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1 var s = new Array();
2
3 s[0] = "TOOMEY D.F. (ed.) (1981).- European Fossil Reef Models.- SEPM
Special Publications 30: 546 pp.- <b>FC&#038;P 12-2</b>, p. 44,
ID=6242^<b>Topic(s): </b>reefs; reefs; <b>Systematics: </b>;
<b>Stratigraphy: </b>fossil; <b>Geography: </b>Europe^[excerpt from a
book review by J.A. Babcock]: &#034;There is another jewel in the
SEPM&#039;s crown of publications. European Fossil Reef Models is a
multifaceted gem of information about European carbonate buildups and
about the state of the art of European reef studies, all in English.
Diversity is the key word here. Contained within 546 pages (18 papers)
is an entire spectrum of scientific approaches and writing styles.
Contributions range in length from 8 pages (&#034;Upper Triassic coral
bioherms&#034;;, Yugoslavia, by Car and others) to 70 pages (&#034;Upper
Triassic reef paleoecology&#034;;, by Flügel). There are very specific
papers (&#034;Pore types in a Paleocene reef&#034;;, Yugoslavia, by
Babic and Zypanic), and there are general summaries (&#034;Process
approach to reef recognition&#034;;, by Longmann; and &#034;European
Devonian reefs&#034;;, by Burchette). Although there is a bias towards
Upper Triassic paleoecologic studies (five contributions, most of them
by Erik Flügel and his students), there is good coverage of other parts
of the geologic column as well. The Silurian, Devonian, Paleocene,
Oligocene, and Recent are all represented by single papers, two papers
concentrate on the Upper Jurassic, and both the Permian and the
Cretaceous are covered by three papers each. If you are searching for
comprehensive review papers on &#034;European reefs&#034;;, then this
volume will help. The contributions by Burchette (Devonian reefs), by
Flügel (Upper Triassic reefs) and by Frost (Oligocene reefs) are all
recommended. Silurian bioherms and biostromes are the subject of the
contribution by Riding. His excellent paper is well-balanced between
careful observations and interpretations. Car and others (Triassic
bioherms) have written one of the best short papers. The contribution
by Piller on the famous Steinplatte complex of northern Austria
presents new sedimentologic interpretations in a well-documented
manner. The monumental works by both Flügel (Upper Triassic reefs) and
Frost (Oligocene reefs) will be standards for years to come.&#034;^1";
4 s[1] = "HELM C. (1998).- &#034;Knopfkorallen&#034;; aus Mitteleuropa und
ihre Lebensweise.- Arbeitskreis Paläontologie Hannover 26: 33-46.-
<b>FC&#038;P 28-1</b>, p. 42, ID=3972^<b>Topic(s): </b>cupolate;
Cupolate corals; <b>Systematics: </b>Cnidaria; Anthozoa;
<b>Stratigraphy: </b>Phanerozoic; <b>Geography: </b>Europe^Cupolate
corals from the Paleozoic as well as Mesozoic and Cenozoic are
discussed in view at their outstanding capability to survive on
extremely soft and unstable grounds.^1";
5 s[2] = "WEYER D. (1978).- Die älteste Rugose Koralle Europas
(Primitophyllum kaljo 1956, Mittelordoviz).- Wissen. Beitr.
Martin-Luther-Univ. Halle. Wittenb. 1978, 30, P7 [Neue
palaeontologische und geologische Forschungsergebnisse hallenser
Absolventen]: 51-77.- <b>FC&#038;P 10-1</b>, p. 46,
ID=5981^<b>Topic(s): </b>; Rugosa, Primitophyllum; <b>Systematics:
</b>Cnidaria; Rugosa; <b>Stratigraphy: </b>Ordovician M; <b>Geography:
</b>Europe^[a thorough revision of Primitophyllum primum and a
discussion of the systematic position of the genus; septal insertion is
interpreted as following the pattern established by Kunth, confirming
the species as a rugose coral, with third order septa in addition;
Primitophyllum is probably a streptelasmatinid (related to Coelolasma)
or possibly a cystiphyllinid (related to Rhabdocyclus)]^1";
6 s[3] = "POTY E., HECKER M.R. (2003).- Parallel evolution in European
rugose corals of the genus Lonsdaleia McCoy, 1849 (Lower
Carboniferous).- Bulletin de l&#039;Institut royal des Sciences
naturelles de Belgique, Sciences de la Terre 73: 109-135.- <b>FC&#038;P
32-2</b>, p. 51, ID=1393^<b>Topic(s): </b>parallel evolution; Rugosa,
Lonsdaleia; <b>Systematics: </b>Cnidaria; Rugosa; <b>Stratigraphy:
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Carboniferous L; Geography: Europe^Two lineages, both leading to cerioid and subcerioid species, can be discerned in the evolution of the genus *Lonsdaleia* McCoy, 1849: L. (*Lonsdaleia*) *duplicata* (Martin, 1809) gave rise to the subgenus *Actinocyathus* d'Orbigny, 1849 (considered here as a subgenus of *Lonsdaleia*) at the beginning of the latest Viséan in northern Europe, and L. (*Lonsdaleia*) *redondensis* sp.nov. or a related species possibly evolved into L. (*Serraphyllum*) subgen. nov. near the Viséan/Serpukhovian transition in South France. Three new species of the genus *Lonsdaleia* are described from the uppermost Viséan and Serpukhovian of the Montagne Noire (South France), including two new species assigned to the subgenus L. (*Serraphyllum*). Two species of the subgenus L. (*Actinocyathus*) are redescribed from the Serpukhovian of the Moscow Basin. Parallel evolution in *Actinocyathus* and *Serraphyllum* during the Serpukhovian is discussed.^1";

- 7 s[4] = "BODZIOCH A. (1993).- Sponges from the Epicontinental Triassic of Europe.- In Hagdorn H. & Seilacher A. (eds) - *Muschelkalk; Schoentaler Symposium 1991: 235-244.*- *FC&P 22-2*, p. 90, ID=3534^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Triassic M; Geography: Europe, epicontinental^The knowledge about sponges from the epicontinental Triassic of Europe is not too extensive. This is mainly due to their sporadic occurrence and poor state of preservation. Until now, sponges were recorded only from few localities where they occur in various lithostratigraphical positions, but always within the *Muschelkalk*. From these localities, bodily preserved specimens, loose spicules and borings have been referred to hexactinellid sponges. However, the more exact systematical position is doubtful in most cases. During the last years, a lot of lyssacinosan sponges have been recorded for the first time both from well known and new localities. They were found in the lower *Muschelkalk* of Upper Silesia and of the Holy Cross Mts., where they occur locally in biohermal and biostromal accumulations. This material provides new information about Triassic sponges, which are presented here in their palaeontological, stratigraphical, and paleoecological contexts.^1";
- 8 s[5] = "BERTLING M. (1993).- Ecology and distribution of the Late Jurassic Scleractinian *Thamnasteria concinna* (Goldfuss) in Europe.- *Palaeogeography, Palaeoclimatology, Palaeoecology 105: 311-335.*- *FC&P 23-1.1*, p. 73, ID=4160^Topic(s): distribution; Scleractinia, Thamnasteria; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Europe^The quantitative investigation of associations in northern Germany revealed *Thamnasteria concinna* as their main element, necessitating an evaluation of all data for the spatio-temporal distribution of this scleractinian. Autecological criteria and sedimentological data indicate an optimum fitness of the coral in turbulent environments with low net-sedimentation rate. In these facies, no conflicting aims existed for *T. concinna* in exploiting light or plankton and resisting adverse hydrodynamic conditions. The most important synecological parameters of the associations studied are dominance patterns and diversity as well as the structure of guilds. *T. concinna* mostly constituted the builder guild, occurring as an ubiquitous, though dominant only in shallow water. As recorded in the study area, strong dominance of a few taxa and low diversity indexes are typical of immature communities in unstable environments. *T. concinna* was well adapted to varying environmental factors showing characteristics of an r-strategist, thus being more successful than other corals in stressful facies. The distribution pattern of *T. concinna* was not controlled by single environmental factors, but rather the oscillation of many of them. This seasonality is a typical feature of the temperate realm. *T. concinna* actually was important only in temperate regions of the Late Jurassic neritic sea or its borders with the Tethyan region. Further south, the coral was just one of the many members of the Tethyan reefs

where mature communities predominated. Because of sedimentological restrictions, this pattern is most clearly visible in the Oxfordian, whereas *T. concinna* was a negligible element of Tithonian reefs. Its evolutionary decline is due to the concentration of reefs on the (sub)tropical Tethyan region.¹¹;

- 9 s[6] = "KEUPP H., BRUGGER H., GALLING U., HEFTER J., HERRMANN R., JENISCH A., KEMPE S., MICHAELIS W., SEIFERT R., THIEL V. (1996).- Paleobiological Controls of Jurassic Spongiolites.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp 209-214.- FC&P 26-1, p. 35, ID=3594^Topic(s): spongiolites; spongiolites; Systematics: Porifera; Stratigraphy: Jurassic; Geography: Europe^Micro- and biofacies aspects as well as biogeochemical data of Jurassic spongiolitic limestones from Spain, Southern Germany and Romania allow to consider the following parameters to have controlled the spongiolitic megafacies: 1) Pro- and regradation of spongiolitic facies correlate with the sealevel development, progradation characterizing transgressive phases. Consequently, spongiolites are restricted to areas having had low sedimentation rates. 2) Spongiolitic and coral facies were in competition during the Jurassic. Factors, which favoured one boundstone type above the other were a) the bathymetry and the dependent parameters hydrodynamics and light intensity, and b) a constantly oligotrophic situation, which favoured a dominance of coral reefs, while spongiolitic mud mounds revealed certain tolerance to an episodically higher trophic level. 3) The formation of microbialitic (automicritic) crusts can be traced to heterotrophic activities, mainly with the aid of data from the microfacies investigations, and isotopic and biogeochemical analyses (Keupp et al. 1993). The spongiolitic facies was thus comparatively more independent from photic conditions and could form in a wide bathymetric range. 4) The spongiolitic facies, in which, conditioned by the bathymetric and hydrodynamic situation, automicrites and allochthonous mud deposition were continuously in competition (Leinfelder & Keupp 1995), reflect more-or-less the low energy habitat, while the coral facies is characteristic of the high energy level. 5) More-or-less cyclic successions within the spongiolitic facies, which affected the Porifera and other benthic associations as well as different types of microbialites (thrombolites, laminated peloidal crusts, aphanitic automicrites), on the one hand were controlled by hydrodynamic events and on the other by episodic oxygen fluctuations. 6) The conservation of spongiolitic mounds presupposed the formation of automicrites and the early diagenetic calcareous lithification of siliceous sponges ("Erhaltungsfenster"), which, besides the above mentioned environmental factors, depends on the taxonomic composition of the sponge fauna, with regard to different amounts of endosymbiotic bacteria (cf. Rehfeld, this volume).¹¹;
- 10 s[7] = "RICHELLE-MAURER E., DEGOUDENNE Y., DEJONGHE L., VAN DE VYVER G. (1994).- Utilisation des eponges d'eau douce comme bioindicateurs de la presence de metaux dans l'environnement.- Service geologique de Belgique, Professional paper 1994, 268: 83 pp., 17 figs, 16 tabs.- FC&P 24-1, p. 8, ID=4445^Topic(s): freshwater pollution indicators; Porifera, freshwater; Systematics: Porifera; Stratigraphy: Recent; Geography: Europe^In the course of the present work, the four common Belgian sponge species, *Ephydatia fluviatilis*, *Ephydatia muelleri*, *Spongilla lacustris* and *Eunapius fragilis* have been collected as well as a fifth species, *Trochospongilla horrida*. This species and its ecology have been rarely described in Europe and this is the first report on it from Belgium. Observations made with light and scanning electron microscopy have shown the presence of spicule morphological variations and malformations, associated with adverse environmental conditions or with transient or permanent pollution. Therefore, these modifications could

- be used as indicators of water quality. [first part of extensive summary]^1";
- 11 s[8] = "DUBATOLOV V.N. (1972).- Zoogeography of Devonian Seas of Eurasia (Materials covering Investigation of Tabulata).- Publishing House "Nauka". Siberian Branch, Novosibirsk: 128 pp., 30 pls. [in Russian, with English summary].- FC&P 2-2, p. 14, ID=4789^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Eurasia^Tabulata distribution in Devonian in addition to determination of geographical differentiation of marine faunas in Eurasia are discussed. The biogeographical provinces, existing in the early Devonian in Eurasia are identified as: Mediterranean, Uralo-Tian-Shan, Jungaro-Balkhashskaya, Altai-Sayanskaya, Indigiro-Kolymskaya, Mongolo-Ochotskaya, Indo-Siniiskaya. Enlargement of the provinces took place between the Middle Devonian and Frasnian time. Climatic zonation is given apart from the hypotheses on the location of the Equator and geographical Poles. The book may be helpful for geologo-stratigraphical, research workers as well as palaeontologists and zoogeographers.^1";
- 12 s[9] = "DUBATOLOV V.N. (1979).- Coral paleobiogeography in the Devonian and Carboniferous of Eurasia.- Acta Palaeontologica Polonica 25, 3-4: 175-187.- FC&P 9-2, p. 40, ID=0310^Topic(s): biogeography; Anthozoa biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian, Carboniferous; Geography: Eurasia^^1";
- 13 s[10] = "DUBATOLOV V.N., VASILYUK N.P. (1981).- Coral paleozoogeography in the Devonian and Carboniferous of Eurasia.- Acta Palaeontologica Polonica 25, 3-4: 519-529.- FC&P 10-1, p. 44, ID=5966^Topic(s): biogeography; coral biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Carboniferous; Geography: Eurasia^[a maximum of 11 provinces in the early Devonian decrease to a minimum of 2 in the Upper Devonian; there follows a progressive increase in provinciality in the Lower Carboniferous culminating in 15 provinces in the Visean but decreasing again to seven provinces by the late Carboniferous]^1";
- 14 s[11] = "SCRUTTON C.T. (1975).- Hydroid-serpulid symbiosis in the Mesozoic and Tertiary.- Palaeontology 18, 2: 255-274.- FC&P 4-2, p. 65, ID=5310^Topic(s): symbiosis; hydroid-serpulid symbiosis; Systematics: Cnidaria Annelida; Hydrozoa; Stratigraphy: Mesozoic Cenozoic; Geography: Europe, Middle East^Several species of Mesozoic and Tertiary serpulids from Europe and the Middle East were infested by a colonial organism which is preserved as the mould of a stolonial network with polyp chambers buried in the peripheral zone of the calcareous tube. The polyp chambers open to the outer surface of the tube through small, usually semicircular apertures. The mould is the result of incorporation of the organism into the worm tube during calcification by the serpulid: it is not a boring. The organism is interpreted as a hydroid or group of related hydroids which lived commensally or possibly mutualistically with the serpulids. This hydroid-serpulid symbiosis is compared with the living symbiosis between the hydroids of Proboscidactyla and certain species of sabellid polychaetes. * The name of the fossil symbiont is Protulophila gestroi Rovereto.^1";
- 15 s[12] = "ARETZ M., WEBB G.E. (2006).- Western European and eastern Australian Mississippian shallow-water reefs: a comparison.- Proceedings of the XVth International Congress on Carboniferous and Permian Stratigraphy, Utrecht, the Netherlands (Wong, Th. E. (ed.): .- FC&P 35, p. 91, ID=2412^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Carboniferous L; Geography: Europe, Australia^Shallow-water reefs were a common element in the Mississippian successions of western Europe and eastern Australia. They formed in different palaeotectonic settings, the stable southern shelf of Laurussia, near the collision zone of Armorica and

Gondwana, and in the fore-arc setting of eastern Australia. Reef development in these areas responded to local and regional tectono-sedimentary patterns, and, therefore, the timing was different in the two regions. Shallow-water reefs occurred throughout almost the entire Mississippian. Australian reefs already developed at the Devonian/Carboniferous boundary, whereas European shallow-water reefs did not appear until the early Viséan. The lack of Tournaisian reefs in Europe is only partly well constrained (unfavourable facies). Reef development ended in Australia somewhat earlier than in Europe. The youngest reefs formed on the southern shelf of Armorica. Reef termination scenarios in all regions included combinations of sediment influx, uplift, volcanism, and/or plate movements. Although individual reef development differed, three major reef-forming fabrics can be identified in both regions. Microbial communities were the most important reef fabrics and entire reefs consisted only of microbial framework. The second framework type consisted of microbial communities, corals, lithistid sponges, and bryozoans of relatively high diversity, but varying abundances. Coral-dominated facies, the third major fabric type, only became volumetrically important in Viséan and Serpukhovian reefs, but, regardless, microbial fabrics were generally essential for reef formation. A large number of reefs consisted of a delicate balance of different reef builders, but a unique Pangean reef community is not evident. The formation of Pangea influenced reef formation in two ways. Firstly, the southward movement of the Australian plate made reef formation impossible, and plate collision and tectonic uplift terminated reef development in Europe. Second, glacio-eustatic sea-level changes, a result of global climate change and associated glaciation in Gondwana, greatly affected reefs in inner shelf positions.¹¹;

- 16 s[13] = "GRASSHOFF M. (1992).- Die Flachwasser-Gorgonarien von Europa und Westafrika (Cnidaria Anthozoa).- Courier Forschungsinstitut Senckenberg 149; 135 pp.- FC&P 22-1, p. 42, ID=3408Topic(s): systematics; Octocorallia, Gorgonaria; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Europe, Africa w^Die vorliegende Abhandlung bietet eine taxonomische Uebersicht ueber alle bisher aus europaeischen und westafrikanischen Kuestenmeeren bekannt gewordenen Flachwasser-Hornkorallen (Gorgonaria). Alle Arten werden, teilweise farbig, abgebildet, diagnostiziert und beschrieben. Die Verbreitung ist in uebersichtlichen Karten festgehalten. Somit handelt es sich um ein wichtiges Quellenwerk fuer alle, die oekologisch arbeiten oder aus sonstigen Gruenden Gorgonarien des Gebietes zuverlassig bestimmen wollen. [from Natur und Museum, 123, 4 (1993)]¹¹;
- 17 s[14] = "GRASSHOFF M. (1990).- Die Flachwasser-Gorgonarien von Europa und Westafrika.- Natur und Museum 120, 12: 410-415. [in German].- FC&P 20-1.1, p. 65, ID=2843Topic(s): systematics; Octocorallia, Gorgonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Europe, Africa w^^1";
- 18 s[15] = "SEMENOFF-TIAN-CHANSKY P., SUTHERLAND P.K. (1982).- Coral distributions near the Middle Carboniferous boundary.- Subcommittee on Carboniferous Stratigraphy, Leeds [W.H.C. Ramsbottom, W.B. Saunders & B. Owens (eds)]: Biostratigraphic data for a mid-Carboniferous boundary; 156 pp.- FC&P 12-2, p. 34, ID=1881Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M/U; Geography: Russia, Algeria, America N^Les auteurs ont tente de situer d'apres les coraux, la coupure qui intervient au milieu du Carbonifere (vers la limite Mississippien-Pennsylvanien) en URSS, dans le bassin de Bechar (Algerie) et en Amerique du Nord. Selon les cas, les donnees proviennent de la litterature ou d'apres les travaux en cours. Dans le bassin du Donetz, l'Anteclise de Voronezh et dans l'oural, ainsi que dans le bassin de Bechar, la faune du Carbonifere inferieur, qui persiste jusqu'au Serpukhovien est

- comparable dans ces quatre regions et comprend des genres repandus comme Lithostrotion, Lonsdaleia, Aulophyllum, Palaeosmia, Gangamophyllum. Les faunes du Carbonifere moyen different davantage d'une region a l'autre, et surtout se distinguent tres nettement de celles du Carbonifere inferieur. Elles comportent toutes ou certaines des formes suivantes: Petalaxis, Lytvophyllum, Protodurhamina, Opiphyllum, Bothrophyllum, Neokoninckophyllum et la presence massive de Multithecopora [first part of extensive summary].¹¹";
- 19 s[16] = "SCHRODER S. (2002).- Neue Daten zur Gattung Tabulophyllum Fenton & Fenton 1924 im Devon (Givetium, Frasnium) von Europa und Nord-Afrika.- Senckenbergiana lethaea 82, 2: 515-543.- FC&P 32-1, p. 22, ID=1720Topic(s): ; Rugosa, Tabulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Europe, Africa N^Seven Tabulophyllum-species of the European Devonian are revised and two species are described as new. Tabulophyllum lineatum (Quenstedt 1881) from the Sudetes is redescribed and taxonomically fixed by designating a lectotype. Tabulophyllum rotundum Fenton & Fenton 1924, T. sylvaticum Rohart 1988 and probably T. normale (Walther 1928) are synonyma of this species. All existing specimens of the taxa described by Walther (1928) are completely figured for the first time and lectotypes are designated for Tabulophyllum brevissimum (Walther 1928) and Tabulophyllum tenuissimum (Walther 1928). Tabulophyllum leonense from Spanish Morocco and Tabulophyllum ? n.sp. aff. T. similis (Rozkowska 1979) from the Harz Mts (Iberger Kalk) are described as new. Federowskicyathus (Rozkowska 1979) is a probable new synonym of Tabulophyllum.¹¹";
- 20 s[17] = "SCHRODER S. (2005).- Solitary Phillipsastreidae (Rugosa) from the Late Devonian of Europe and North Africa.- Journal of Paleontology 79, 5: 871-883.- FC&P 34, p. 36, ID=1240Topic(s): ; Rugosa, Phillipsastreidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Europe, Africa N^Macgeea is a cosmopolitan genus of Devonian rugose corals that includes numerous, generally highly variable, species. Because of its wide skeletal variation and additional trabecular dilation it is difficult to recognize taxonomically relevant characters and to separate those from ecologically induced modifications. The high variability is probably related to radiations following phases of sea level rise and is connected to bioevents. Length of major septa in ontogenetic stages allows a separation of different populations within the Macgeea dubia species group. However, it remains questionable if septal length is a reliable taxonomic character, indicating a phylogenetic trend, or if it is subject to large individual variability. By revising Macgeea dubia, we reveal its synonymy with Macgeea heterophylloides sensu Birenheide. In addition, Macgeea recta (type species of Pexiphyllum Walther 1929) is discussed as an insufficiently defined taxon of problematic status. Macgeea crassiseptata n.sp. is also described from the Late Givetian of Morocco. The erection of the new pseudocolumellate genus Baculophyllum with type species Pexiphyllum ultimum Walther 1929 requires a comparison with Protomacgeea from Poland and Australia as well as a phylogenetic discussion of the solitary Phillipsastreidae. The new genus most probably belongs to a separate lineage of the Upper Devonian Macgeea group but could also be considered as a descendant of the Australian Lower Devonian columellate solitary phillipsastroid species group, that has not yet been recorded from the Middle Devonian. Because of large stratigraphic gaps between the occurrences of both genera, preference is given to the interpretation of a development of polychronomorph taxa (homeomorphic taxa living at a different time) not belonging to a single lineage. This shows again the significance of stratigraphic age when comparing similar-looking taxa, which should be considered in any phylogenetic reconstruction.¹¹";
- 21 s[18] = "NESTOR V. (1974).- Catalogue of the Paleontological Collections.- Eesti NSV Teaduste Akademia, Geologia Instituut;

- Tallinn.- FC&P 4-1, p. 48, ID=6287^Topic(s):
collections of fossils; paleontology, corals; Systematics:
Stratigraphy:fossil; Geography:Estonia^[catalogue of
fossils of the Geological Institute of Estonia]^1";
- 22 s[19] = "NEUMAN B.E. (1975).- New Lower Palaeozoic streptelasmatic
corals from Scandinavia.- Norsk Geologisk Tidsskr. 55: 335-359.-
FC&P 5-1, p. 24, ID=5341^Topic(s):new taxa; Rugosa,
Leolasma; Systematics:Cnidaria; Rugosa; Stratigraphy:
Paleozoic L; Geography:Scandinavia^The generic characters,
taxonomic positions, and geographical distributions of the genera
Leolasma Kaljo 1956 and Ullernelasma n.gen. are discussed, and three
new species are described viz. Leolasma pachycolumnaris n.sp.,
Ullernelasma svartoyensis n.sp. and Streptelasma unicum n.sp.^1";
- 23 s[20] = "STEL J.H. (1976).- The Paleozoic hard substrate trace fossils
Helicosalpinx, Chaetosalpinx and Torquaysalpinx.- N. Jb. Geol.
Palaeont. Mh 1976, 2: 726-744.- FC&P 6-1, p. 24,
ID=5515^Topic(s):trace fossil, borers; Systematics:
ichnofossils; Stratigraphy:Paleozoic L; Geography:
Netherlands, erratics^[Paleozoic material from erratic boulders,
collected at Groningen, Netherlands]^1";
- 24 s[21] = "HUISMANN H. (1979).- Noordelijke zwerfsteenkorallen.- Oldenzaal
1: 2-16, 36 . [Journal?].- FC&P 8-1, p. 56,
ID=0238^Topic(s):Anthozoa; Systematics:Cnidaria;
Anthozoa; Stratigraphy:Paleozoic; Geography:
Netherlands, erratics^(Northern erratic corals (12): The genus
Syringopora Goldfuss 1826. A description is given of syringoporids
found as Pleistocene erratics from the northern part of the
Netherlands. A new interpretation of the syringoporid skeleton is
suggested: tubules (modified pores) and so-called infundibular tabulae
(which actually consist of series of tabellae) are considered as
adaptions to the fruticose morphology of the colony. Lateral increase
has been observed.^1";
- 25 s[22] = "HUISMAN H. (1974).- Noorelijke zwerfsteenkorallen 4. [coraux
dans les blocs erratiques nordiques 4] .- Grondboor en Hamer 1974, 5:
86-94.- FC&P 4-2, p. 57, ID=5269^Topic(s):
Tabulata, Subalveolites; Systematics:Cnidaria; Tabulata;
Stratigraphy:Paleozoic; Geography:Netherlands,
erratics^[Subalveolites paleozoique de blocs erratiques des Pays-Bas]^1";
- 26 s[23] = "BONDARENKO O.B. (1983).- Geliolitidy verkhnego Ordovika
jugo-vostochnoy Latvii.- Biulleten Moskovskogo Obshchestva Ispytateley
Prirody, Otdel Geologicheskiiy 58, 6: 136-146.- FC&P 14-1, p.
52, ID=1026^Topic(s):Heliolitida; Systematics:
Cnidaria; Heliolitida; Stratigraphy:Ordovician U;
Geography:Latvia^1";
- 27 s[24] = "REITNER J. (1990).- Taxonomische Bedeutung freier Skleren in
Carpospongia globosa (Eichwald 1830) und Aulocopium aurantium Oswald
1850 (Demospongiae, "Lithistida") (Oberordovizium) aus dem
Kaolinsand von Braderup / Sylt.- Fossilien von Sylt 3 [Hacht U. v.
(ed.)]: 219-230. [in German].- FC&P 20-1.1, p. 74,
ID=2861^Topic(s):sclerites, taxonomy; Porifera Lithistida;
Systematics:Porifera; Lithistida; Stratigraphy:
Ordovician; Geography:Germany, erratics^1";
- 28 s[25] = "WEYER D. (1979).- Revision von Tryplasma praecox Kaljo, 1957
(Anthozoa, Rugosa; Mittelordoviz, Estnische SSR).- Abhandlungen und
Berichte für Naturkunde und Vorgeschichte 12, 2: 26-33.- FC&P
9-1, p. 33, ID=0258^Topic(s):revision; Rugosa, Tryplasma ;
Systematics:Cnidaria; Rugosa; Stratigraphy:Ordovician
M; Geography:Estonia^Tryplasma praecox is assigned to
Estonielasma.^1";
- 29 s[26] = "WEYER D. (1983).- Lambelasma-Arten (Anthozoa, Rugosa) aus dem
balto-skandischen Mittelordoviz.- Freiburger Forschungsheft 384: 7-19.-
FC&P 13-2, p. 37, ID=0540^Topic(s):Rugosa,
Lambelasma; Systematics:Cnidaria; Rugosa; Stratigraphy:

- Ordovician M; Geography: Baltoscandia^Three species of *Lambelasma* Weyer 1973 are described from Baltoscandic shallow water coral communities of upper Middle Ordovician age. Morphologic and taxonomic revision of Estonian type or topotype material is presented for *Lambelasma dybowskii* (Kaljo 1956) from the Middle Viruan Johvi horizon, and *Lambelasma atavum* (Kaljo 1958) from the Upper Viruan Rakvere horizon. *Lambelasma narvaense* Weyer 1984, recorded from the same stratigraphical level in the Estonian S.S.R., occurs in a Pleistocene erratic boulder of aphanitic Wessenberg Limestone found in the German Democratic Republic.^1";
- 30 s[27] = "WEYER D. (1985).- *Dybowskiina rakverensis*, a new *Lambelasma* rugose coral (Rugosa) from the Middle Ordovician of Estonia.- *Eesti NSV Tead. Akad. Toim. Geol.* 4: 130-132.- FC&P 15-1.2, p. 26, ID=0856^Topic(s): new taxa; Rugosa, *Dybowskiina*; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M; Geography: Estonia^^1";
- 31 s[28] = "WEYER D. (1984).- *Lambelasma narvaense*, a new rugose coral from the Middle Ordovician of Estonia.- *Eesti NSV Tead. Akad. Toim.* 33: 92-95.- FC&P 14-1, p. 47, ID=0989^Topic(s): new taxa; Rugosa, *Lambelasma*; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M; Geography: Estonia^^1";
- 32 s[29] = "KALJO D. (2004).- Diversity of late Ordovician rugose corals in Baltoscandia: role of environmental changes and comparison with other areas.- *Proceedings of the Estonian Academy of Sciences, Geology* 53, 4: 233-245.- FC&P 33-2, p. 17, ID=1117^Topic(s): biodiversity; Rugosa, diversity; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Baltoscandia^Corals colonized the Palaeobaltic Sea in the middle Caradoc. A century and a half of studies have produced many significant results related to their taxonomy and other aspects. A summary of the genus level taxonomic composition of the Baltoscandian rugose coral assemblages and some aspects of their diversity dynamics are presented by B. E. E. Neuman and D. Kaljo in Webby et al. (2004b). * Recent advances in Baltic isotope studies gave rise to the idea of using isotope data, together with biodiversity data, to investigate the role of environmental changes in the evolution and diversification of corals. The well-known diversity curves of Sepkoski (1995) show a generalized pattern of diversity change. Regional curves are more environmentally controlled and reveal details that can be correlated with stable isotope data, sea level curves, etc. These links are employed here for better understanding of the environmental background of certain bioevents. Conclusions are also based partly on the palaeoceanic and palaeoclimatic models suggested by Jeppsson (1990) and revised by Munnecke et al. (2003) for the Silurian Period. Morphological novelties are the essence of coral evolution in leading to the appearance of new taxa. Usually, the time pattern of the latter process correlates somewhat with environmental changes and this allows biodiversity to be taken as a qualitative measure of possible ecological influence. Some useful pointers to this influence can be obtained via correlation of the coral diversity data with the late Ordovician carbon isotope trends. [excerpts from an introduction]^1";
- 33 s[30] = "NEUMAN B.E. (1986).- Rugose corals from the Upper Ordovician erratic boulders of Oeland.- *Geol. Fores. Stockholm Foerh.* 108: 349-365.- FC&P 16-1, p. 57, ID=1953^Topic(s): erratics derived; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Sweden, Oeland^^1";
- 34 s[31] = "NEUMAN B.E. (1997).- Aspects on life strategies of the Upper Ordovician rugose coral *Bodophyllum duncanae* (Spjeldnaes 1961) from the Oslo Region.- *Coral Research Bulletin* 05: 197-201.- FC&P 27-1, p. 72, ID=3815^Topic(s): life strategies; Rugosa, *Bodophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Norway, Oslo^A great number of cleaned silicified specimens of *Bodophyllum duncanae* (Spjeldnae 1961)

- from Upper Ashgillian Beds from the locality Gunnekleiv in the Skien-Langesund District of the Oslo Region revealed that this species had a liberosessile way of life in shallow marine environment. Some specimens remained fixosessile also during the neanic stage and developed a thicker cylindrical septate prolongation of the corallite. The intraspecific rate of variation of different morphological structures as a result of environmental influence is discussed.¹";
- 35 s[32] = "WEYER D. (1993).- Lambelasama carinatum, eine neue Rugose Koralle aus dem Mittel-Ordoviz von Estland.- Abhandlungen und Berichte für Naturkunde 16: 70-77.- FC&P 23-1.1, p. 66, ID=4144Topic(s): new taxa; Rugosa, Lambelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M; Geography: EstoniaThe new species occurs in the Upper Caradocian Oandu stage (within the northeastern Estonian area of Oandu facies) and is the now fifth European representative of that Viruan genus of Calostylina.1"
- 36 s[33] = "WEBBY B.D. (1979).- Ordovician stromatoporoids from the Mjosa district, Norway.- Norsk. Geol. Tidsskr. 59: 199-211.- FC&P 9-1, p. 53, ID=5841Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Norway[5 species of the genera Labechia, Pachystylostroma and Radiostroma (new) are described from these Middle Ordovician rocks; Radiostroma (type R. tenue) is a labechiid with pillars composed of radial plates]1"
- 37 s[34] = "KLAAMANN E. (1975).- Verbreitung der ältesten Tabulatenassoziationen in Baltoskandia.- Izvestiya Akademii Nauk Estonskoy SSR, Chimiya Geologiya 24, 4: 287-291.- FC&P 6-2, p. 20, ID=0155Topic(s): communities, stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: BaltoscandiaThe Tabulate Eofletcheria - Lyopora association consists of representatives of the genera Eofletcheria, Lyopora, Saffordophyllum and Nyctopora and ranges from the upper Diplogaptus multidentis-zone to the end of the Dicranograptus clingani-zone (middle Ordovician). Eofletcheria orvikui and E. irregularis characterize the lower part of the Kullberg (Dalarna district / Sweden) and Encrinites limestone of the Langesund-Gjerpen region (Norway). Lyopora favosa has been found in the lower Mjosa limestone of the Toten and Nes Hamar region, while the species Eofletcheria orvikui, together with Saffordophyllum tulaensis and S. grande are representatives of the reef facies of the Oandu stage in western Estonia.1"
- 38 s[35] = "KLAAMANN E. (1975).- Zur Taxonomie einiger mittelordovizischer Tabulatenarten Norwegens, Schwedens und Estlands.- Izv. AN ESSR 24, 3: 219-226.- FC&P 6-1, p. 22, ID=5510Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician M; Geography: NorwayDie in der ordovizischen Tabulatenassoziation (Eofletcheria-Lyopora - Fauna) des baltoskandischen Raumes vornehmlich auftretenden Taxa Eofletcheria, Saffordophyllum und Lyopora werden beschrieben und einer kritischen Betrachtung unterzogen. Es zeigte sich, dass von sovjetischen Forschern bisher zu Lyopora gestellte Arten heute Saffordophyllum zuzurechnen sind: S. tulaensis (Sokolov 1951) und S. grande (Sokolov 1951). Weiterhin werden behandelt Eofletcheria orvikui (Sokolov 1951), E. irregularis Hill 1953, und Lyopora favosa (McCoy 1850). Letztere wird entsprechend den Untersuchungen von Preobrazhenskiy & Klaamann (1975) zu den Calapoeciidae gerechnet.1"
- 39 s[36] = "HILLMER G., REITNER J. (1990).- Oberordovizische (?) Favositida aus dem Kaolinsand von Braderup / Sylt.- Fossilien von Sylt 3 Hacht U. v. (ed.): 143-150. [in German, without summary].- FC&P 20-1.1, p. 59, ID=2829Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: Germany, erratics1"
- 40 s[37] = "SCHALLREUTER R. (1975).- Ein neuer ordovizischer Holothuriensklerit aus Ojlemyr geschoben der Insel Gotland. [a new

Ordovician holothurian sclerite from Ojlemyr Boulders of the isle of Gotland].- Neues Jahrbuch für Geologie und Paläontologie, Monatshefte 1975, 12: 727-733.- FC&P 14-1, p. 64, ID=1076^Topic(s): Holothurioidea; Systematics: Echinodermata; Stratigraphy: Ordovician; Geography: Sweden erratics^The perfectly preserved microfauna contains two forms of wheel type sclerites: Protocaudina triperforata Schallreuter, now considered as type species of Mercedescaudina n.g., and Mercedescaudina mostleri n.g. n.sp.^1";

41 s[38] = "RHEBERGEN F. (ed.), EGGINK R., KOOPS T., RHEBERGEN B. (2001).- Ordovizische zwerfsteensponzen.- Grondboor & Hamer 55, 2: 1-144.- FC&P 30-2, p. 37, ID=1607^Topic(s): atlas of fossils; Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Europe, Central, erratics^Over many years more than 60.000 silicified Ordovician erratic sponges from the palaeocontinent Baltica have been collected in some areas in Northern Europe. Especially in the Netherlands some hundred enthusiastic amateur geologists have stored about 20.000 specimens in their private collections or housed them in museums. However, appropriate literature to identify them properly is not readily available. Either the literature is too old to be loaned out by museums or institutes, or it is inaccessible to the average amateur, due to both the scientific level and the need to read foreign languages. The purpose of this volume is first of all to provide a guide, a manual for Dutch (and German) amateurs. This atlas also serves other purposes: It is also meant to give an overview of the current knowledge of this subject at a time that sponges are the subject of extensive research. Besides, there is presently a concentration of knowledge, experience and availability of the material. The third purpose is to draw the attention of sponge specialists throughout the world to the extensive and varied sponge assemblages from Baltica. It is remarkable that in the 19th century German sponge specialists, such as Roemer, Rauff and von Zittel, were leading the research and even examined American sponges. After that generation only a few European palaeontologists continued these investigations. Over the years American specialists dominated sponge research. Perhaps as a result of this development Baltic sponges were gradually left out of palaeontological focus. Perhaps this atlas will stimulate renewed interest in these varied, sometimes wonderfully preserved, erratic sponge assemblages. [from original English summary: introduction]^1";

42 s[39] = "BARTHOLOMAUS W.A., LANGE M. (1994).- Monaxone Skelett- und Wuerzelschopfnadeln bei lithistiden und nicht-lithistiden Schwaemmen (Ordoviz) aus Kaolinsand von Sylt.- Der Geschiebesammler 27: 51-66. [in German].- FC&P 23-1.1, p. 82, ID=4188^Topic(s): skeletal structure; Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Germany, Sylt erratics^An den Schwammgeroellen (Ordoviz) von Sylt / Norddeutschland lassen sich oxymonaxone Kieselskelettnadeln bei allen astylospongiiden (von Astylospongia praemorsa abgesehen) und anthaspidelliden Schwaemmen, sowie bei Hindia sphaeroidalis nicht nur direkt in Schwammkoerpern, sondern auch indirekt an Schwammoberflaechen nachweisen. Moeglicherweise ragten sie z.B. an Kanaloeffnungen ueber die Koerperflaeche hinaus. Von konzentriertem Schutt monaxoner Nadeln kann angenommen werden, das er teilweise zu Spongien gehoert, die bisher unter der baltoskandischen Fauna ordovisch-silurischer Hornsteingerolle aus Kaolinsandablagerungen (Pliozaen) noch nicht erkannt sind. Auch radiale Nadelbuenchel in Lebensstellung (Wuerzelschopfe) weisen auf noch nicht erkannte andersartige Erzeuger hin.^1";

43 s[40] = "HINTS L., MEIDLA T., GAILITE L.I., SARV L. (1993).- Catalogue of Ordovician Stratigraphical units and stratotypes of Estonia and Latvia.- Estonian Academy of Sciences, Tallinn; 62 pp.- FC&P 22-2, p. 78, ID=3495^Topic(s): catalogue of stratigraphic

- units; stratigraphy; Systematics: ; Stratigraphy: Ordovician; Geography: Estonia^The catalogue presents data on the Ordovician stratigraphical units (82 members, 67 formations, 2 groups, 2 substages, 18 stages) and their stratotypes (establishing time, author, location publications) of Estonia and Latvia. The geographical etymons and the transliteration of the names of stratigraphical units into English, Estonian, Latvian and Russian are given.^1";
- 44 s[41] = "SYTOVA V.A. (1973).- Stages of evolution in the Ordovician of Russian Platform. [in Russian] .- Vest. Leningrad. Univ. 1973, 18: 72-76.- FC&P 4-1, p. 39, ID=5139^Topic(s): geohistory; ???; Systematics: ; Stratigraphy: Ordovician; Geography: Russia, Russian Platform^^1";
- 45 s[42] = "HARLAND T.L. (1981).- Middle Ordovician reefs of Norway.- Lethaia 14: 169-188.- FC&P 11-1, p. 58, ID=6133^Topic(s): reefs, geohistory; reefs; Systematics: ; Stratigraphy: Ordovician M; Geography: Norway^The Middle Ordovician reefs of Norway were the first to develop in the western part of the Baltoscandian epicontinental sea and are the earliest coral-stromatoporoid reefs so far reported in Europe. Small patch reefs in the Steinvika Limestone, Langesund-Skien district, consist mainly of algae, echinoderms, corals and stromatoporoids. Bryozoans, molluscs, athropods and brachiopods are also present. The reefs developed on pelmatozoan-rich substrates and are organically zoned, consisting of a pioneer community of stemmed echinoderms and sheet algae, a high-diversity intermediate community dominated by fasciulate corals and a low diversity climax community of massive corals and stromatoporoids. These communities are interpreted as the seral stages of an autogenic ecological succession. Small patch reefs are also present in the laterally equivalent Mjosa Limestone, Toten and Nes-Hamar districts. These are organically very similar to those in the Steinvika Limestone and developed in an identical way. A large complex, consisting of several reefs, is also present in the Mjosa Limestone. Unlike the reefs elsewhere, which developed with shallow inshore areas, this complex developed at the outer edge of the inshore shelf. The outstanding features of the complex is the main reef forming the offshore limit which is totally dominated by stromatoporoids and lacks a sequential development. This is due to the influence of the harsher environment at the shelf edge. [original summary]^1";
- 46 s[43] = "BIRENHEIDE R. (1974).- Die Typen der Sammlung wedekind (Rugosa) von Gotland und vom Oslo-Gebiet (Ordovizium-Silurium).- Senckenbergiana lethaea 54, 5/6: 475-489.- FC&P 3-1, p. 23, ID=4876^Topic(s): type material; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician Silurian; Geography: Norway, Oslo, Sweden, Gotland^The present paper lists those type specimens of Rugosa described by wedekind (1927) from the Silurian of Gotland and from the Ordovician-Silurian of the Oslo region which are deposited in the Forschungs-Institut Senckenberg, Frankfurt am Main. Lectotypes are chosen when wedekind has designated more than one specimen as "Typus der Art"; ("type of the species"). The strata typica given by wedekind are - as far as possible - supplemented by modern names (standard stratigraphy of Gotland by Manten 1971). An additional list contains all names of species introduced by wedekind 1927 of which neither holotypes nor lectotypes are deposited in the Forschungs-Institut Senckenberg.^1";
- 47 s[44] = "KAZMIERCZAK J. (1987).- Stromatoporen aus dem Kaolinsand von Braderup auf Sylt.- Fossilien von Sylt 2 [Hacht U. von (ed.)]: 179-183 [in German].- FC&P 16-2, p. 34, ID=2014^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Silurian; Geography: Germany, erratics^[a specimen of Simplexodictyon showing traces of a granular microstructure that is attributed to coccooid bluegreen algae is illustrated and a specimen of Ecclimadictyon; the text is a brief

- description of Stromatoporoids in general]^1";
- 48 s[45] = "NESTOR H. (1997).- Stromatoporoids.- Geology and Mineral Resources of Estonia [Raukas A. & Teedumae A. (eds)]: pp 215, 219-221, fig. 38; Estonian Academy Publishers, Tallinn.- FC&P 27-1, p. 109, ID=3863^Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Ashg - Silurian Prid; Geography: Estonia^Eighty-eight species of Stromatoporoids have been described from all the regional stages of Estonia from lower Ashgill to lower Pridoli. The ranges of the 26 genera are plotted in a large table (31). The distribution of these genera in the various stages is briefly discussed. Labechiids are relatively rare in the Ordovician rocks at the bottom of the sequence; they are joined in younger Ordovician rocks by clathrodictyids. In the Llandoverly clathrodictyids make up 80 % of the fauna and labechiids are next in abundance. Many new families appear in the Llandoverly: atelodictyids, actinostromatids, gerronostromatids and pseudolabechiids. In the Wenlock beds occur the first densastromatids and the first representatives of the orders Stromatoporida, Stromatoporellida and Syringostromatida. The diversity maximum in Estonia was reached in the Ludlow Stage. The richest Stromatoporoids faunas are found in rocks deposited in high energy shoal environments.^1";
- 49 s[46] = "NESTOR H. (1999).- Community structure and succession of Baltoscandian early Palaeozoic Stromatoporoids.- Proc. Estonian Acad. Sci. Geology 48, 3: 123-139.- FC&P 29-1, p. 70, ID=7050^Topic(s): biocoenoses, biozonation; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician U - Silurian; Geography: Baltoscandia^Twenty-eight stromatoporida communities are defined, spreading in Upper Ordovician and Silurian deposits of Estonia, Sweden (Gotland), and Norway (Oslo Region). The communities are linked to the Standard Benthic Assemblages (BA) after Boucot (Evolution and Extinction Rate Controls, 1975). Successive stromatoporida faunas consist of imperfectly delimited lateral communities of different stratigraphical range and taxonomical diversity. The richest communities occur in the reef (shoal) facies corresponding to BA2. These have the shortest stratigraphical range and are laterally replaced by less diverse long-range communities. [original abstract]^1";
- 50 s[47] = "STASINSKA A. (1967).- Tabulata from Norway, Sweden and from the erratic boulders of Poland.- Palaeontologia Polonica .- FC&P 6-2, p. 22, ID=0161^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician Silurian; Geography: Norway, Sweden, Poland^The paper deals with the results of a detailed morphological and taxonomical investigation on the Tabulata from Norway, Sweden (Island of Gotland) and from the erratic boulders of Poland. The stratigraphical correlation of the Silurian in the above mentioned areas and in Estonia is given. These studies have also thrown some new light upon the development of Tabulata during the Silurian in the Scandinavian-Baltic region. A hundred and seven species assigned to twenty-six genera are described. Thirty-six of the species and four of the genera (Solenihalysites n.gen., Sparsisolonia n.gen., Kiaerites n.gen., Fayosipora n.gen.) are new ones. Moreover, a new family (Angoporidae) has been established^1";
- 51 s[48] = "MOTUS M.-A. (1997).- Tabulate corals. In Raukas A. and Teedumae A. (eds): Geology and mineral resources of Estonia Tallinn: 219-223.- Geology and Mineral Resources of Estonia [Raukas A. & Teedumae A. (eds)]: 219-223.- FC&P 35, p. 62, ID=1695^Topic(s): distribution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician Silurian; Geography: Estonia^Due to the favourable climatic and shallow-water conditions in the Estonian part of the Baltic Basin, tabulates played a significant role in the Late Ordovician and Silurian faunal assemblages. In Estonia, the earliest tabulates are known from

the Late Caradoc. *Lyopora tulaensis* Sokolov, *Saffordophyllum grande* Sokolov, *Eoflecheria orvikui* Sokolov, occur in the Vasalemma reef facies of the Oandu Stage. At the beginning of the Late Ordovician, the conditions for tabulates were unfavourable, therefore the fossils are rare. Only one species, *Catenipora obliqua* (Fischer-Benzon) has been recorded from the Nabala Stage. Diversification of the Late Ordovician tabulate fauna began in the Vormsi Age with the appearance of the first Paleofavosites - *P. schmidti* Sokolov and *P. borealis* Tshernyshev. The most ancient heliolitids (*Wormsipora*, *Esthonia*, *Protaraea*) are also known from the Vormsi Stage. Sarcinuliids and halysitids (*Catenipora*) became common for the first time. During the Pirgu Age diversification continued. The tetradiids (*Cryptolichenaria multiplex* Klaamann) appeared for the first time in the Baltic area. The halysitid *Eocatenipora* was widely distributed and early heliolitids were well developed. The Late Ordovician favositids were blooming in the Porkuni Age. The first records of *Porkunites*, *Mesofavosites* and *Priscosolenia* are from the same age. The beginning of the Silurian was a time of rapid diversification of *Mesofavosites* and *Paleofavosites*. [first part of extensive summary]^1";

- 52 s[49] = "CHERNS L. (1994).- A medusoid from the late Ordovician or early Silurian of Jamtland, central Sweden.- *Journal of Paleontology* 68, 4: 716-721.- FC&P 23-2.1, p. 53, ID=4396^Topic(s): ; Medusoid, Patanacta; Systematics: Cnidaria; Stratigraphy: Ordovician U? Silurian L; Geography: Sweden, Jamtland^Patanacta pedina n.gen. and sp. is interpreted as a medusoid from the late Ordovician or early Silurian of Jamtland, central Sweden. The unique specimen is from the Kyrkas Quartzite Formation, a poorly fossiliferous, allochthonous sequence of metasediments in a lower nappe of the frontal zone of the Scandinavian Caledonides. A marginal marine depositional environment is inferred for the Kyrkas facies.^1";
- 53 s[50] = "NESTOR H. (1995).- Ordovician and Silurian reefs in the Baltic Sea.- *Publications Service Géologique Luxembourg* 29: 39-47.- FC&P 29-1, p. 70, ID=1509^Topic(s): reefs, geography, morphology; reefs; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: Baltoscandia^Coral, stromatoporoid and algal reefs were developed in the marginal part of the gulf-like Baltic cratonic basin in Gotland, north and central Estonia, and east to central Lithuania. They are situated at different stratigraphic levels from the middle Caradoc up to the lower Pridoli. Their appearance coincided with the transition of the Baltic Basin from an epicontinental to pericontinental phase of development, and with shifting from a temperate to the tropical climatic zone. Most of these reefs had a flat or lenticular shape, as they grew in conditions of relative tectonic and eustatic stillstand. Extensive progradation of the reef belt took place during general regression of the basin at these times. The role of stromatoporoids increased in frame building towards the end of the Silurian. Shoal-barrier type reef tracts, developed at different stratigraphic levels, were situated in the middle part of a broad carbonate shelf (platform) on the SW margin of the Baltic craton. This contrasts with Recent barrier reefs, usually located at the shelf edge of eastern margins of continents.^1";
- 54 s[51] = "KLAAMANN E. (1977).- K korrelyacii razrezov visbyuskogo vodopada (o. Gotland) i glinta severnogo Saaremaa (Estonija) po korallam.- *Izvestiya Akademii Nauk Estonskoy SSR, Chimiya Geologiya* 26, 1: 33-37.- FC&P 6-2, p. 21, ID=0156^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: Baltoscandia^(Zur Korrelation des Wasserfallprofils von Visby (Gotland) und des Klints von Nord-Saaremaa (Estland) auf der Basis von Korallen). Aus der Zusammensetzung der Korallenassoziationen, deren Verbreitung und dem lithologischen Charakter der Ablagerungen im Wasserfallprofil von Visby (Abb.) wird gefolgert, daß die Profilabschnitte 0-10, 13-20 und

- 20-24,2 m (Schichten 1, 3 und 4) stratigraphische Analogien der Paramaja-Formation der Jaani Stufe (JjJP) Estlands, und das Interyall 10-13 m (haupt-sachlich Krinoidkalkstein, Schicht 2) - eine Analogie der Ninase-Formation (JjN) darstellen. Die Schichten oberhalb des Niveaus von 24,2 m (Schichten 5 und 6) entsprechen schon der Jaargarahu Stufe - der Vilsandi (JgV) und dem untersten Teil der Maasi-Formation (J2M). [original summary]^1";
- 55 s[52] = "KLAAMANN E., EINASTO R. (1982).- Coral reefs of the Baltic Silurian. (Structure, Facies relations).- Akademiya Nauk Estonskoy SSR; D. Kaljo & E. Klaamann (eds): Ecostratigraphy of the East Baltic Silurian: 35-40.- FC&P 12-1, p. 45, ID=6191^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: Baltic^In conclusion it can be said that during the whole Wenlock and Ludlow reefs were characteristic of the northern part of the Paleobaltic. They are especially abundant on Gotland, where at least 9 levels with reefs of different age have been preserved. Suggesting general regression of the basin, they replaced regularly each other towards the South and Southwest. The coincidence of the succession on Gotland and in Estonia shows the presence of reef belts situated roughly parallel to the shore line. This succession was partly interrupted at the end of the wenlock at the time of Silurian maximum regression (in Rootsikula time) when reef formation took place only on Gotland (evidenced by buildups in the uppermost Halla Beds, the Mulde and Klinteberg Beds). [original summary]^1";
- 56 s[53] = "RICHARDS R.P., DYSON-COBB M. (1976).- A Lingula-Heliolites association from the Silurian of Gotland, Sweden.- Journal of Paleontology 50, 5: 858-864.- FC&P 6-2, p. 22, ID=0160^Topic(s): symbiosis; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Sweden, Gotland^In the Silurian Hemse Group (Ludlovian) of Gotland, Sweden, Lingula occurs in burrows in Heliolites interstinctus Linnaeus and rarely in Densastroma podolicum (Yavorskiy). Statistical analysis of patterns of burrow occupancy and mode of burrow construction suggests that Lingula did not make the burrows, but occupied them after they were abandoned by the burrowing organism. Lingula preferred to occupy burrows in living Heliolites colonies, and was usually able to keep the burrows open in spite of continued coral growth. The relationship is interpreted as commensal, benefiting Lingula by providing a solid substrate and perhaps nematocyst protection from would-be predators. The virtual restriction of the relationship to Heliolites is attributed to the open structure of the Heliolites skeleton and its slow growth, as compared with the other available colonial coral, Favosites.^1";
- 57 s[54] = "BONDARENKO O.B. (1978).- Izmenchivost' i asto-filogeneticheskoye razvitiye nekotorykh pozdnesiluriyskikh Geliolitoid Podol'skogo Pridnestrov'ya. [variability and asto-phylogenetic changes in some Late Silurian heliolitoids from Podolyan Pridnestrovie; in Russian].- Paleontologicheskii Zhurnal 1978, 4: 13-31.- FC&P 8-1, p. 56, ID=0240^Topic(s): astogeny; Heliolitida, astogeny; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Ukraine, Podolia^Es wird gezeigt, dass bei den Gattungen Okopites und Dnestrites aus ein und demselben Biotop die zwischenkoloniale Veranderlichkeit geringer ist als die inner-koloniale. Innerhalb der Kolonien bewirkt der jährliche saisonale Wechsel (Cyclomorphose), verbunden mit Phasen der Vermehrung, einen komplizierten Bau. Die Eigentumlichkeit des Baues, bedingt durch Cyclomorphose in den dunklen Zonen in Phasen geschlechtlicher Vermehrung, verschiebt sich allmahlich in die helleren Zonen und in mehr fruhe Stadien der kolonialen Entwicklung. In der Phylogenese von Okopites und Dnestrites gleicht sich der Unterschied im Bau zwischen hellen und dunklen Zonen bei einigen Merkmalen aus, während er sich bei anderen verstärkt. Dies

hangt mit der Zeit des Erscheinens der Merkmale in der Evolution der Gruppen zusammen. [translated original summary; described are two new genera: Okopites n.gen. with the species O. okopinensis n.sp. and the subspecies O. okopinensis uniformis n.ssp., and Dnestrites n.gen. with the species D. transitus n.sp. and D. expectatus n.sp.; * Heliolites barrandei Lindstrom 1899 (pars) perhaps belongs to Okopites; as Synonyma of Okopites okopinensis okopinensis, Heliolites jackil Dun 1927 (pars), H. daintrei Jones & Hill 1940 (pars) are listed, as well as H. portentosus Bondarenko 1978; * Heliolites interstinctus (Fought 1745) from the Wenlockian of Visby, Gotland is mentioned as a species probably belonging to Dnestrites]^1";

- 58 s[55] = "KLAAMANN E. (1984).- Heliolitidy v poznesilurijskikh korallovykh soobshchestvakh Pribaltiki.- Izvestiya Akademii Nauk Estonskoy SSR, Chimiya Geologiya 33, 2: 63-69.- FC&P 13-2, p. 42, ID=0560^Topic(s): taxonomy, biostratigraphy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Baltic E^ [Heliolitids in the eastern Baltic Silurian coral communities] Two coral communities from the Ludlovian of the Ventspils boring (West Latvia) are discussed. The older one is restricted to the Engure Formation. It contains two species of heliolitid corals and Favosites gothlandicus, representing probably the deep water Halysites laticatenatus-Favosites gothlandicus community of Mulde and Hemse Marls of the Gotland area. The Dnestrites community comes from the Mituva Formation, from the Andreaolepis hedei Zone, mainly from an interregnum between that one and the Thelodus sculptilis vertebrate zones, corresponding to the Uduvere Beds of the Paadla Regional Stage. That community occupied the central part of the inner shelf, the vicinity of shoal sedimentary barriers where the organic buildups were developed. Six new species of heliolitid corals are described: Heliolites subdecipiens, Pseudoplasmodium longisepta, Saaremolites kurzemensis, Stelliporella baltica, Dnestrites ludlovicus and D. incognitus. They are the first heliolitids in the East Baltic Late Silurian coral communities.^1";
- 59 s[56] = "BONDARENKO O.B. (1985).- Izmenchivost' i morfogenez poznesilurijskikh geliolitoidov Paraheliolites - Pachyhelioplasma iz Podolskogo Pridnestrov'ya.- Paleontologicheskij Zhurnal 1985, 2: 15-19.- FC&P 15-1.2, p. 33, ID=0819^Topic(s): variability; Heliolitida variability; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Ukraine, Podolia^ [Variabilitat und Morphogenese obersilurischer Heliolitida Paraheliolites - Pachyhelioplasma aus dem podolischen Dnestr-Gebiet; in Russisch] Beschrieben wird die Variabilitat und Morphogenese zweier neuer Arten - Paraheliolites skalinensis (Bondarenko) und Pachyhelioplasma podolica (Bondarenko) aus dem podolischen Dnestr-Gebiet.^1";
- 60 s[57] = "VINN O., MOTUS M.-A. (2008).- The earliest endosymbiotic mineralized tubeworms from the Silurian of Podolia, Ukraine.- Journal of Paleontology 82, 2: 409-414.- FC&P 35, p. 67, ID=2371^Topic(s): endobionts of; Heliolitida, endobionts; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Ukraine, Podolia^ The earliest endosymbiotic tubeworms have been discovered within skeletons of the tabulate coral Heliolites sp. from the Silurian (Ludlow) of Podolia, Ukraine. The new tubeworm species has a maximum diameter about 1 mm, a slightly conical tube, a smooth lumen in the tube and a lamellar wall structure. The tube wall is 0.05-0.10 mm thick. The new endosymbiotic tubeworm Coralloconchus bragensis n.gen. and sp. shares zoological affinities with the tentaculitids (incertae sedis) and is assigned to the Family Cornulitidae (Tentaculita, Cornulitida).^1";
- 61 s[58] = "BENGTSON S. (1981).- Atractosella, a Silurian alcyonarian Octocoral.- Journal of Paleontology 55, 2: 281-294.- FC&P 11-2, p. 42, ID=1872^Topic(s): ; Octocorallia, Atractosella; Systematics: Cnidaria; Octocorallia; Stratigraphy:

- Silurian; Geography: Sweden, Gotland^Fusiform calcitic spicules occur abundantly in the Lower and Upper Visby beds and sparsely in the basal Hoegklint Beds on the Island of Gotland in the Baltic Sea. The stratigraphic interval spans the uppermost Llandoveryan to lowest Wenlockian. The spicules can be referred to the genus *Atractosella* Hinde 1888, previously interpreted as a sponge. The new species *A. cataractaca* is described on the basis of the Gotland material. The spicules are built up of concentric layers, representing stages of growth. The surface is usually covered with granula or small thorns. The calcite shows good alignment of the c axes parallel to the the spicule axis, but the direction may deviate up to $\pm 8^\circ$ between opposing sides of the spicule. Occasional branched spicules are interpreted as fused adjacent normal spicules. Two natural spicule associations on a bedding surface show the organism to have had a rounded outline and a diameter of a few centimeters. In all the investigated characters, *Atractosella* is indistinguishable from a modern soft coral of the family Alcyoniidae. It is interpreted as the earliest known representative of the octocoral order Alcyonacea, extending the range of this group from the Lower Jurassic to the Lower Silurian. *Mirmor andreae* Lamont 1978, described originally as an ostracoderm, is reinterpreted as a species of *Atractosella*. *A. cataractaca* is common in fine-grained sediments and may have lived attached to hard objects on soft bottoms. [original summary]^1";
- 62 s[59] = "BENGTSON S. (1981).- En laderkorall i Gotlands silur. [in Swedish, with English summary].- Fauna och Flora 76: 37-42, 7 figs.; Uppsala.- FC&P 10-2, p. 79, ID=6110^Topic(s): Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Silurian; Geography: Sweden, Gotland^[fusiform calcareous spicules occurring abundantly in the Silurian Visby Marls on the Island of Gotland in the Baltic Sea have been identified as belonging to a member of the octocoral order Alcyonacea (soft coral)]^1";
- 63 s[60] = "REICH M. (2002).- Skleren von Alcyonacea (Anthozoa: Octocorallia) aus einem Silur-Geschiebe Norddeutschlands.- Neues Jahrbuch für Geologie und Paläontologie, Monatshefte 2002, 9: 551-561.- FC&P 31-2, p. 51, ID=1707^Topic(s): sclerites; Octocorallia Alcyonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Silurian; Geography: Germany, erratics^Scleres of octocorals from a Geschiebe (glacial erratic boulder) of Wenlockian age found in northern Germany can be assigned to the Alcyonacea (soft corals). The fauna indicates an origin of this Geschiebe near the middle Baltic Sea, east of the Isle of Gotland. The early fossil record of octocorals is shortly discussed.^1";
- 64 s[61] = "NEUMAN B.E., HANKEN N.-M. (1979).- Rugose corals.- Sveriges Geologiska Undersökning C 762, 73, 3 [Jaanusson V., Laufeld S. & Skoglund R. (eds): Lower Wenlock faunal and floral dynamics, Vattenfallet section, Gotland]: 86-91.- FC&P 9-1, p. 36, ID=0265^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Sweden, Gotland^An annotated faunal list including taxonomic remarks is presented.^1";
- 65 s[62] = "KATO M. (1982).- *Nipponophyllum* (Rugosa) from Gotland, Sweden.- Stockholm Contributions in Geology 37, 9: 117-128.- FC&P 13-1, p. 32, ID=0441^Topic(s): Rugosa, *Nipponophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Sweden, Gotland^*Nipponophyllum*, a member of the family Holmophyllidae, is for the first time recorded from the Sundre Beds in Gotland. The genus is reviewed and its taxonomic position is discussed. *Nipponophyllum* is known to be distributed from Australia, through Japan, China, Central Asia, the Urals and Sweden to Great Britain, mostly from the Ludlovian strata. *Nipponophyllum simplex* (Lewis) and *Nipponophyllum hesslandii* n.sp. are described.^1";

- 66 s[63] = "KATO M., EZAKI Y. (1986).- Rugose corals from the Upper Silurian of Scania, Sweden.- Hokkaido University, Faculty of Science Journal 41, 4: 483-504.- FC&P 15-1.2, p. 28, ID=0879^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Sweden, Scania^Four species of rugose corals including two new species, Pilophyllun keimorii and Phaulactis variabilis are described from the upper Ludlovian Oved-Ramsasa Group of Scania, southern Sweden. An attempt is made at re-classifying and synonymizing genera belonging to the Streptelasmataceae, Lykophyllidae and Kyphophyllidae.^1";
- 67 s[64] = "KADLETS N.M. (1998).- Hermatypic and ahermatypic periods in the history of the coral genus Acervularia (Rugosa). [in Russian].- Ezhegodnik Tsentral'nogo Nauchno-Issledovatel'skogo Geologorazvedochnogo Muzeya imeni akademika F. N. Chernysheva 1995, 2: 6-15.- FC&P 32-1, p. 22, ID=1718^Topic(s): reefs; Rugosa, Acervularia; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Ukraine, Podolia^Illustrations of Acervularia ananas (Linné), Acervularia sokolensis kadlets, and Acervularia truncata (Wahlenberg) from Podolia, including protocorallite development and discussion of palaeoecology.^1";
- 68 s[65] = "NEUMAN B.E. (1988).- Some aspects of life strategies of Early Palaeozoic rugose corals.- Lethaia 21: 97-114.- FC&P 17-2, p. 29, ID=2186^Topic(s): life strategies; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Sweden, Gotland^Examination of some well-preserved specimens of Silurian rugose corals from Gotland reveals that the following categories of life strategies can be distinguished: ambitopic, liberoseessile, fixoseessile, rhizoseessile and possibly limited vagile. Most solitary rugose corals appear to have been liberoseessile and are characterized by initial attachment to a small sediment grain but subsequently becoming recumbent on a soft substrate. Detailed studies of Phaulactis angelini, Holophragma calceoloides, Laccophyllum lindstroemi, Rhegmaphyllum conulus and Rhabdocyclus ocksarvensis n.sp., and comparison with earlier described species, provide some new aspects on different life strategies for solitary corals.^1";
- 69 s[66] = "JOHANNESSEN W.H. (1995).- Nanophyllum, a new monotypic rugose coral genus from the Lower Silurian of Gotland.- GFF 117: 53-55.- FC&P 24-2, p. 83, ID=4571^Topic(s): new taxa; Rugosa, Nanophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: Sweden, Gotland^The genus Nanophyllum is here established. The generic affinities to Donacophyllum and Entelophyllum is discussed. The type species N. ramosum n.gen. et n.sp. is described and illustrated.^1";
- 70 s[67] = "WEYER D. (1974).- Zur Kenntnis von Rhegmaphyllum wedekind 1927 (Anthozoa, Rugosa; baltoscandisches Silur).- Zeitschrift der geologischen Wissenschaften 1974, 2, 2: 157-183.- FC&P 4-1, p. 40, ID=5152^Topic(s): ; Rugosa, Rhegmaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Baltoscandia^1";
- 71 s[68] = "NEUMAN B.E. (1982).- Early Silurian rugose corals of the Oslo Region (preliminary report).- Paleont. Contr. Univ. Oslo 278 [D. Worsley(ed.): Field Meeting Oslo Region 1982; IUGS, Subcommission on Silurian Stratigraphy]: 33-42.- FC&P 12-2, p. 29, ID=6208^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: Norway, Oslo^Rugose corals are well represented in late Ordovician and Silurian rocks of the Oslo Region, but very few Silurian taxa have yet been described or correctly identified. Some rugose corals representative for the different Silurian formations are here listed and illustrated. At present, the stratigraphic value of the Silurian rugose corals from the Oslo Region is limited, but the comparatively rich faunas have an

- undoubted potential in this respect. [original summary]^1";
- 72 s[69] = "KADLETS N.M. (1978).- Acervulariidy (Rugosa) iz Silura Podolii. [Silurian Acervularikidae (Rugosa) from Podolya; in Russian].- Paleontologicheskii Zhurnal 1978, 4: 42-48.- FC&P 8-1, p. 51, ID=5686^Topic(s): ; Rugosa, Acervulariidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Ukraine, Podolia^Analysis of literature concerning the Silurian colonial corals with an inner wall and investigation of a collection of those corals from the Silurian of Podolya, allow reinforcement of the opinion that these corals with an inner wall belong to only two genera (Acervularia and Diplophyllum). * Two species of Acervularia are described from Podolia: A. ananas (Linne 1758) of wenlockian age, and A. sokolensis n.sp. of Ludlowian age. * Measurements of the latter: corallite diameters about 14mm, number of septa up to 48, tabularium diameters up to 5mm, tabulae 6-12 within 5 mm. One row of dissepiment between outer and inner wall, rarely two rows but inside the wall there are one to three rows.^1";
- 73 s[70] = "HANNISDAL B. (2001).- Cladistic analysis of entelophyllid rugose corals from the Silurian of northern Europe: some methodological aspects.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 050-061.- FC&P 30-1, p. 19, ID=7062^Topic(s): cladistic taxonomy; Rugosa Entelophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Europe N^The construction of a character taxon matrix is fundamental to cladistic analysis, and some of the methodological issues involved in the making of such a data matrix are discussed. Three aspects are emphasized: (1) character construction, (2) coding procedure, and (3) the use of non morphological data. Characters used in cladistic analyses are constructed, on the basis of observed variation, in a manner that fits a specific taxonomic problem. In rugose coral species, morphological variables are commonly continuous and quantitative. There is a subtle interaction between observation of variables and semantics of character naming, with non trivial implications for parsimony analysis. Character coding can be approached in several ways, and two contrasting methods of coding are considered: (A) composite (multi state) coding, and (B) reductive (absence/presence) coding. Skeletal morphology may be insufficient for resolution of rugose coral phylogeny, suggesting the use of additional sources of data. Methods of incorporation of stratigraphic information in the data matrix pay little attention to the nature of the sedimentary record, and a more rigorous evaluation of relationships between stratigraphy and phylogeny is recommended. Examples are drawn from a preliminary study applying cladistics to entelophyllid rugose coral species from the Silurian of northern Europe. Consensus cladograms from alternative search settings are here included to illustrate effects of different approaches. Specific choice of procedure affects homology assessment, character distribution, and tree topology. If the data matrix is to be accessible to other workers, and subject to testing, the construction of the data matrix must be made explicit as far as possible. [original abstract]^1";
- 74 s[71] = "SCRUTTON C.T., HORSFIELD W.T., HARLAND W.B. (1976).- silurian fossils from western Spitsbergen.- Geological Magazine 06: 519-523.- FC&P 7-1, p. 23, ID=0181^Topic(s): ; fossils; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Silurian; Geography: Spitsbergen^Silurian fossils have been identified from Oscar II Land, western Spitsbergen. They are the first silurian fossils from Spitsbergen and threw new light on regional correlations and dating of Palaeozoic orogenic events in the region. The corals mentioned are the rugosan genera Ketophyllum, Dokophyllum, Tryplasma, Phaulactis and the tabulate coral Palaeofvosites and Catenipora. [part of original summary]^1";
- 75 s[72] = "OEKENTORP K. (2004).- Professor Dr. Erik Flügel.- FC&P 33, 1:

- 9-10.- **FC#038;P 33-1**, p. 9, ID=7165^**Topic(s):** **biographical;** **Systematics:** **Stratigraphy:** **Geography:** **born** 7. 04. 1934 Fürstenfeld, Österreich [died] 14. 04. 2004 Erlangen, Deutschland. * Prof. Dr. Erik Flügel, Emeritus, Chair-holder and founder of the Institut für Paläontologie der Universität Erlangen-Nürnberg and Member of the International Association for the Study of Fossil Cnidaria and Porifera passed away on April 4th 2004 - only 8 days after his 70th birthday. He was an international recommended and well known as well as an esteemed scientist. He was a passionate researcher, unremitting organizer in science and an appreciative colleague.^1";
- 76 s[73] = "MORI K. (1978).- Stromatoporoids from the Silurian of the Oslo Region, Norway.- Norsk Geologisk Tidsskriftning 58: 121-144.- **FC#038;P 8-1**, p. 50, ID=0210^**Topic(s):** **stroms;** **Systematics:** **Porifera;** **Stromatoporoidea;** **Stratigraphy:** **Silurian;** **Geography:** **Norway, Oslo**^**Stromatoporoids of the genera Clathrodictyon, Ecclimadictyon, Plectostroma, Stromatopora, Pseudostylodictyon, are described. The new genus Osلودictyon, with type species O. henningsmoeni Mori is described.^1";**
- 77 s[74] = "NESTOR H. (1979).- Stromatoporoids.- Sveriges Geologiska Undersökning C 762, 73, 3 [v. Jaanusson, S. Laufeld & R. Skoglund (eds): Lower Wenlock faunal and floral dynamics, Vattenfallet section, Gotland]: 63-64.- **FC#038;P 9-2**, p. 51, ID=0373^**Topic(s):** **stroms;** **Systematics:** **Porifera;** **Stromatoporoidea;** **Stratigraphy:** **Silurian Wen;** **Geography:** **Sweden, Gotland**^[an annotated faunal list of the stromatoporoids collected with great stratigraphic precision from the Upper Visby and Hogklint limestones is presented]^1";
- 78 s[75] = "KERSHAW S. (1984).- Patterns of Stromatoporoid growth in level-bottom environments.- Palaeontology 27, 1: 113-130.- **FC#038;P 13-1**, p. 50, ID=0535^**Topic(s):** **growth patterns;** **stroms;** **Systematics:** **Porifera;** **Stromatoporoidea;** **Stratigraphy:** **Silurian;** **Geography:** **Sweden, Gotland**^**Stromatoporoids in argillaceous level-bottom limestones of the Upper Visby Beds in the Silurian of Gotland, Sweden, show a variety of features of growth forms, within a spectrum of coenosteal shapes from laminar through low to high domical. Many coenostea show interdigitations of sediment in their margins, attributable to intermittent sedimentation, while others show abrupt changes in growth direction, which are the result of movement, often leading to overturning. Stromatoporoids frequently survived these agents and continued to grow, often resulting in different morphotypes from those which would have been produced in the absence of sedimentation and movement; serious problems of shape identification and shape classification exist as a consequence. Variations in the effects of sedimentation and movement are recognizable in the specimens studied and the Stromatoporoids therefore record a variety of events occurring at the sea bed during their lives.^1";**
- 79 s[76] = "BOGOYAVLENSKAYA O.V. (1982).- Ekologicheskiye tipy stromatoporat Siluriyskogo basseyna Podolii [Ecologic types of stromatoporoids of the Silurian Podolia basin].- Trudy Instituta Geologii i Geofiziki Novosibirsk 510: 115-126 [Betekhtina O. A. & Zhuravleva I. T. (eds): Sreda i zhizn' v geologicheskom proshlom: paleolandshafty i biofatsii].- **FC#038;P 14-1**, p. 54, ID=1030^**Topic(s):** **ecology;** **stroms;** **Systematics:** **Porifera;** **Stromatoporoidea;** **Stratigraphy:** **Silurian;** **Geography:** **Ukraine, Podolia**^1";
- 80 s[77] = "SANDSTROM O., KERSHAW S. (2002).- Ludlow (Silurian) stromatoporoid biostromes from Gotland, Sweden: facies, depositional models and modern analogues.- Sedimentology 49, 3: 379-395.- **FC#038;P 31-2**, p. 16, ID=1669^**Topic(s):** **reefs stromatoporoid, biostromes;** **reefs stroms;** **Systematics:** **Porifera;** **Stromatoporoidea;** **Stratigraphy:** **Silurian Ludl;** **Geography:**

- Sweden, Gotland^Stacked stromatoporoid-dominated biostromes of the Ludlow-age Hemse Group (Silurian) in eastern Gotland, Sweden, are 0.5-5 m thick and a few tens of metres to >1 km in lateral extent. They form one of the world's richest Palaeozoic stromatoporoid deposits. This study compiles published and new data to provide an overall facies model of these biostromes, which is assessed in relation to possible modern analogues. Some of the biostromes have predominately in-place fossils and are regarded as reefs, but lack rigid frameworks because of abundant, low-profile, non-framebuilding stromatoporoids: other biostromes consist of stromatoporoid-rich rudstones interpreted here as storm deposits. [first part of extensive abstract]^1";
- 81 s[78] = "KERSHAW S. (1980).- Cavities and cryptic faunas beneath non-reef stromatoporoids.- Lethaia 13: 327-338.- FC&P 11-2, p. 36, ID=1856^Topic(s): generating cryptic habitats; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Sweden, Gotland^Important ecological conclusions concerning the presence of cavities beneath stromatoporoids found in level bottom communities in the Silurian of Gotland are made in this paper.^1";
- 82 s[79] = "NIELD E.W. (1986).- Non-cryptic encrustation and pre-burial fracturing in stromatoporoids from the upper Visby beds of Gotland, Sweden.- Palaeogeography, Palaeoclimatology, Palaeoecology 055: 35-44.- FC&P 16-1, p. 76, ID=2019^Topic(s): bioencrusters; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Wen; Geography: Sweden, Gotland^[high domed stromatoporoids are encrusted by organisms that show a preference for either lower or upper flanks. Coverage was twice as dense at the apex due to progressive burial by the substrate. Radial fractures formed before burial and in some cases before encrustation]^1";
- 83 s[80] = "NESTOR H. (1990).- Biogeography of Silurian stromatoporoids.- Geological Society Memoir 12 [McKerrow W. S. & Scotese C. R. (eds.): Paleozoic Palaeogeography and Biogeography]: 215-221.- FC&P 19-1.1, p. 66, ID=2701^Topic(s): biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Estonia^The distribution of well-dated stromatoporoid faunas in Llandovery, Wenlock, Ludlow, and Pridoli times are shown in 2 maps; the generic composition of the faunas is given in four tables; the major change from labechiid-dominated faunas to clathrodictyid ones took place before the beginning of Silurian time; Late Llandovery faunas are widespread and cosmopolitan; the acme of diversity occurred in Wenlock time when actinostromatids and stromatoporids joined the clathrodictyonids; progressive restriction of the distribution of stromatoporoid faunas occurred in Ludlow and Pridoli time^1";
- 84 s[81] = "KERSHAW S. (1990).- Stromatoporoid palaeobiology and taphonomy in a Silurian biostrome on Gotland.- Palaeontology 33: 681-705.- FC&P 19-2.1, p. 11, ID=2728^Topic(s): strom buildups, biology; strom reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Sweden, Gotland^Sixteen species of various morphologies occur in the Kuppen bioherm. Some, such as Clathrodictyon mohanicum have a specific growth style (laminar to low domical) yet others (eg. Plectostroma intermedium) show a range of growth forms from low to high domical that suggests phenotypic plasticity but actually results only from some individuals growing longer than others. Taller forms were more commonly turned over by storms. Some species responded to environmental gradients by modifying growth form. Most stromatoporoids grew on stable substrates provided by dead stromatoporoids. Cathodoluminescence suggests they secreted calcite.^1";
- 85 s[82] = "KANO A. (1990).- Species, morphologies and environmental relationships of Ludlovian (Upper Silurian) stromatoporoids on Gotland, Sweden.- Stockholm Contributions in Geology 42, 2: 85-121.- FC&P 19-2.1, p. 41, ID=2776^Topic(s): morphology,

- ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Ludl; Geography: Sweden, Gotland^The growth forms of 922 specimens from 3 localities were analysed quantitatively in order to compare sedimentary environments. Loose bottoms, with low sedimentation rates result in ambitopic laminar low domical, enveloping high domical to bulbous forms and intermediate skeletons of various forms. Growth is controlled by both genetic and environmental factors. Sedimentation stress results in ragged margins and incorporated sediment. Parallelostroma typicum dominated areas of heavy sedimentation; enveloping Plectostroma scaniense and P. typicum dominated hard bottoms.^1";
- 86 s[83] = "KANO A. (1991).- Stromatoporoid palaeoecology in the Ludlovian of Gotland; a reply.- GFF 113: 247-248.- FC&P 21-1.1, p. 59, ID=3272^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Ludl; Geography: Sweden, Gotland^[This is a reply to Kershaw's discussion (Kershaw 1991) and comments on the nature of the data, rules of Stromatoporoid growth, ambitopic species, and substrate preference as a control of form]^1";
- 87 s[84] = "KERSHAW S. (1991).- Stromatoporoid palaeoecology in the Ludlovian of Gotland: a discussion.- GFF 113: 245-246.- FC&P 21-1.1, p. 59, ID=3273^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Ludl; Geography: Sweden, Gotland^Objections are raised to Kano's (1990) division of growth forms into enveloping, ambitopic and intermediate. His substrate-related interpretations are not justifiable on the basis of his data.^1";
- 88 s[85] = "KERSHAW S. (1993).- Sedimentation control on growth of stromatoporoid reefs in the Silurian of Gotland, Sweden.- Journal of the Geological Society, London 150: 197-205.- FC&P 23-2.1, p. 20, ID=3414^Topic(s): strom buildups, growth; strom reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Sweden, Gotland^These reefs are formed during phases of reduced clastic supply. Hogklint reefs began as bioherms and were replaced by biostromal phases as water shallowed. Low clastic supply reduced not only the clay input but also lowered nutrient levels. Modern reefs develop best in low nutrient conditions and show suppressed bioerosion and increased symbiosis. Hogklint and Hemse reefs are interpreted as having grown in nutrient-deficient conditions. Reef growth could ultimately be controlled by eustatic changes or climate control. A model of alternating wet and dry episodes interpreted as CO2-driven is proposed.^1";
- 89 s[86] = "KERSHAW S. (1997).- Palaeoenvironmental change in Silurian stromatoporoid reefs, Gotland, Sweden.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 329-342.- FC&P 26-2, p. 18, ID=3694^Topic(s): strom buildups, ecology; strom reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Sweden, Gotland^Stromatoporoid-dominated biostromal reefs of Ludlow age in Gotland, Sweden, are well-known to display a densely packed suite of stromatoporoid growth forms from laminar to tall domical which are species or genus specific. Biostrome facies comprise clays and packstones / grainstones containing debris of stenohaline marine groups (crinoids, bryozoa, brachiopods), supplemented by debris of reef-building stromatoporoids and corals. Recent sampling reveals previously unresearched significant differences in stromatoporoid growth forms, of the same morphospecies, in stratigraphically-closely related biostromes, in broadly similar environments. [first part of extensive summary]^1";
- 90 s[87] = "SANDSTROM O. (1998).- Sediments and stromatoporoid morphotypes in Ludfordian (Upper Silurian) reefal sea stacks on Gotland, Sweden.- Geologiska Foereningens i Stockholm Foerhandlingar (GFF) 120: 365-371.- FC&P 28-2, p. 39, ID=4039^Topic(s): sedimentology,

stroms shapes; sedimentology, stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Ludf; Geography: Sweden, Gotland^The morphological range of stromatoporoids is strongly related to depositional environment. In high energy environments, characterized by packstones and grainstones, low profile forms predominate, whereas in calmer settings, characterized by wackestones and packstones, high profile stromatoporoids dominate. Four rock units are recognized, representing two major facies: reeflike limestones and detrital grainstones. Reeflike limestones comprise a variety of lithologies including wackestones, packstones, boundstones, and framestones. All units are shallow marine but the occurrence of crystal silt may indicate a vadose situation on the top of the reeflike facies. In the reeflike units hard substrates for stromatoporoid growth were probably provided by microbial sedimentation. Sedimentation rates were generally low although episodic high sedimentation occurred as indicated by raggedness in stromatoporoid skeletons. The stromatoporoid fauna is considered a low diversity assemblage dominated by *Parallelostroma typicum*. Other species found are: *Pycnodictyon densum*, *Stromatopora venukovi*, *S. bekkeri*, *Petridiostroma convictum*, *Ecclimadictyon robustum*. "Since measurements of skeletons were made in the field, and due to limited amount of sampling, species confined to certain shapes were not distinguished."^1";

91 s [88] = "KERSHAW S. (1994).- Cathodoluminescence of Silurian stromatoporoids from Gotland.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 307-318.- FC&P 23-1.1, p. 22, ID=4088^Topic(s): research methods, cathodoluminescence; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Sweden, Gotland^Cathodoluminescence (CL) response of stromatoporoids from the Silurian of Gotland, Sweden, varies from none to brightly luminescent. The greater contrast shown with CL can help with identification of poorly preserved stromatoporoids. In normal light, stromatoporoids show a range of alteration of skeletal structure from apparently well preserved to strongly altered. In cross-polarized light, skeletal elements are overprinted by large, bladed to irregular calcite crystals, even in apparently well-preserved specimens, and irrespective of microstructure, thereby demonstrating at least partial alteration in all samples examined. The most common stromatoporoid microstructure, termed compact, consists of irregularly arranged micritic calcite crystals, which show a trend towards aggrading neomorphism when altered; this is seen most clearly under CL. The CL response in relatively well-preserved stromatoporoids with a compact structure normally consists of a speckled mixture of micritic non-, dull and bright luminescent crystals, also micritic in normal light. This is probably close to its original texture, and earlier SEM studies by others concur with this. Recent work shows that modern shells can luminesce, and exhibit a range of CL response, even in different individuals of the same species, reflecting minor variations in the skeletal composition. Therefore, the variation of intensity of CL in the speckling within stromatoporoid microstructure may indicate original compositional variations, but in view of the partial recrystallization of even well-preserved skeletons, separating CL response of the original microstructure and that of diagenetic alteration, is not practicable. However, in the present material, CL response generally shows the same textural features as the normal light view, and so the main advantage of its use is that these are more clearly seen under CL. Stromatoporoids are normally more recrystallized than brachiopods and rugose and tabulate corals (interpreted originally Low Mg calcite), but better preserved than molluscs of originally aragonitic composition. This has led to previous suggestions of a High Mg calcite composition, but variation of state of preservation between species in the same facies suggests variation in original skeletal

- mineralogy; different stromatoporoid species probably secreted either aragonite or High Mg calcite skeletons, with the possibility of varying Mg concentrations.¹";
- 92 s[89] = "KERSHAW S., KEELING M. (1994).- Factors controlling the growth of stromatoporoid biostromes in the Ludlow of Gotland, Sweden.- Sedimentary Geology 89: 325-335.- FC&P 23-1.1, p. 79, ID=4179Topic(s): strom buildups, growth; strom reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Ludl; Geography: Sweden, GotlandLower wenlock bioherms grew during a relative sea-level fall, on substrates of limited lateral extent and sediment accumulated around and on the reefs as they grew. Middle Ludlow biostromes were determined by low levels of clastic supply, laterally extensive suitable substrate, relatively stable sea level and largely flat sea beds in shallow-water conditions. The biostromes contain high and low profile forms and show differences from upper Ludlow representatives of the same species which are low profile only. Controls on growth may include: substrate consistency, environmental energy, and closer adaptation by the same species between middle and upper Ludlow times. Biostromes on Gotland may form when sea level is stable and a dry climate ensures low clastic input.1";
- 93 s[90] = "KERSHAW S. (1981).- Stromatoporoid growth form and taxonomy in a Silurian biostrome, Gotland.- Journal of Paleontology 55, 6: 1284-1295.- FC&P 10-2, p. 14, ID=6071Topic(s): growth forms; stroms, growth forms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Sweden, GotlandA biostrome at Kuppen, in the middle Ludlow Hemse Beds (Silurian) on Gotland, Sweden, is dominated by densely packed laminar, domical and bulbous stromatoporoids to the exclusion of almost all other organisms. Within the biostrome two contrasting growth forms developed, growing together in the same environment. Clathrodictyon mohicanum Nestor forms laminar to low domical shapes, while Stromatopora bekkeri Nestor and Plectostroma scaniense Mori developed higher domical and bulbous shapes. The interactions between environmental factors and the genotype brought about the development of characteristic shapes (phenotype) for each species. P. scaniense and C. mohicanum show these and other morphotypes elsewhere on Gotland, while S. bekkeri forms only higher domical shapes within the limits of its known occurrence on Gotland. P. scaniense has the greatest potential genotypic plasticity for shape variability and shows a sensitivity to the environment not shared by the other two species. Variations in environmental conditions and changes in selection pressures and functional requirements of stromatoporoids appear to be responsible for shape variations. Identifying genetic components of shape, and showing how they relate to associated faunas and environments should make interpretations of stromatoporoid morphology more meaningful. [original abstract]1";
- 94 s[91] = "NESTOR H. (1982).- Middle Silurian stromatoporoid succession.- Akademiya Nauk Estonskoy SSR; D. Kaljo & E. Klamann (eds): Ecostratigraphy of the East Baltic Silurian: 43-50.- FC&P 12-1, p. 43, ID=6185Topic(s): biozonation; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian M; Geography: Baltic EThe present paper distinguishes five successive stromatoporoid communities spread in the shallow water sections of the Baltic Silurian Basin, in the stratigraphical interval corresponding to the wenlock Series by now accepted correlations. In the ascending order they are: Stromatopora impexa, Vikingia tenuis, Ecclimadictyon astrolaxum, Labechia conferta and Parallelostroma tenellum Communities. However, there is a possibility that the last community already belongs to the lowermost Ludlow. Potentially these communities may serve as a basis for a zonal stromatoporoid standard of the Baltic and adjacent regions. In the same stratigraphical interval in deeper water, marginal areas of the distribution of stromatoporoids, two communities are distinguished:

- Densastroma pexisum and Pycnodictyon densum. [original summary]^1";
- 95 s[92] = "LUCZYNSKI P., SKOMPSKI S., KOZLOWSKI W. (2009).- Sedimentary history of Upper Silurian biostromes of Podolia (Ukraine) based on stromatoporoid morphometry.- Palaeogeography, Palaeoclimatology, Palaeoecology 271, 3-4: 225-239.- FC&P 36, p. 37, ID=6403^Topic(s): sedimentology, stroms biostromes; sedimentology, stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian U; Geography: Ukraine, Podolia^The sedimentary history of stromatoporoid biostromal accumulations reflecting various depositional conditions (autoparabiostromes and parabiostromes) is studied in two isochronous, Late Silurian carbonate sections of the Malynivtsy Formation from Podolia (western Ukraine, Kam'janec' Podil'skij area). This study focuses on morphometrical analysis of massive stromatoporoids. Various stromatoporoid attributes, such as growth form, volume, surface character etc., are interpreted in terms of growth environments. Attributes of redeposited specimens are also analysed in terms of their susceptibility to exhumation and redeposition, and new criteria are presented in this matter. The exposed facies succession, which can be subdivided into three units: an oncolitic-fenestral complex and the stromatoporoid-coral complexes that underlie and cover it, represents the belt of shoals located at a considerable distance from shore, and its transition to a narrow zone of back-shoal tidal flats. The facies patterns proved to be strongly obscured by an intensive process of onshore redeposition of material during high energy episodes. These events caused exhumation and landward transport of stromatoporoids inhabiting soft-sediment bottoms of outer shelf areas, which were afterwards accumulated in parabiostromes in calm waters on lee side of a zone of shoals. The main process governing the distribution of redeposited stromatoporoids is fractional (weight) segregation. The high energetic events had less effect on stromatoporoid-coral autoparabiostromes that formed the zone of shoals, which were inhabited by stromatoporoids better adapted to permanent wave action, but nonetheless, they caused their partial reworking and depletion from those forms that did not resist redeposition, on the one hand, and supplementation by specimens derived from offshore areas, on the other. [original abstract]^1";
- 96 s[93] = "KERSHAW S. (1987).- Stromatoporoid-coral intergrowths in a Silurian biostrome.- Lethaia 20, 4: 371-380.- FC&P 17-1, p. 40, ID=2161^Topic(s): symbiosis ?; stroms, Anthozoa, intergrowth; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Silurian; Geography: Sweden, Gotland^Four stromatoporoid species from a stromatoporoid biostrome in the middle Ludlow Hemse Beds, Gotland, Sweden, show intergrowths with syringopoid tabulate and rugose corals, and indicate close relationships between particular coral and stromatoporoid species. The stromatoporoid Clathrodiction convictum always contains ?Syringopora and this tabulate is rarely found in the other stromatoporoids. C. convictum is also closely associated with Tryplasma flexuosum (rugosa) while Petrozium pelagicum (rugosa) occurs only in the stromatoporoids Plectostroma intermedium and Parallelostroma typicum. The microstructure of ?Syringopora within the stromatoporoids is composed of an inner lamellar layer and an outer radial layer of calcite crystals. Diagenetic alteration has affected the microstructure which differs from recently described Devonian forms having only a radial layer. This shows variability in the structure of the tabulates within stromatoporoids. Information is sparse on the range of such variation and assessment of the relative importance of taxonomic, palaeoenvironmental and diagenetic effects is not possible in the present sample. No evidence is found to prove the precise nature of the relationships; they were not parasitic but may have been mutually symbiotic, or (most probably) commensal. The results suggest that the

corals selected the most suitable stromatoporoid species for their requirements. Stromatoporoid morphology may have had an important influence on the association, where corals are more abundantly associated with those stromatoporoid species which adopted a high profile. Overall the associations appear to have allowed the corals to explore higher energy habitats otherwise unavailable to their delicate branching structure.^1";

- 97 s[94] = "STEL J.H., De COO J.C.M. (1977).- The Silurian Upper Burgsvik and Lower Hamra-Sundre beds, Gotland.- Scripta Geologica 044: 1-43.- FC&P 8-1, p. 50, ID=0214^Topic(s): geology; geology; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^Five facies are recognized in the Upper Burgsvik and Lower Hamra-Sundre Beds on account of a lithological and paleobiological analysis : I) siliciclastic. II) bioclastic, III) oolitic/pisolitic, IV) oncolitic/biostromal, and V) crinoidal facies. The facies represent five depositional environments : a beach, a fore-shore, a surf, a shallow marine current, and an off-shore environment. The diversity and colony shape of tabulates in facies IV is related to discrete physical and biological factors. The succession of facies reflects a transgressive sequence. Land was situated in the north-west.^1";
- 98 s[95] = "KLAAMANN E. (1977).- Ueber die silurischen Tabulatenassoziationen Estlands und der Insel Gotland.- Academy of Sciences Estonian SSR, chem. geol 26 (3): 203-210.- FC&P 7-1, p. 23, ID=0183^Topic(s): assemblages; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Baltoscandia^This paper compares the Silurian Tabulate associations of the Baltio area with those of the island of Gotland (Sweden). These faunas are of great importance for zonal formations in the Baltic-Scandinavian area. During the Silurian time the Tabulate corals lived in shallow and detritic facies (Kaljo 1970). In the Silurian time a corresponding fauna with equivalent genera and species is mostly found in Estonia as well as on the island of Gotland. But some differences occur which are laid down in the following. During the middle and late Llandovery Gotland lacks a coral fauna. Thereafter, in the upper Llandovery two faunal associations exist: in Estonia the Mesofavosites obliquus - Favosites favosus group. At the same time the [gayosites] stoermeri group is found on Gotland and in Norway. During the Wenlockian time Estonia shows a restricted poor fauna, whereas on Gotland the rich F. lichenarioides - Pachypora lamellicornis group is typical. From the Hogklint or Jaani stage onwards both areas again show similar development. With the beginning of the Ludlow a lagoon facies, characterized by Parastriatopora commutabilis association, is found in Estonia, whereas the former conditions continue on Gotland. A greater unification is typical since the Hemse-Paadla stage. The F. subgothlandicus group follows the F. effusus association. But in the Baltic area the first one can be subdivided by Thecia swinderniana and the younger Laceripora cribrosa. The Paadla-Hemse fauna is widespread; species of this association are found in the Northern Ural, the Siberian platform, Central Asia and Podolia. Since the Upper Ludlow the Tabulate corals are retrograde. In Estonia three different groups are to be distinguished: the older F. forbesi - F. similis group, the F. pseudoforbesi muratsiensis - Paleofavosites moribundus group and the youngest F. pseudoprhcai ohesaarensis group. Because the upper two groups are lacking on Gotland, it is concluded that the Silurian is more complete in Estonia: in the lower part as well as in the uppermost part.^1";
- 99 s[96] = "KLAAMANN E. (1982).- Tabulate communities (Late Wenlock and Ludlow Gotland).- Communities and biozones in the Baltic Silurian: 35-50 [Kaljo D. & Klaamann E. (eds)].- FC&P 13-1, p. 43, ID=0498^Topic(s): communities; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Wen Ludl; Geography: Sweden, Gotland^^1";

- 100 s[97] = "KLAAMANN E. (1984).- Tabulyaty Yaniskogo i Yagarakhuskogo gorizontov (Wenlok Estonii) i ikh biozony.- Paleontologiya drevnego paleozoya Pribaltiki i Podolii [E. Klaamann (ed.)]: 3-40; Academy of Sciences Estonian SSR, Inst. Geol.- FC&P 13-2, p. 41, ID=0559^Topic(s): zonation; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Estonia^The taxonomy and the distribution of tabulate and heliolitid corals in the Palaeobaltic Wenlockian basin are described based on material mainly obtained from borehole sections. Out of 13 species three are new: Rhiphaeolites lamelliformis, Striatopora coenitoides and Parastriatopora priva. Based on these tabulate corals, the Jaani and Jaagarahu stages are subdivided into the following zones: Angopora hisingeri (as the uppermost zone) - Halysites senior - Favosites jaaniensis - Favosites mirandus - Halysites junior / Paleofavosites tersus - Rhiphaeolites lamelliformis (as the lowermost zone). These zones are correlated with the zones of the chinitozoans and with the international graptolite standard.^1";
- 101 s[98] = "HELM C. (1999).- Astogenese von Aulopora cf. enodis Klaamann 1966 (Visby-Mergel, Silur von Gotland).- Paläontologische Zeitschrift 73, 3/4: 241-246.- FC&P 29-1, p. 60, ID=1461^Topic(s): astogeny; Tabulata, Aulopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: Sweden, Gotland^This paper deals with bifurcation angle of a reptant dichotomously branching Aulopora cf. enodis colony (Silurian, Gotland). It can be demonstrated, that during early astogenetic growth the branching angle between offsetting corallites decreases rapidly from 165° to 100° averagely during later growth stages. This growth pattern resembles development of similar dichotomous branching uniserial bryozoans, e.g. Paleozoic Corynotrypa species or Mesozoic Stromatopora species.^1";
- 102 s[99] = "CALNER M., SANDSTROM O., MOTUS M.A. (2000).- Significance of a Halysitid-Heliolitid mud-facies autobiostrume from the Middle Silurian of Gotland, Sweden.- Palaios 15, 6: 511-523.- FC&P 31-2, p. 52, ID=1591^Topic(s): reefs; Tabulata, reefs; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^A low-diversity halysitid-heliolitid autobiostrume from the Late Wenlock Halla Formation at Blåhäll 1, Gotland, indicates a brief period of particular environmental conditions. The reef is 0.3-0.5 m thick, internally without bedding structures, and had a sheet-like distribution on a low-relief soft-bottom, in marginal platform, graptolitiferous strata (height-width ratio is 1:900 in outcrop). The dominating coral species building this mud-facies biostrome were the tabulates Stelliporella cf. parvostella and Halysites latitenatus. The rugose coral fauna is dominated by fixosessile and rhizosessile forms with well developed holdfasts, for example Dokophyllum elegantulum. Coral growth forms generally indicate high background sedimentation rates during the growth of the biostrome. Four successive stages of sea-floor development are discussed: (1) a pre-biostrome stage, (2) a pioneering community stage, (3) a climax-community stage, and (4) a post-biostrome stage. Stratigraphically, these stages show an increased carbonate-siliciclastic ratio, a decreased phosphorus content, somewhat lighter d18 stable isotopes, and an increased rate of bioturbation. The climax-community stage coincides with a bloom(?) in paleocopid and metacopid ostracods. The biostrome differs from all other Wenlock-Ludlow reefs on Gotland in its geographic and stratigraphic isolation on the seaward slope of the carbonate platform. It was the first re-appearance of a reefal structure following the oceanic Mulde Event and associated eustasy. On a regional scale, this appearance coincide with an inferred high-stand systems tract and the onset of widespread reef growth in the basin indicating that, at least, basin-regional factors controlled reef growth.^1";
- 103 s[100] = "MOTUS M.-A. (2001).- Environmental related morphological

- variation in Early Silurian tabulate corals from the Baltic area.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 062-069.- FC&P 30-1, p. 19, ID=2364^Topic(s): phenotypic variation; Tabulata, ecology; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Baltoscandia^The morphology of two species, Halysites catenularius (Linnaeus, 1767) and Paleofavosites asper (d'orbigny, 1850), is statistically analysed based on numerous specimens. The specimens of H. catenularius, collected from the biostrome at Ireviken 3, Gotland show no particular change in intracolony variation, but shape and size of lacunae are variable. However P. asper from the Slite Beds in Gotland shows very large variation of corallite size and corallum shape both within and among localities. Species with large morphological variation are widespread and difficult to deal with taxonomically. [original abstract]^1";
- 104 s[101] = "MOTUS M.-A. (2004).- Tabulate corals from the Lower Silurian of Jämtland (Sweden).- GFF 126, 4: 339-352.http://www.gff-online.se/site/article.asp?articleID=799.- FC&P 35, p. 64, ID=2365^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: Sweden, Jamtland^The tabulate species of the genera Paleofavosites, Favosites, Parastriatopora, Propora, Aulopora and Catenipora recorded in Jämtland, Sweden, Scandinavian Caledonides, are taxonomically revised. Biometrics is used for species definition. The intraspecific variability is considered, and the analyses of type material and other similar specimens from Estonia are included in the taxonomical section. The neotype of Catenipora distans is illustrated and remeasured together with two other specimens from the same locality. Paleofavosites primus is synonymised with P. hystrix and Favosites favosiformis is synonymised with F. favosus. Several species are tentatively synonymized, what mostly demonstrates the problem of typological species in Baltoscandia. The tabulates known from Jämtland are also found in Estonia. The close relation of the development of tabulate faunas in both areas is suggested. The stratigraphical position of the Ede Formation at Ede, and the Berge Formation at Verkön and Norderön is discussed, comparing the tabulate successions from Jämtland and Estonia. The tabulate record from the Berge Formation proves the Aeronian age of the unit. [original abstract]^1";
- 105 s[102] = "MOTUS M.-A. (2006).- Intraspecific variation in wenlock tabulate corals from Saaremaa (Estonia) and its taxonomic implications.- Proceedings of the Estonian Academy of Sciences, Geology 55, 1: 24-42.- FC&P 35, p. 64, ID=2366^Topic(s): variation intraspecific; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Wen; Geography: Estonia^Different aspects of intraspecific variation in wenlock tabulate corals are discussed. Intracorallum and intraspecific variation is demonstrated in specimens within the collection from one locality. The diagnostic characters of Halysites senior Klaamann and Catenipora oriens Klaamann and those of Paleofavosites secundus (Klaamann) and Favosites jaaniensis Sokolov overlap and therefore these species are regarded as synonyms. Propora raricellata Sokolov is a possible synonym of P. tubulata (Lonsdale), because the character differentiating these species is variable.^1";
- 106 s[103] = "MOTUS M.-A., GRITSENKO V. (2007).- Morphological variation of the tabulate coral Paleofavosites cf. collatatus Klaamann 1961 from the Silurian of the Bagovichka River localities, Podolia (Ukraine).- Estonian Journal of Earth Sciences 56, 3: 143-156.- FC&P 35, p. 64, ID=2367^Topic(s): variation; Tabulata, Palaeofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Ukraine, Podolia^Paleofavosites cf. collatatus Klaamann occurs abundantly in marls and bioherms of the Muksha Member of the Bagovitsa Formation

- (Upper Silurian, Ludlow). The morphological variation of this species identified in different localities is analysed. The biometrical data show that there is no substantial variation among specimens from different localities except that corallum shapes are taller in marls than in bioherms and corallites are slightly smaller in specimens from bioherms. The irregular growth of coralla is common to this area.¹¹";
- 107 s[104] = "MOTUS M.-A., SANDSTROM O. (2005).- Cystihalysites sp. and its significance to biostratigraphy and event stratigraphy in the Ludlow (Late Silurian) of Gotland, Sweden.- GFF 127, 4: 269-272.http://www.gff-online.se/site/article.asp?articleID=846.- FC#038;P 35, p. 65, ID=2369Topic(s): stratigraphy; Tabulata, Cystihalysites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Ludl; Geography: Sweden, GotlandCystihalysites sp. from the Ludfordian Eke Formation on Gotland, Sweden, is the youngest halysitid coral found in Baltoscandia. Halysitids had earlier been considered as absent at this level and were thought to have disappeared in the Gorstian-lower Ludfordian Hemse Group. The new material indicates that at least one species survived the early parts of the Lau extinction event.¹¹";
- 108 s[105] = "LAFUSTE J., TOURNEUR F. (1990).- Structure et microstructure du genre Kiaerites Stasinska 1967 (Tabulata, Silurien de Norvege).- Geobios 23, 6: 655-669.- FC#038;P 20-1.1, p. 13, ID=2788Topic(s): microstructures; Tabulata, Kiaerites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: NorwayWe give new data on the structure and the microstructure of the genus Kiaerites Stasinska 1967, based on the examination of the type specimen of the type species, K. norvegicus Stasinska 1967 and of two other colonies from the Llandoverian of Norway. The morphological fundamental characters are the convex tabulae with locally tabular spines and the numerous oblique trabecular spines in the walls. The microstructure is characterized by sclerenchyme composed of lamellae in tectiform arrangement along a median lamina which for its part is composed of plaquettes - this arrangement was until now unknown in the Tabulata; the spines are fibrous. Fossils of Kiaerites seem to occur frequently in Llandoverian and wenlockian beds of Europe and North America. The genus is assigned to the family Favositidae Dana 1846.¹¹";
- 109 s[106] = "HELM C., SOLCHER J. (1998).- Geschiefbefund einer rugosen Koralle mit Bewuchs durch Aulopora necopina Klaamann 1966.- Geschiefbekunde aktuell 14, 2: 33-44, 43-50.- FC#038;P 27-2, p. 51, ID=3910Topic(s): ; Tabulata, Aulopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Germany, erraticsAulopora necopina Klaamann, 1966, eine inkrustierende "inkommunikate Tabulate", einschliesslich der als Substrat dienenden rugosen Koralle werden beschrieben. Als mogliches Muttergestein des Geschiebes kommen Ablagerungen der Eke-Schichten (Ludlow-Stufe) in der faziellen Ausbildung in Betracht, wie sie auf Gotland an der Lokalitat "Lau Backar" anstehen.¹¹";
- 110 s[107] = "BARTHOLOMAUS W.A., HUISMAN H. (1995).- Fossilinhalt eines ostbaltischen Hornsteingeschiebes (Silur) aus dem Braunschweiger Land.- Geschiefbekunde aktuell 11, 3: 85-94.- FC#038;P 24-2, p. 86, ID=4580Topic(s): morphology; Tabulata, Catenipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Germany, erraticsDie Fauna eines Eiszeitgeschiebes von Nordwestdeutschland wird dokumentiert. Im Mittelpunkt steht die in einem Hornstein eingeschlossene Kettenkoralle Catenipora vespertina der Formengruppe escharoides. Sie wird in ihren Einzelheiten abgebildet. Der Fossilinhalt erlaubt die Zuweisung eines silurischen Gesteinsalters.¹¹";
- 111 s[108] = "KLAAMANN E. (1972).- On the Tabulata assemblages in the Silurian of the East Baltic.- Eesti NSV Teaduste Akad. Toimetised 21, Keemia Geologia 1: 78-82.- FC#038;P 1-2, p. 15,

- ID=4649^Topic(s): assemblages; Tabulata, assemblages; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Baltic E^Five facies belts have been distinguished in the Silurian of the East Baltic Area, which are tentatively referred to as follows (from the shore towards the open sea): the lagoonal, the shoaly, the detritic, the transitional and the off-sea facies. The lagoonal facies is mainly represented in the Ludlovian and characterized by ramose and cylindrical tabulate corals (Parastriatopora, Laceripora); favositids occur extremely rarely and represent casual immigrants from the shoaly facies. The majority of Tabulata species of the East Baltic Silurian is restricted to the shoaly facies. Within this facies we may distinguish a relatively shallower part (reef region) and a deeper one (off-reef region); they differ from each other by a different species content. In the process of evolution of Tabulata, the shoaly facies was of the greatest significance, and in the prochoresis likewise. In the detritic facies, the significance of fasciculate forms increases, with eurifacial species playing the predominant role. In the transitional facies, the Tabulata occur sporadically and their assemblage may be regarded as a considerably impoverished assemblage of the detritic facies. No Tabulata have been found in the off-sea facies so far. ^1";
- 112 s[109] = "STEL J.H. (1979).- Environment and quantitative morphology of some Silurian tabulates from Gotland.- Scripta Geologica 047: 1-75.- FC&P 8-2, p. 46, ID=5721^Topic(s): ecology, morphometry; Tabulata, ecology, morphology; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^An outline is given of reef development in Gotland, Sweden, during the time when the Visby (Llandovery) and Hogklint (Wenlock) Beds were deposited together with a sketch of the palaeology in the time during which the Hemse and Hamra-Sundre (Ludlow) Beds were formed. Variation is described in the tabulates Favosites hissingeri Edwards & Haime, F. obliquus (Sokolov), F. gothlandicus Lamarck, F. forbesi Edwards & Haime, Syringolites kunthianus (Lindstrom), and Alveolites suborbicularis Lamarck. * In order to clarify ecophenotypic variation of corallite size in tabulates, the corallite area and three different corallite diameters were measured. Although the corallite area is more related to the shape of the organism that lived in a corallite, comparison of the several parameters revealed that measuring of a corallite diameter can be applied in such species from which ecophenotypic variation is known. However, the current limitation of variability in corallite diameters within defined morphospecies is often far too narrow, and does not allow for ecophenotypic variation. As a consequence, the number of morphospecies established since Sokolov (1950) is unrealistically large in the F. forbesi group as well as in others. Variability in F. hissingeri is influenced to a high degree by the environment. The characteristic (genetically controlled?) pattern of larger corallites between smaller ones in F. forbesi is hardly influenced by ecological factors. Variation in thickness of the wall, in distance between the tabulae and in intensity of the development of the septal structures is mainly determined by the environment. [original summary]^1";
- 113 s[110] = "GRICENKO V.P. (1980).- Novy vid korallov (Tabulata) iz silura Podolya. [new species of tabulate corals from the Silurian of Podolia; in Russian].- Paleontologicheskii Sbornik 17: 41-44.- FC&P 10-1, p. 51, ID=5993^Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Ukraine, Podolia^The new species of corals was obtained from the Dnister river region. The species *Cylindrostylus lelehusi* Gricenko sp.nov. was described in this short paper. It is marked by peculiar structure: conically opening tabulae and sharply ridged epitheca. This does not allow placing such specialized genera as *Cylindrostylus* into close relation to *Sinopora* Sokolov. A new family *Cylindrostylidae* Gricenko has been established.^1";

- 114 s[111] = "AARHUS N. (1982).- Lower Silurian Tabulate corals of the Oslo Region.- Paleont. Contr. Univ. Oslo 278 [D. Worsley(ed.): Field Meeting Oslo Region 1982; IUGS, Subcommission on Silurian Stratigraphy]: 43-53.- FC&P 12-2, p. 37, ID=6224^Topic(s): distribution, ecology; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: Norway, Oslo^The distribution of Lower Silurian coral faunas in the Oslo Region reflects the shifting depositional environments represented in the succession. Tabulate corals are the dominant fossil group in some rocks, such as the patch reefs of the Rytteraker Formation or the marl banks in the middle of the Vik Formation. They are correspondingly rare in the clastic sequences of the Bruflat Formation. Halysitids occur through most of the sequences, but only represent an important faunal constituent in the shaly intervals. Systematic studies have only been carried out in the Vik Formation, and most illustrations presented here are from this unit. [original summary]^1";
- 115 s[112] = "BARTHOLOMAUS W.A., LANGE M. (1993).- Syringopora bifurcata, eine seltenere Koralle aus dem Kaolinsand von Sylt.- Geschiebekunde aktuell 9, 4: 109-112.- FC&P 23-1.1, p. 66, ID=6839^Topic(s): ex erratics; Tabulata Syringopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian?; Geography: Germany, Sylt erratics^^1";
- 116 s[113] = "HAMMER O. (1999).- Computer-aided study of growth patterns in tabulate corals exemplified by Catenipora heintzi from Ringerike, Oslo-region.- Norsk Geologisk Tidsskrift 79, 4: 219-226.- FC&P 29-1, p. 51, ID=7045^Topic(s): serial sections; Tabulata Catenipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Norway, Ringerike^Most of this paper is related to the growth of halysitids but the method employed could be applied to the three-dimensional reconstruction of stromatoporoid skeletons. A block containing the specimen was ground down at intervals of 0.1mm and 78 cross sections were recorded. At each interval the block was placed on a scanner and a computer program (M. J. Herbert et al. 1995 - The Visual Computer11: 343-359) was used to reconstruct the growth pattern in three dimensions.^1";
- 117 s[114] = "PLUSQUELLEC Y., TOURNEUR F., GROISARD E. (1997).- Revision of Alveolites fougti Milne-Edwards & Haime 1851, type species of Planalveolites Lang & Smith 1939 (Tabulata, Silurian of Gotland).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 205-215.- FC&P 26-2, p. 15, ID=3685^Topic(s): revision; Tabulata, Alveolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^The type specimens of Alveolites fougti Milne-Edwards & Haime 1851, type species of the genus Planalveolites Lang & Smith 1939 from the Silurian of Gotland, have been traced (coll. de Verneuil, Université Claude Bernard, Sciences de la Terre, Lyon 1) and a lectotype is designated. Additional material from Lusklint, Upper Visby Beds, Lower Wenlock, permits an accurate description of the morphology and structure of the species and completes the sparse data available from Stumm (1968) and Lafuste (1984) (new data on the "epitheca"; on the bilateral symmetry of the septal ridges on the upper margin of the calice, on the tabulae seen in longitudinal transverse and tangential sections). Increase is lateral, but secondary thickening of the wall often makes it look like intramural. Standard and ultra thin sections from an unfigured fragment of the lectotype show the scutellate microlamellae described by Lafuste (1984). The specimens of Planalveolites from Lusklint show a great variability in size and sometimes in calice morphology, and the attribution of all the coralla to P. fougti is discussed. The species assigned to the genus are also discussed.^1";
- 118 s[115] = "BROOD K. (1978).- Skeletal structures of Silurian auloporid corals.- GFF Geologiska Föreningens i Stockholm Förhandlingar 100: 53-63.- FC&P 8-1, p. 53, ID=0231^Topic(s):

- microstructure; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^The shell ultrastructure of six aulopodid coral species was investigated and shown to have originally been constructed of laminar calcite. The mineral succession begins with a subcuticular granular layer and continues with a secondary laminar layer which makes up the bulk of the skeleton. The laminar layer is constructed of lath-like crystals 2-4µm thick and 10-20 µm wide, and is penetrated by granular rods which originate from the primary granular layer and protrude into the calicular cavity as spinose septa. The lamina deflect around the granular rods in an inward convex pattern. The following species were studied: Aulopora amiea Klaamann 1962, Aulopora neosopina Klaamann 1966, Syrinsopora schmidtii Chernyshev 1937 (all from Ludlow of Gotland), Syrinsopora multifaria Klaamann 1962, Syrinsopora blanda Klaamann 1962 (Ludlow of Estonia) and Syrinsopora sp. (Wenlock of Gotland).^1";
- 119 s[116] = "OEKENTORP K., SORAUF J.E. (1970).- Über Wandporen bei Favosites (Fav.) gothlandicus Lamarck, 1816 (Coelenterata, Tabulata).- N. Jb. Geol. Palaeont. Abh. 134, 3: 283-298.- FC&P 1-2, p. 16, ID=4657^Topic(s): wall pores; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^Die Wandporen eines gut erhaltenen Korallums von Favosites (Fav.) gothlandicus Lk. 1816, aus dem Silurium von Gotland wurden sowohl mit dem Lichtmikroskop als auch mit dem Raster-Elektronenmikroskop (Stereoscan) untersucht. Die Poren liegen in - an der Oberkante der waende gebildeten - &Mulden&; von Wachstums-lamellen und werden bei dieser Art von einem &Ringwall&; umgeben. Entstanden sind diese &Ring-waelle&; durch eine Wandverdickung im Bereich des Porenrandes. Einige der Poren sind durch Porenplatten verschlossen, die zeitlich spaeter durch das Polypen-Ektoderm abgeschieden wurden. Die in angeetzten Schnitten im Porenbereich zu beobachtende &lamellaere&; wandstruktur ist sehr wahrscheinlich durch Rekristallisationen des Skelettkarbonats hervorgerufen worden.^1";
- 120 s[117] = "MOTUS M.-A., KLAAMANN E. (1999).- The halysitid coral genera Halysites and Cystihalysites from Gotland.- GFF 121, 2: 81-90.- FC&P 31-2, p. 46, ID=1694^Topic(s): taxonomy; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^The taxonomy of the tabulate coral genera Halysites and Cystihalysites of the order Halysitida from the Silurian of Gotland is revised. Catenipora crassa Stasinska, 1967 and Halysites crassus Stasinska, 1974, are considered to be junior synonyms of Halysites senior Klaaman, 1961. The formation of walls by joined edges of dissepiments in Cystihalysites is shown. The distribution of species in the Gotland sequence is documented. The occurrence of Cystihalysites blakevayensis Sutton, 1964 on Gotland is noted for the first time. ^1";
- 121 s[118] = "WEYER D. (2009).- Coral publications of Sandor Mihalyi.- FC&P 35: 122-123.- FC&P 35, p. 122, ID=7261^Topic(s): bibliography; Systematics: ; Stratigraphy: ; Geography: ^[coral bibliography of Sandor Mihalyi (1941-1995), Hungarian paleontologist in the Hungarian Geological Survey; student of the tabulate corals and of the Mesozoic-Cenozoic echinoderms]^1";
- 122 s[119] = "WEBBY B.D. (1975).- Patterns of increase in coenosteoid halysitid corals.- Alcheringa 01, 1: 31-36.- FC&P 5-1, p. 14, ID=5327^Topic(s): increase modes; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Sweden, Gotland^This study is based on Halysites and Cystihalysites from the Silurian of Gotland. On interstitial increase within ranks, the conflicting views of Buehler (1955) and Webby & Semeniuk (1969) are resolved: the manner of increase is different in the two genera.^1";
- 123 s[120] = "KLAAMANN E. (1978).- Catenipora quadrata (Fischer-Benzon

- 1871) v Silurie Baltoskandii.- Izv. AN Estonskoy SSR, Geol. 27, 2: 53-58.- FC&P 7-2, p. 18, ID=5620Topic(s): ; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Baltoscandia^Auf Grund der taxonomischen Revision wurde die stratigraphische Verbreitung - Oberes Llandoveryum - Unterer Wenlockium - der bisher nur aus erratischem Material bekannten Catenipora quadrata bestimmt. Aus dem Oberen Visby-Mergel von Gotland, wo die Art am haeufigsten vorkommt, hat man den Neotypus gewaehlt. Die durchgefuehrte Revision stellte die synonymischen Arten und die Veraenderlichkeit der Form und Groesse der Ketten und Koralliten fest. In korrigierter Form lassen sich die wichtigsten Merkmale von C. quadrata zu folgender Diagnose zusammenfassen: Catenipora mit kleinen Koralliten 0,75-0,9 x 1,0-1,2mm im Durchmesser. Da die Korallitenwand an den Seiten ziemlich flach ist, erscheinen die Koralliten etwas eckig, insbesondere an der Oberflaeche des Stockes und wo die Waende duenner sind. Die Boeden duenn und wellenfoermig, Intervall 0,15-0,5mm. Septaldornen zonal zahlreich entwickelt, lang und in der Mitte der Koralliten zu einer unterbrochenen Kolumnella vereinigt. [original summary]^1";
- 124 s[121] = "KLAAMANN E. (1979).- Morfologia i vozrast Halysites catenularius (Linnaeus). [morphology and geological age of Halysites catenularius; in Russian with English summary].- Izv. AN Est. SSR, Geol. 28: 140-144.- FC&P 10-2, p. 74, ID=6094Topic(s): revision; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Llan; Geography: Sweden, Gotland^The author presents a description of the Halysites genotype, based on the research into the neotype and on the revision of halysitids of the Gotland Silurian. The stratigraphic distribution is limited to the Llandoveryan stage of the Lower Silurian whence also the finds made in Gotland (Lower Visby marl) and those of species considered synonymous with Halysites catenularius (see the synonymies) in other regions. The diagnostic characters of the species are as follows: meshes outstretched, of varying shape; consist of corallites of 1.3-1.5mm in width and 1.6-1.8mm in length. Mesocorallites mostly rectangular, 0.5-0.6 x 0.75mm, the joints of meshes irregularly triangular or polygonal. Corallite wall 0.15-0.2mm thick, consists of uniform, finegrained calcium carbonate. Septa moderately developed, constantly 12 in number. Tabules horizontal, slightly concave or convex, placed at an interval of 0.4-0.7mm; mesocorallites are twice as densely diaphragmed. A comparison of the quantitative characters of Halysites catenularius and synonymous species are presented in a Table. [original summary]^1";
- 125 s[122] = "KLAAMANN E. (1979).- Tabulate and heliolitid corals.- Sveriges Geologiska Undersokning C 762, 73, 3 [Jaanusson V., Laufeld S. & Skoglund R. (eds): Lower Wenlock faunal and floral dynamics, Vattenfallet section, Gotland]: 81-85.- FC&P 9-1, p. 45, ID=0281Topic(s): ; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Silurian Wen; Geography: Sweden, Gotland^An annotated faunal list including stratigraphical remarks is presented.^1";
- 126 s[123] = "HUISMAN H. (1987).- Verkieselte Korallen aus dem Kaolin-Sand von Sylt.- Fossilien von Sylt 2 [Hacht U. von (ed.)]: 149-163.- FC&P 16-1, p. 64, ID=1973Topic(s): taxonomy; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Silurian; Geography: Germany, erratics^From erratics of the Braderup sandpit, Isle of Sylt (northern W-Germany) the following Tabulates are briefly characterized and figured: Sarcinula organun Linne, S. luhai Sokolov, S. rakverense (Sokolov), S. sp., Catenipora sp., Halysites sp., Paleofavosites estonicus, P. porkuniensis (Sokolov), P. sp., Favosites basaltiformis, F. sp., Propora conferta Edwards & Haime, Proheliolites dubius (Schmidt).^1";
- 127 s[124] = "KALJO D., KLAAMANN E. (1982).- Communities and biozones in

- the Baltic Silurian.- Academy of Sciences Estonian SSR, Inst. Geol.-
 FC&P 13-1, p. 21, ID=0395^Topic(s): ecology,
 stratigraphy; Systematics: ; Stratigraphy: Silurian;
 Geography: Baltoscandia^1";
- 128 s[125] = "ABUSHIK A.F. et al (1985).- The Fourth Series of the Silurian
 System in Podolia.- Lethaia 18: 125-146.- FC&P 14-2, p. 43,
 ID=0926^Topic(s): stratigraphy; stratigraphy; Systematics:
 ; Stratigraphy: Silurian; Geography: Ukraine,
 Podolia^This paper contains charts showing the ranges of
 stromatoporoids and a short paragraph on the species in the section.^1";
- 129 s[126] = "SAMTLEBEN C., MUNNECKE A. (1999).- Reef mounds im unteren
 Wenlock auf Gotland: Beispiele fruher Korallenriffe.- Meyniana 51:
 77-94.- FC&P 29-1, p. 66, ID=1512^Topic(s): reef
 mounds; reefs; Systematics: ; Stratigraphy: Silurian Wen;
 Geography: Sweden, Gotland^The reef mounds in the Lower
 Wenlockian of Gotland represent in a two-fold sense early stages of
 reef development. On the one hand they form the first stage in the
 development of the reef succession on Gotland, on the other hand they
 are early examples of reef formation in the geological history of coral
 reefs, lacking important criteria of modern reefs like strict internal
 structure, framework, and complex synecology.^1";
- 130 s[127] = "SANDSTROM O. (2000).- Reef biostromes and related facies from
 the Middle Silurian of Gotland, Sweden.- Lund Publications in Geology
 148: 1-16.- FC&P 30-1, p. 34, ID=1524^Topic(s):
 facies; reefs; Systematics: ; Stratigraphy: Silurian
 M; Geography: Sweden, Gotland^[Reef biostromes and related
 facies from the upper part of the Wenlock and from the Ludlow were
 investigated in order to explain their formation, paleoecology, and
 biology.]^1";
- 131 s[128] = "BJERKEUS M., ERIKSSON M. (2001).- Late Silurian reef
 development in the Baltic Sea.- GFF 123, 3: 169-179.http://www.gff-
 online.se/site/article.asp?articleID=663.- FC&P
 31-2, p. 25, ID=1663^Topic(s): reefs, geology; reefs;
 Systematics: ; Stratigraphy: Silurian U; Geography:
 Baltoscandia^In the Baltic Sea, reef structures are common in the
 Ordovician and Silurian sedimentary bedrock. Palaeozoic reef
 development culminated in the Silurian when several successive reef
 barriers developed. The present investigation has revealed new reef
 structures in the upper Silurian sedimentary bedrock. Two new
 biostromes, E1 and E2, have been found in the Ludlovian Eke Beds, east
 of Gotland. The biostromes trend in a more or less east-west direction
 and can be traced across the northern part of the Baltic Sea. In the
 Pridolian, two reef-like barriers, named B5 and B6, occur at the
 boundary to the Devonian. The lower barrier, B5, is found to the south
 of the younger B6 barrier. This indicates that a transgression occurred
 between the formation of the two barriers. A tentative reconstruction
 of the Pridolian bay suggests that the coast shifted from a more
 east-west direction in the Ludlovian to a more north-easterly to
 south-westerly direction in the Pridolian. Bioherms are commonly
 associated with the Eke biostromes and the upper Pridolian reef-like
 barriers. The bioherms occur on the seaward side of the larger reef
 structures, on the biohermal slope. Patch-reefs also occur on the
 biohermal slope but they are more common on the landward (lagoonal)
 side of the barriers. [original abstract]^1";
- 132 s[129] = "FLODEN T., BJERKEUS M., TUULING I., ERIKSSON M. (2001).- A
 Silurian reefal succession in the Gotland area, Baltic Sea.- GFF 123,
 3: 137-152.http://www.gff-
 online.se/site/article.asp?articleID=660.- FC&P
 31-2, p. 27, ID=1665^Topic(s): ecologic succession; reefs;
 Systematics: ; Stratigraphy: Silurian; Geography:
 Sweden, Gotland^Seismic reflection profiling east of Gotland has
 given information on a succession of four reefal units in the lower
 Ludlow stratal sequence ranging from the Klinteberg Formation to the

Hemse Group in the Gotland sequence. In this paper they are named the Klinte Reef (Klinteberg Formation unit f), the Hammarudden Reef (Hemse Group 'younger' units a-c), the Östergarn Reef (Hemse Group unit d) and the Millklint Reef (Hemse Group unit e). The reef units form a mainly regressive succession with younger reefs resting on the seaward slopes of older reefs. The reef succession is exposed on Gotland and in the Baltic Sea east of Gotland, whereas towards the East Baltic coast it is overlain by Pridoli sedimentary bedrock. Each reef unit corresponds to a well-defined seismic unit with distinct facies zonality ranging from lagoon via reef barrier and biohermal slope to basin facies. The 'fore-reef' facies is in this paper termed biohermal slope to express its characteristic reefal features. Reconstruction of the post-depositional tilting of the sequence indicates lagoonal depths of up to 10m. The reef barriers developed at depths of up to 20m and the biohermal slopes at between 10 and 55m. The reef barrier and the biohermal slope are generally separated by a debris fan of waste products from the reef, 1-2km wide. The reef barriers are generally 1-3km wide, which is about the same width as their lagoons. The biohermal slopes become successively wider towards the upper part of reef succession, ranging from 5-9km at the Klinte Reef to 15-18km at the Millklint Reef. Comparisons with the Gotland sequence show that the reef barriers are biostromal stromatoporoid reefs in a matrix of crinoid debris. The biostromes are of the Kuppen type. The bioherms are of the Axelro and Hoburgen types. The bioherms occur randomly on the seaward slope of the barriers. [original abstract]^1";

- 133 s[130] = "KANO A. (1989).- Deposition and paleoecology of an Upper Silurian stromatoporoid reef in southernmost Gotland, Sweden.- Geological Journal 24: 295-315.- FC&P 19-1.1, p. 65, ID=2699^Topic(s): sedimentation, ecology; reefs; Systematics: Stratigraphy: Silurian U; Geography: Sweden, Gotland^The distribution of organisms in boundstones and surrounding reef debris facies at Holmhällar was mapped on rock surfaces in detail; stromatoporoids make up 54-63 % of the boundstones; they were divided into 3 shape classes: laminar, domical, repeated laminar; 11 species were identified; heights and widths of various species of stromatoporoids are plotted for each of the facies; periodic exposure is suggested as a mechanism to control growth form; the paleoecology of the common stromatoporoid species is discussed^1";
- 134 s[131] = "NEUMAN B.E., KERSHAW S. (1991).- Gotland / Sweden - Silurian reefs and coral bearing strata.- Excursion A1, VI International Symposium on Fossil Cnidaria and Porifera, Muenster, 111 pp.- FC&P 20-2, p. 49, ID=2911^Topic(s): excursion guide; reefs; Systematics: Stratigraphy: Silurian; Geography: Sweden, Gotland^1";
- 135 s[132] = "NESTOR H. (1993).- Catalogue of Silurian Stratigraphic units and stratotypes in Estonia and Latvia.- Estonian Academy of Sciences, Tallinn; 23 pp.- FC&P 22-2, p. 79, ID=3498^Topic(s): catalogue of stratigraphic units; stratigraphy; Systematics: Stratigraphy: Silurian; Geography: Estonia^The catalogue presents information on the valid Silurian stratigraphic units and their stratotypes (establishing time, author, location, publication) established in Estonia and Latvia. Altogether the catalogue includes 78 Stratigraphic units, among them 10 regional stages, 23 formations, 28 beds, 16 members and one group. The geographical etymons and the transliteration of the names of stratigraphical units into English, Estonian, Latvian and Russian are given.^1";
- 136 s[133] = "MUNNECKE A., SAMTLEBEN C. (1996).- The Formation of Micritic Limestones and the Developement of Limestone-Marl Alterations in the Silurian of Gotland, Sweden.- Facies 34, 1: 159-176.- FC&P 25-2, p. 40, ID=3629^Topic(s): carbonates; micritic limestones; Systematics: Stratigraphy: Silurian;

Geography: Sweden, Gotland^Micritic limestone-marl alternations make up the major part of the Silurian strata on Gotland (Sweden). Their position on the stable Baltic Shield protected them from deep burial and tectonic stress and allowed the preservation of early stages of burial diagenesis, including lithification. In the micritic limestones certain characteristics have been preserved (e.g., pitted microspar crystals, sharp boundaries between microspar and components, lack of deformation phenomena) that offer insights into their formation. We suppose the formation of these micritic limestones and limestone-marl alternations to be based on a rhythmic diagenesis within an aragonite solution zone (ASZ) close below the sediment surface. The micritic limestones are the product of a poikilotopic cementation of carbonate muds which consisted of varying portions of aragonitic, calcitic and terrigenous matter. Their microspar crystals show the primary size and shape of the cements lithifying the original carbonate mud. Dissolution of aragonite in the marls provided the carbonate for the lithification of the limestones. By cementation, the limestone beds evaded further compaction. The marls, which already underwent a volume decrease by aragonite depletion, lacked cement and became more and more compacted due to increasing sedimentary overburden. Although field observations show that primary differences in material influence the development of limestone-marl alternations they are not required for their formation.^1";

137 s[134] = "KANO A. (1994).- Quantitative compositions and reef development of the Silurian limestones of Gotland, Sweden.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 141-146.- FC&P 23-1.1, p. 17, ID=4071^Topic(s):quantitative analysis; reefs; Systematics:; Stratigraphy:Silurian; Geography:Sweden, Gotland^The Silurian (Wenlockian-Ludlovian) carbonate sequence of Gotland includes numerous reef-like constructions formed on a warm, shallow and open marine shelf. They were often exposed above sea-level in their depositional time. The constituents of the reef-like limestones were quantitatively analysed. The most important reef-building organisms were stromatoporoids for all the investigated limestones. However, the limestones in the upper part of the Gotland sequence show stronger domination by stromatoporoids and higher stromatoporoid density on the rock surfaces than the limestones in the lower sequence show. The most important identifiable sediment producers were echinoderms, with the exception of one example from the Hogklint Formation in which calcareous algae dominated. The investigated reef-like limestones vary as to stages of maturity. Only one of the limestones (Holmhallar 1) can be strictly regarded as a reef limestone. The other investigated limestones exhibit no or poorly developed frameworks. Important conditions for the development of the Gotland reefs were the formation of a stable bottom associated with karstic processes, low sedimentation stress, and domination by stromatoporoids as a condition for faunal capacity in constructing frameworks. This last condition may have been dependent on the stages of global evolution of the Palaeozoic reef community.^1";

138 s[135] = "KEELING M., KERSHAW S. (1994).- Rocky shore environments in the Upper Silurian of Gotland, Sweden.- GFF [Geologiska Foreningens i Stockholm Fordhandlingar] 116: 69-74.- FC&P 23-2.1, p. 54, ID=4221^Topic(s):facies, rocky shore; rocky shore; Systematics:; Stratigraphy:Silurian U; Geography:Sweden, Gotland^[In the Hemse Group stromatoporoid biostromal reefs show evidence of episodic erosion resulting in sea stacks, shallow cliffs, and planar erosion surfaces that are interpreted as representing rocky shorelines; the surfaces are overlain by coarse calcarenites and calcirudites; rarely auloporids and bryozoans encrust the surfaces]^1";

139 s[136] = "KALJO D., KLAAMANN E. (eds) (1982).- Ecostratigraphy of the

- East Baltic Silurian.- Akademiya Nauk Estonskoy SSR, Tallinn: 109 pp., 15 figs, 5 tabs.- FC&P 12-1, p. 43, ID=6184^Topic(s): stratigraphy, ecostratigraphy; stratigraphy, ecology; Systematics: Stratigraphy: Silurian; Geography: Baltic E^[several papers of this volume deal with the results obtained from the study on the relations between the distribution of organisms and facies, e.g. stromatoporoids, tabulate corals, brachiopods, trilobites, ostracods, conodonts, chitinzoans, graptolites and vertebrates]^1";
- 140 s[137] = "HERB R. (1984).- Récifs siluriens de Gotland (Suède).- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 6.1-6.22.- FC&P 13-1, p. 11, ID=6319^Topic(s): reefs; reefs; Systematics: Stratigraphy: Silurian; Geography: Sweden, Gotland^La succession silurienne de l'île de Gotland contient un nombre considérable de récifs de types différents, et qui sont parmi les plus beaux exemples de récifs paléozoïques du monde. Ils sont connus depuis longtemps, et divers auteurs leur ont consacré des travaux synthétiques. [first fragment of an introduction]^1";
- 141 s[138] = "ANTOSHKINA A.I. (1999).- Origin and evolution of lower Paleozoic reefs in the Pechora Urals, Russia.- 002 Bulletin of Canadian Petroleum Geology 47: 85-103.- FC&P 28-2, p. 36, ID=4030^Topic(s): reefs; reefs; Systematics: Stratigraphy: Silurian Devonian L; Geography: Russia, Pechora, Urals^This paper contains numerous references to the stromatoporoid bioherms and barrier reefs of Silurian and Lower Devonian age. No identifications or taxonomy are included.^1";
- 142 s[139] = "IVANOVSKIY A.B., HECKER M.R., BOLSHAKOVA L.N., ULITINA L.M. (1997).- Dynamics of Coral / Stromatoporoid Assemblages of the Middle Paleozoic of Russian and Adjacent Areas.- Coral Research Bulletin 05: 181-189.- FC&P 27-1, p. 53, ID=3808^Topic(s): corals stroms assemblages; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Silurian - Carboniferous L; Geography: Russia^A review of the historical development of poriferan-cnidarian communities in most of the platform and geosyncline basins in the territory of Russia during the Silurian, Devonian and early Carboniferous is given. Their evolution through time and their biogeographic connections is discussed.^1";
- 143 s[140] = "TSYGANKO V.S., BOGOYAVLENSKAYA O.B., LUKIN V.Yu. (1997).- Kishechnopolostnye iz otlozheniy Devona Ochparminskogo vala (Yuzhnyi Timan, r. Vol). [Coelenterates of Devonian deposits of Ochparmin wall (S Timan, Vol river)].- SyktyvkarSKIY Paleontologicheskiy Sbornik 2: 30-48. (Trudy Instituta Geologii Komi nauchnogo tsentra 91).- FC&P 30-2, p. 21, ID=1572^Topic(s): Anthozoa stroms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Russia, Timan^^1";
- 144 s[141] = "ZAIKA Yu.V., KRUCHEK S.A. (2008).- Upper Devonian (Frasnian) corals (Anthozoa) of Belarus. Part 1: systematic composition, stratigraphic distribution, palaeoecology.- Lithosphere 2, 29: 49-60.- FC&P 36, p. 82, ID=6489^Topic(s): taxonomy, biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Fra; Geography: Belarus^The present paper describes the taxonomic composition, stratigraphic distribution and palaeoecology of Upper Devonian (Frasnian) Rugose and Tabulate corals (Anthozoa) of Belarus. Corals are widely distributed in carbonate rocks of the Pripyat Trough, Zhlobin Saddle and Orsha Depression, being especially abundant in the Buinovichi beds (Semiluki Formation, Middle Frasnian) and Ptich beds (Voronezh Formation, Upper Frasnian). * The following species have been recognized from the Semiluki Formation: Aulopora schelonica aseptata Zaika, subsp.nov., Thamnopora cervicornis (Blainv.), Th. polyforata (Schloth.), Th. reticulata (Blainv.), Th. tumefacta Lec., Gracilopora vermicularis

(McCoy). *Scoliopora conferta albaruthenica* Zaika, subsp.nov., *Crassialveolites obtortus* (Lec.), *Cr. domrachevi* (Sok.), *Alveolites suborbicularis lamellosa* Lec., *Planocoenites medius* (Lec.), *Disphyllum pashiense* (Soshk.), *D. kostetskae* (Soshk.), *Thamnophyllum monozonatum* (Soshk.), *Pterorrhiza multizonata* (Reed) and *Pt. berdensis* (Soshk.). Another association consisting of *Peneckiella jevlanensis* (Bulv.), *P. achanaiensis* Soshk., *P. szulczewskii* Rózk., *P. fascicularis* (Soshk.), *Aulopora soshkinae* Sok. and *Aulocystis tikhyi* Sok. is known from the Voronezh Formation. * It may be supposed that the majority of species mentioned above penetrated into Frasnian epicontinental basins of Belarus during Middle and Late Frasnian time through the seas of the Main and Central Devonian Fields, and, possibly, through the basin of the Doniets-Dnieper depression. Two local subspecies of *Aulopora schelonica aseptata* Zaika, subsp.nov. and *Scoliopora conferta albaruthenica* Zaika, subsp.nov. are indicative of some isolation of Frasnian faunas of the Pripyat Trough. * Different kinds of coral biofacies are typical of the Buinovichi and Ptich beds. Coral communities of Buinovichi time in the Pripyat Trough inhabited hard-bottom upfolds and formed tabulate-stromatoporoid buildups like biostromes and caliptras of several tens of centimetres thick. Ramose tabulate and rugose corals populated soft-bottom depressions. Coral-stromatoporoid buildups were much bigger in size in the Zhlobin Saddle and Orsha Depression, which may suggest the more dissected relief of the sea bottom as compared with that of the Pripyat Trough. Also, massive cerioid colonies of unidentified rugose corals contribute significantly to coral-stromatoporoid organogenic building in the Orsha Depression. * Communities of fasciculate rugose corals and auloporoid tabulates inhabited soft-bottom surfaces in the Pripyat Trough during Ptich time. [original English summary]^1";

- 145 s[142] = "BATANOVA G.P., DANSHINA N.V. (1980).- Korallovo-stromatoporovo-vodoroslevyye Franskiye rify nizhnego povolzhya [coral-stromatoporoid-algal Frasnian reefs of the Lower Volga region].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 21-25; Nauka, Moskva.- FC&P 11-2, p. 35, ID=1846^Topic(s):reefs; Anthozoa stroms reefs; Systematics:Cnidaria Porifera algae; Anthozoa Stromatoporoidea; Stratigraphy:Devonian Fra; Geography:Russia, Lower Volga Region^^1";
- 146 s[143] = "TSYGANKO V.S. (1998).- Stratigraficheskoye rasprostraneniye korallorv rugoz v otlozheniyakh Devona Pechorskoy plity.- SyktyvkarSKIY Paleontologicheskiiy Sbornik 3: 35-41. (Trudy Instituta Geologii Komi nauchnogo tsentra 99).- FC&P 30-2, p. 21, ID=1571^Topic(s):stratigraphy; stratigraphy; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:Russia, Pechora Platform^^1";
- 147 s[144] = "WEYER D. (1996).- Nichlavalla sytovae n.g., n.sp. aus dem Lochkovian von Podolien (Anthoza, Rugosa; Unterdevon, Ukraine).- Abhandlungen und Berichte für Naturkunde 19: 83-103.- FC&P 25-2, p. 49, ID=3140^Topic(s):new taxa; Rugosa, Nichlavalla; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian Lochk; Geography:Ukraine, Podolia^The monotypic new genus of Lindstroemiidae is close to Metriophyllum Milne-Edwards & Haime 1850 and represents the most ancient taxon of the suborder Zaphrentoidina.^1";
- 148 s[145] = "BOGOYAVLENSKAYA O.V. (2001).- Characterization of Devonian stromatoporoids of the Russian Platform.- Paleontologicheskiiy Zhurnal 2001, 4: 16-23.- FC&P 31-1, p. 70, ID=1647^Topic(s):stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian; Geography:Russia, Russian Platform^The stratigraphic range of stromatoporoids in the Devonian of the Russian Platform and the taxonomic composition of stromatoporoids are emended; new generic names and new descriptions of two known species are presented. The first data on the presence of the genera Clathrocoilon and Trupetostroma in this region are cited.^1";

- 149 s[146] = "ZAIKA Yu.V., KRUCHEK S.A. (2009).- Upper Devonian (Frasnian) corals (Anthozoa) of Belarus. Part 2: Description of taxons.- Lithosphere 1, 30: 57-74.- FC&P 36, p. 83, ID=6490^Topic(s): taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian Fra; Geography: Belarus^This paper is the second part of the research into the Upper Devonian (Frasnian) corals of Belarus. Twenty five species and subspecies of the Tabulate and Rugose corals have been described and illustrated from the Middle-Upper Frasnian of the Pripyat Trough, Zhlobin Saddle and Orsha Depression for the first time. Two new subspecies identified may suggest some isolation of the fauna of the Frasnian Pripyat Paleobasin. Some major zoogeographical and paleoecological implications were outlined in the first part of the paper. [original English summary; the list of species is almost the same as in Zaika et Kruchek (2008), with few exceptions: (1) Thamnopora polyforata (Schloth.) has been only figured, but without description; (2) one more subspecies Alveolites suborbicularis suborbicularis has been listed with mentioning its locality, but it is neither described nor figured; (3) one more species, namely Ivdelephyllum? sp. should be added to the second association from the Voronezh Formation]^1";
- 150 s[147] = "DELIYA S.V., DANSHINA N.V. (2010).- A lithofacies model for the Upper Devonian Pamyatno-Sasovskoye reef (oilfield) (Volgagradsкое Povolzhye, Russia).- Palaeoworld 19, 3-4: 278-283.- FC&P 36, p. 114, ID=6551^Topic(s): reef complexes, ecology, lithofacies; reef complexes; Systematics: ; Stratigraphy: Devonian Fra; Geography: Russia, Povolzhye^Based on the exploratory drilling data provided by LLC LUKOIL-Nizhnevolzhskneft, we studied the structure, composition, and conditions of formation of the middle-upper Frasnian sections of the Pamyatno-Sasovskoye oilfield, Central Russia, which are related to a complex organogenic build-up. We also conducted a lithofacies section modeling based on the data derived from classification of secondary dolomitic limestones (as per Dunham's classification), palaeontological components (e.g., algae, stromatoporoids, crinoids, gastropods, protozoans), structural constructions, and logging data. [original abstract]^1";
- 151 s[148] = "ALTMARK M.S. (1978).- Znachenie korallov dlya korrelyatsii razrezov Nizhnego Karbona.- Stratigrafiya i Paleontologiya Paleozoya vostoka Russkoy platformy: 113-118 [Izdatelstvo Kazanskogo Universiteta].- FC&P 9-2, p. 40, ID=0306^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Russia^^1";
- 152 s[149] = "KOZYREVA T.A. (1978).- Ob etapnosti razvitiya Kamennougol'nykh korallov yuzhnogo sklona Voronezhskoy anteklizy.- Trudy Sessiyi vsesoyuznogo Paleontologicheskogo Obshchestva 18 [Problemy etapnosti razvitiya organicheskogo mira]: 81-88.- FC&P 9-2, p. 41, ID=0321^Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Voronezh^^1";
- 153 s[150] = "EINOR O.D., GORAK C.V. (eds)) (1983).- Verkhneserpukhovskiy podyarus Donetskogo Basseina (paleontologicheskaya kharakteristika) [Upper Serpukhovlan Substage in Donetz Basin (paleontological characteristics)].- Akademiya Nauk Ukrainskoy SSR, Institut Geologicheskikh Nauk; 159 pp.- FC&P 15-2, p. 29, ID=0660^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Serp; Geography: Ukraine, Donets Basin^[in Russian; coral lists and plates are given by Vassilyuk]^1";
- 154 s[151] = "KOZYREVA T.A. (1984).- Stratigraficheskoe znachenie korallov Bashkirskogo yarusa yuga Voronezhskoy Anteklizy [stratigraphic significance of Bashkirian corals from the south of Voronezh Anteclyse].- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 59, 6: 102-110.- FC&P 15-2, p. 30, ID=0671^Topic(s): biostratigraphy; Anthozoa stratigraphy;

- Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Bashk; Geography: Russia, Voronezh^1";
- 155 s[152] = "POLYAKOVA V.Ye. (1967).- Vliyanie abioticheskikh i bioticheskikh faktorov na sostav i oblik pozdneserpukhovskikh korallov Donetskogo Basseina [influence of abiotic and biotic factors on composition and character of late Serpukhovian corals of Donets Basin; in Russian].- In: Bogdanova T. N. & Kozatskiy (eds): Paleontologiya i Rekonstruktsiya Geologicheskoy Istorii Paleobasseinov. Trudy Sessi Vsesoyuznogo Paleontologicheskogo Obshchestva Leningrad, 29: 83-88.- FC&P 19-1.1, p. 43, ID=2567^Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Serp; Geography: Ukraine, Donets Basin^1";
- 156 s[153] = "VASILYUK N.P. (1975).- Rol' korallov v biostratigrafii Karbona Donetskogo Basseina. [role of corals in biostratigraphy of the Carboniferous of the Donets Basin] .- In O.L. Einor (ed.): Stratigrafiya i biogeografiya morey i sushi Kamennougol'nogo perioda na territorii SSSR [stratigraphy and biogeography of Carboniferous lands and seas of the USSR]: 7-16; Lenin Order Kiev State Shevchenko University, Kiev.- FC&P 5-1, p. 31, ID=5372^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Ukraine, Donets Basin^[recognizes 13 coral assemblages]^1";
- 157 s[154] = "OGAR V. (2010).- New data on the Carboniferous corals of the Donets Basin.- Palaeoworld 19, 3-4: 284-293.- FC&P 36, p. 61, ID=6453^Topic(s): taxonomy, distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Ukraine, Donets Basin^Additional data are given here on the taxonomic diversity and distribution of the Carboniferous rugose and tabulate corals of the Donets Basin (Ukraine). Keyserlingophyllum obliquum (Keyserling, 1846) was recorded in the Tournaisian part of the section for the first time. Rotiphyllum omaliusi (Milne-Edwards et Haime, 1851) and Dorlodotia pseudovermiculare (McCoy, 1849) were found in Tournaisian-Visean boundary deposits. Zaphrentites parallelus (Carruthers, 1910), together with Sutherlandia and Cladochonus, was discovered approximately in the mid-Visean. The tabulate coral Volnovakhipora n.gen. from the Tournaisian and the rugose coral Arctophyllum lugankaensis n.sp. from the Gzhelian are established and described.^1";
- 158 s[155] = "FEDOROWSKI J. (1975).- On some Upper Carboniferous Coelenterata from Bjornoya and Spitsbergen.- Acta Geologica Polonica 25, 1: 27-78.- FC&P 4-2, p. 57, ID=5265^Topic(s): taxonomy; Chaetetida Tabulata, Rugosa; Systematics: Porifera Cnidaria; Chaetetida Anthozoa; Stratigraphy: Carboniferous U; Geography: Bjornoya, Spitsbergen^Twenty species of Coelenterata (Chaetetida, Tabulata and Tetracoralla) are described. The Ambigua Limestone fauna is compared with coeval coral faunas from other regions. The systematic position of the described species is mostly discussed in the light of ontogenetic investigations. It is suggested that the lower limit of the Ambigua Limestone is Lower Kasimovian.^1";
- 159 s[156] = "WEYER D., POLYAKOVA V.E. (1995).- Heterocorallia aus dem Oberen Serpukhovian des Donez-Beckens (Unterkarbon, Arnsbergian; Ukraine).- Abhandlungen und Berichte für Naturkunde 18: 143-159.- FC&P 24-2, p. 88, ID=4585^Topic(s): taxonomy; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous Serp; Geography: Ukraine, Donets Basin^The probably youngest and latest heterocorals of middle Arnsbergian age (Cravenoceratoides nitidus zone) are described from the basal and middle Zapaltyubinskiy-horizon at Kalmius river SSE of Donezk. There occur Heterophyllia angulata Duncan 1868, well known from the Brigantian of Scotland, Germany, Poland, and Hexaphyllia ayzenvergi sp.n., with richer and more complete material to be classified in

- future as a separate, still monotypic genus in between of Hexaphyllia and Heterophyllia, if Nodohexaphyllia Liu & Su 1992 will not prove (after revision) to be the same taxon.^1";
- 160 s[157] = "ROSEN B.R., WISE R.F. (1980).- Revision of the rugose coral *Diphyphyllum concinnum* Lonsdale, 1845 and historical remarks on Murchison's Russian coral collection.- Bulletin Brit. Mus. (Nat. Hist.), Geology, Miscellanea 33, 2: 147-155.- FC&P 9-2, p. 42, ID=0329^Topic(s): revision; Rugosa, *Diphyphyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Russia^The type specimen of *Diphyphyllum concinnum* Lonsdale 1845, which is also the type species of the important Carboniferous rugose coral genus *Diphyphyllum*, had been thought lost, but one has recently been found again, and is here redescribed. Comparison with recently erected neotypes suggests that they are only doubtfully conspecific. Remarks are given on the history of Murchison's Russian coral collections, which some authors had thought lost, and a list is given of those of his corals held in the British Museum (Natural History) collections.^1";
- 161 s[158] = "VASILYUK N.P., ZHIZHINA M.S. (1978).- Novye dannye o Nizhnekamennougol'nykh rugozakh Donetskogo basseina (Semeistva Lonsdaleiidae i Clisiophyllidae) [New data on the Lower Carboniferous rugose corals from the Donets basin (Families Lonsdaleiidae and Clisiophyllidae)].- Paleontologicheskii Sbornik 1978, 15: 27-33.- FC&P 10-1, p. 48, ID=0336^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Ukraine, Donets Basin^[six species (three of them new) of colonial rugose corals are described from the Visean and Serpuchovian deposits of the Donetz Basin; the species described are: *Dorlodotia fomitschevi* Zhizhina, *Pseudodorlodotia subkakimii* Vasilyuk, *Protolonsdaleia tenuis* Zhizhina, *P. intermedia*, *Corwenia vaga*, *C. progressiva*]^1";
- 162 s[159] = "VASILYUK N.P., ZHIZHINA M.S. (1979).- Novye dannye o Nizhnekamennougol'nykh rugozakh Donetskogo basseina (Semeistva Palaeosmilidae i Lithostrotionidae) [New data on the Lower Carboniferous rugose corals from the Donets basin (Families Palaeosmilidae and Lithostrotionidae)].- Paleontologicheskii Sbornik 1979, 16: 35-41.- FC&P 10-1, p. 49, ID=0337^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Ukraine, Donets Basin^Ten species and subspecies of colonial rugose corals (families Palaeosmiliidae and Lithostrotionidae) are described from the Lower Carboniferous of the Donetz basin. From the Visean stage, the zone Cv1d - *Diphyphyllum latetabulatum* Volk. The zone Cv1f - *Palaeosmilia regia* Phill., *Diphyphyllum fasciulatum latetabulatum* Zhizh. subsp.nov., *Lithostrotion longiseptatum* Vass. sp.nov., *Lithostrotion kwangsiense tanaica* Zhizh. subsp.nov., *Nemistium grandis* Zhizh. sp.nov., *Orionastraea phillipsi* (M'Coy), *Solenodendron ramosa* Vass. sp.nov. From the Serpukhovian stage, the zone Cs1b - *Aulina (Aulina) grandis* Vass. sp.nov.; the zone Cs1d - *Diphyphyllum carinatum* Bik. [original summary]^1";
- 163 s[160] = "KOZYREVA T.A. (1984).- Novyye kolonial'nye rugozy iz Kamennougol'nykh otlozheniy Voronezhskogo Massiva [new colonial Rugosa from the Carboniferous deposits of Voronezh Massif].- Paleontologicheskii Zhurnal 1984, 4: 53-62.- FC&P 15-2, p. 30, ID=0672^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Russia, Voronezh^^1";
- 164 s[161] = "HECKER M.R. (1986).- Colony development in Carboniferous rugose corals *Corwenia* from the Moscow basin.- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii 61, 3: 91-96.- FC&P 18-1, p. 36, ID=2242^Topic(s): blastogeny; Rugosa, *Corwenia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Russia, Moscow

- Basin^^1";
- 165 s[162] = "KOZYREVA T.A., KONOPELKO E.N. (1987).- New Middle Carboniferous Rugosa of Donets Basin.- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 62, 1: 77-85.- FC&P 18-1, p. 38, ID=2255^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: Ukraine, Donets Basin^^1";
- 166 s[163] = "KOZYREVA T.A. (1988).- Novye rugozy iz Nizhnego Karbona yuzhnogo sklona Voronezhskoy anteklizy.- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 63, 5: 71-76.- FC&P 20-2, p. 57, ID=2935^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Voronezh^^1";
- 167 s[164] = "HECKER M.R.[GEKKER] (1992).- Lonsdaleia percassa v rannekamenougolnom podmoskovskogo bassejna [Lonsdaleia percassa in the early Carboniferous of the Moscow Basin].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatomoroids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3378^Topic(s): ; Rugosa, Lonsdaleia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Moscow Basin^^1";
- 168 s[165] = "HECKER M.R. (1997).- Evolution, ecology and variability of Actinocyathus d'Orbigny 1849 (Rugosa) in the Moscow Basin during the latest Visean and Serpukhovian.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 107-115.- FC&P 26-2, p. 11, ID=3677^Topic(s): ecology, variability; Rugosa, Actinocyathus; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise Ser; Geography: Russia, Moscow Basin^Actinocyathus floriformis and A. crassiconus migrated to the Moscow Basin at the beginning of the Aleksin and Mikhailov time (latest Visean) respectively. They gave rise to two groups differing in some morphological characteristics, in patterns of evolution and in ecological plasticity. In both groups the most important evolutionary changes took place at the very beginning of the Serpukhovian. The A. crassiconus group evolved in the open sea in the south of the basin and in the current zone in the north-west as well. It reached its acme at the beginning of the early Serpukhovian. The A. floriformis group evolved in the open sea in the south only, but in the early Serpukhovian it colonized a broad spectrum of habitats in the west and north-west also and reached its acme at the end of the early Serpukhovian. Intracolony variability was typical for most species of Actinocyathus and became especially high every time species dominated in communities. Intraspecific variability could be represented either by a few adaptive modifications with transitions between them or by distinct adaptive norms. It cannot be recognized in species with high intracolony variability, those which are highly specialized or of low abundance.^1";
- 169 s[166] = "KOZYREVA T.A. (1973).- Opiphyllum, nouveau genre de Rugosa du Bachkirien de l'ant'clise de Voronej.- Paleontologicheskiiy Zhurnal 1973, 3: 129-132.- FC&P 4-1, p. 34, ID=5114^Topic(s): new taxa; Rugosa, Opiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Russia, Voronezh^^1";
- 170 s[167] = "KOZYREVA T.A. (1974).- Nouveaux coraux du genre Petalaxis (Rugosa) du Bachkirien de l'ant'clise de Voronej.- Paleontologicheskiiy Zhurnal 1974, 3: 23-30.- FC&P 4-1, p. 34, ID=5115^Topic(s): new taxa; Rugosa, Petalaxis; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Russia, Voronezh^^1";
- 171 s[168] = "KOZYREVA T.A. (1974).- Tatjanophyllum, nouveau genre de Rugosa du Carbonif're inf'rieur de l'ant'clise de Voronej.-

- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 49, 3: 93-96.- **FC&P 4-1**, p. 34, ID=5116^**Topic(s):** **new taxa; Rugosa, Tatjanophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Voronezh^1**;
- 172 s[169] = "VASILYUK N.P., KOZYREVA T.A. (1974).- A new genus *Copia* (Rugosa) from Lower Carboniferous of the Voronezh geanticline.- Paleontologicheskiiy Sbornik 1974, 11, 1: 51-54; Lviv.- **FC&P 4-2**, p. 62, ID=5299^**Topic(s):** **new taxa; Rugosa, Copia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise / Nam; Geography: Russia, Russian Platform^Description d'un genre nouveau de Tétracoralliaires coloniaux et de son espèce type *Copia admiranda* nov. gen., nov. sp. du Viséen supérieur et du Namurien inférieur du bord sud de l'antéclise de Voronezh.^1**;
- 173 s[170] = "KOZYREVA T.A. (1976).- Pervava nakhodka *Pseudodorlodotia* (Rugosa) iz Bashkirskogo yarusa Srednego Karbona. [discovery of *Pseudodorlodotia* (Rugosa) from Bashkirian deposits of Middle Carboniferous] .- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 51, 1: 124-127.- **FC&P 5-2**, p. 9, ID=5429^**Topic(s):** **new records; Rugosa, Pseudodorlodotia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Russia, Voronezh^Describes and illustrates 2 new species from Voronezh Anteclyse.^1**;
- 174 s[171] = "KOZYREVA T.A. (1978).- Novyj kamennougolnyj rod *Protodurhamina* (Rugosa) i ego rol v filogenii duramid. [new Carboniferous genus *Protodurhamina* (Rugosa) and its role in phylogeny of the Durhaminidae; in Russian].- Paleontologicheskiiy Zhurnal 1978, 1: 20-24.- **FC&P 8-2**, p. 32, ID=5584^**Topic(s):** **new taxa; Rugosa, Protodurhamina; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Russia, Russian Platform^new genus: Protodurhamina, type species *P.strelzovskensis*: p. 22, pl. 2; Carboniferous (Bashkirian) of the Russian Platform]^1**;
- 175 s[172] = "WEYER D. (1981).- Revision von *Pseudobradyphyllum Dobrolybova* 1940 (Anthozoa, Rugosa, Oberkarbon). [in German with English summary].- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 3: 3-21.- **FC&P 10-2**, p. 63, ID=6079^**Topic(s):** **revision; Rugosa, Pseudobradyphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Russia, Moscow Basin^Pseudobradyphyllum Dobrolybova 1940 is a polycoeliacean genus and a junior synonym of *Paracaninia* Chi 1937. Revision based on topotypes and syntypes of the type species (*Zaphrentis nikitini* Stuckenbergl 1888 from the basal Gzhelian stage of the Moscow basin) demonstrates all essential features of *Ufimia* Stuckenbergl 1895 (Plerophyllidae), modified by an amplexoid trend. There are no affinities with *Bradyphyllum* Grabau 1928 (Hapsiphyllidae). Due to intraspecific variation, and if separated from their series of cross-sections cut from one specimen, some sections might be identified as different genera even of several families (*Ufimia*, *Pentamplexus*, *Amplexocarinia*, *Allotropiophyllum*, *Rotiphyllum*, *Bradyphyllum*). [original summary]^1**;
- 176 s[173] = "FEDOROWSKI J. (2009).- Early Bashkirian Rugosa (Anthozoa) from the Donets Basin, Ukraine. Part 1. Introductory considerations and the genus *Rotiphyllum* Hudson, 1942.- Acta Geologica Polonica 59, 1: 1-37.- **FC&P 36**, p. 55, ID=6439^**Topic(s):** **Rugosa Rotiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Ukraine, Donets Basin^The present paper is the first in a series devoted to the Early Bashkirian Rugosa (Anthozoa) from the Donets Basin. The history of investigation and current status of Early Bashkirian stratigraphy is discussed in the context of the Donets Basin strata. Corals of that time interval are extremely rare worldwide and those from the Donets Basin have never been described in detail. Four of the five species described are new:**

- Rotiphyllum asymmetricum sp.nov., R. latithecatum sp.nov., R. simulatum sp.nov., and R. voznesenkae sp.nov. Two species are left in open nomenclature. The synonymy, species content and critical review of species potentially belonging to the genus Rotiphyllum are reviewed. [original abstract]^1";
- 177 s[174] = "FEDOROWSKI J. (2009).- Early Bashkirian Rugosa (Anthozoa) from the Donets Basin, Ukraine. Part 2. On the genera Axisvacuus gen. nov. and Falsiamplexus Fedorowski, 1987.- Acta Geologica Polonica 59, 3: 283-317.- FC&P 36, p. 55, ID=6440^Topic(s): new taxa; Rugosa, Axiscavus Falsiamplexus; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Ukraine, Donets Basin^Five species belonging to two genera: Falsiamplexus Fedorowski, 1987 and Axisvacuus gen. nov. are described in detail and their species content and relationships are discussed. Both genera are perhaps related to Rotiphyllum and were probably derived from it, but relationship of Falsiamplexus to Bradyphyllum Grabau, 1928 cannot be excluded. The new genus Axisvacuus is represented by four species, of which three are new: A. verus (type species), A. extendus and A. semicirculatus. Stratigraphic ranges of species described are compared to the western European and Russian standards (Table 1). Some possible palaeogeographic implications of the occurrence of Axisvacuus postumus (Smith, 1931) and Falsiamplexus reductus Fedorowski, 1987 are briefly discussed.^1";
- 178 s[175] = "HECKER M.R. (2010).- Some aspects of evolution in the Lonsdaleia (Actinocyathus) crassiconus species-group.- Palaeoworld 19, 3-4: 316-324.- FC&P 36, p. 59, ID=6446^Topic(s): phylogeny; Rugosa Lonsdaleia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Serp; Geography: Russia, Moscow Basin^The Actinocyathus crassiconus species-group represents a separate trend of evolution within the rugose subgenus Lonsdaleia (Actinocyathus) (d'Orbigny, 1849). It is distinguished by consistently developed minor septa and by regular axial structures. In the Moscow Basin, this species-group comprises seven species, A. crassiconus (McCoy, 1849), A. lativesiculosus (Dobrolyubova, 1958), A. sarytschevae (Dobrolyubova, 1958), A. subtilis (Dobrolyubova, 1958), A. gorskyi (Dobrolyubova, 1958), Actinocyathus sp. A, and Actinocyathus sp. B. It ranges from the Mikhailov horizon (Brigantian) to the Protva horizon (lower upper Serpukhovian), and is especially characteristic of the Tarusa horizon (lowermost Serpukhovian) in the north-western part of the basin. Evolution in the group took place at the beginning of Mikhailov time and in Tarusa time and showed three trends: (i) increase in corallite size and number of septa; (ii) increase in number of septa and tabularia diameter; and (iii) a wide range of variability in septal number without important changes in tabularia diameter. Lonsdaleia ornata Dobrolyubova, 1958, L. heckeri Dobrolyubova, 1958, and L. longiseptata crassicolumellata Dobrolyubova, 1958 are synonymised with Actinocyathus subtilis, and Lonsdaleia subcrassiconus subcrassiconus Dobrolyubova, 1958 is with Actinocyathus gorskyi.^1";
- 179 s[176] = "HECKER M.R. (1992).- Lonsdaleia floriformis v ranekamenougolnom podmoskovskogo bassejna. [Lonsdaleia floriformis in the early Carboniferous of the Moscow Basin; in Russian].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korall'ov i stromatomorfid [intraspecific variability in corals and stromatoporoids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=6824^Topic(s): ; Rugosa Lonsdaleia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Moscow Basin^^1";
- 180 s[177] = "FEDOROWSKI J., VASSILYUK N.P. (2001).- Bashkirian Rugosa of the Donets Basin.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 291-297.- FC&P 30-1, p. 21, ID=7074^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:

- Carboniferous Bashk; Geography: Ukraine, Donets Basin^The Bashkirian rugose coral fauna of the Donets Basin from the Homoceras, Reticuloceras and Gastrioceras biozones is analysed in terms of modern ammonoid, foraminiferal and conodont biostratigraphy. Comparison to the Serpukhovian corals of the same area shows a drastic impoverishment in the Homoceras biozone, culminating in the Reticuloceras biozone. Those two biozones should be considered as the main period of turnover from the Lower to the Upper Carboniferous rugosan faunas. The step by step recovery and appearance of younger faunas began with, and was accelerated during, the Gastrioceras biozone. The fauna of the Donets Basin is distinctly different from that of the adjacent Voronezh, or the Spanish and North African regions in both generic composition and growth form. Except for a single species of the colonial Lytvophyllum?, only solitary taxa of both dissepimental and non dissepimental types occur in the Donets Basin. Many of these taxa are new and show primitive characteristics of Upper Carboniferous taxa. The Donets Basin represents environments differing from those in the areas mentioned above and also was one of the main world centers for the appearance of new rugose coral faunas following the Homoceras-Reticuloceras biozone crisis. [original abstract]^1";
- 181 s[178] = "HECKER M. (2001).- Lower Carboniferous (Dinantian and Serpukhovian) rugose coral zonation of the East European Platform and Urals, and correlation with Western Europe.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 298-310.- FC&P 30-1, p. 21, ID=7075^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Russian Platform^A sequence of nine rugose coral zones (six assemblage zones and three interval zones) is proposed for the Dinantian and Lower Serpukhovian of the East European Platform and Urals. Two assemblage zones are recognized in the Tournaisian, the Siphonophyllia-Conilophyllum and Uralinia-Cyathoclisia-Sychnoelasma konincki zones, three in the Visean. the Haploasma-Sychnoelasma urbanowitschi, Acrocyathus-Dorlodotia and Palastraea-Actinocyathus floriformis-Nemistium zones, and one in the lower Serpukhovian, the Turbinatocania-Actinocyathus borealis-Paralithostrotion zone. They correspond to the upper part of the Tn1b, to the Tn3, V1b-V2a, V2b-V3bβ, V3c, and to the Pendleian-Arnsbergian respectively. Interval zones correspond to the Tn2, V1a and V3bγ. All litho-chronostratigraphic sigla are used in the sense of Conil et al. (1990). * Rugose corals are usually considered important but endemic index fossils, and are seldom used for long distance correlations. Intraspecific variability is often overlooked, with the consequence of the establishment of systematically invalid species. A regrouping of these "species" puts a good tool for correlation at our disposal. * The proposed zones can be correlated with the Lower Carboniferous coral zones established in Great Britain, Belgium and South China. Most of the genera, and even some species, upon which zonations of Western Europe rely on, are observed in the Lower Carboniferous of the Central Russia, Urals and Ukraine (Donets Basin). Comparison of rugose faunas of Europe, Urals and South China shows that communication existed between these areas in the Early Carboniferous, and was especially intensive during the late Tournaisian and latest Visean. [original abstract]^1";
- 182 s[179] = "POLYAKOVA V.Ye. (1984).- Stromatoporaty iz verkhneserpukhovskikh otlozheniy donetskogo basseyna [Stromatoporata from the Upper Serpukhovian deposits of the Donets Basin].- Geologicheskii Zhurnal 44, 4: 102-107.- FC&P 14-1, p. 57, ID=1053^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Carboniferous Serp; Geography: Ukraine, Donets Basin^^1";
- 183 s[180] = "POLYAKOVA V.Ye. (1983).- Novyy vid tabulyat iz Nizhnego Karbona Donetskogo basseyna [a new tabulate species from the Lower

- Carboniferous of Donets Basin].- Paleontologicheskii Zhurnal 1984, 4: 86-88.- FC&P 15-2, p. 32, ID=0686^Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous L; Geography: Ukraine, Donets Basin^^1";
- 184 s[181] = "TOURNEUR F., LAFUSTE J., PLUSQUELLEC Y. (1990).- Structure et microstructure de *Michelinia rectotabulata* Vassilyuk 1960 (Tabulata, Serpukhovien du Bassin du Donetz, U.S.S.R.).- Bulletin de la Societe belge de Geologie 98, 3/4: 443-451. [in French, with English summary].- FC&P 19-1.1, p. 21, ID=2580^Topic(s): microstructures, systematic position; Tabulata, *Michelinia*; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Serp; Geography: Ukraine, Donets Basin^The assignment of the species *Michelinia rectotabulata* Vassilyuk 1960 to the genus *Michelinia* De Koninck 1842 has been confirmed by the detailed microstructural study of topotypes; the sclerenchyme is composed of undulating lamellae parallel to the granular median lamina, a peripheral fibrous zone is locally developed. The species, coming from the Serpukhovian of the Donetz Basin, counts among the last representants of the genus, which is not recognized with certainty after the Lower Carboniferous.^1";
- 185 s[182] = "NOWINSKI A. (1994).- A new tabulate coral from Upper Carboniferous of Nordenskiöld Land, Svalbard.- Polish Polar Research 15, 1-2: 31-35.- FC&P 25-1, p. 9, ID=2995^Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U; Geography: Svalbard^Roemeripora tollinoidea sp. n. (Anthozoa, Tabulata) is described from Upper Carboniferous strata of SW Nordenskiöld Land (Ingeborgfiellet), Bellsund area in West Spitsbergen (Svalbard). The new species is characteristic for a phacelo-ceriod structure of entire corallum. [original abstract]^1";
- 186 s[183] = "VASILYUK N.P., POLYAKOVA V.Ye. (1986).- Evolution of coelenterates at boundary between Early and Middle Carboniferous in Donets basin.- Phanerozoic reefs and corals of the USSR [Sokolov B. S. (ed.), Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam, Dushanbe 1983]: 74-76 [in Russian].- FC&P 18-1, p. 39, ID=2263^Topic(s): faunal turnover; Coelenterata; Systematics: Cnidaria; Stratigraphy: Carboniferous L/M; Geography: Ukraine, Donets Basin^^1";
- 187 s[184] = "POLYAKOVA V.Ye. (1986).- Fringing reefs of the upper Serpukhovian in the Donets basin.- Phanerozoic reefs and corals of the USSR [Sokolov B. S. (ed.), Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam, Dushanbe 1983]: 174-179 [in Russian].- FC&P 18-1, p. 38, ID=2260^Topic(s): fringing reefs; reefs; Systematics: Stratigraphy: Carboniferous Serp; Geography: Ukraine, Donets Basin^^1";
- 188 s[185] = "POLETAEV V.I., BRAZHNIKOWA N.E., VASILYUK N.P., VDOVENKO M.V. (1991).- Local zones and major Lower Carboniferous biostratigraphic boundaries of the Donets basin (Donbass), Ukraine, USSR.- Courier Forschungsinstitut Senckenberg 130: 47-59.- FC&P 21-1.1, p. 47, ID=3235^Topic(s): stratigraphy; stratigraphy; Systematics: Stratigraphy: Carboniferous L; Geography: Ukraine, Donets Basin^^1";
- 189 s[186] = "NOWINSKI A. (1990).- Some Carboniferous-Permian organisms from the coral bearing strata of Spistbergen.- Polish Polar Research 11, 3-4: 317-329.- FC&P 21-1.1, p. 20, ID=3203^Topic(s): paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Spitsbergen^^1";
- 190 s[187] = "SOMERVILLE I.D. (1997).- Biostratigraphy and biofacies of Upper Carboniferous - Lower Permian rugose coral assemblages from the Isfjorden area, central Spitsbergen.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 365-380.-

- FC&P 26-2, p. 34, ID=3727^Topic(s): biostratigraphy; coral assemblages; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U - Permian L; Geography: Spitsbergen^Rugose coral assemblages from the Upper Carboniferous-Lower Permian Wordickammen Formation of central Spitsbergen are used in combination with microfaunal data and carbonate facies analysis for biostratigraphic correlations and biofacies interpretations. On the Nordfjordne Block in the west, an Upper Carboniferous (late Moscovian) fauna was recovered from the lower part of the Kapitol Member. This assemblage is characterised by abundant cerioid colonies of Petalaxis, fasciculate colonies of Tschussovskenia ?, Profischerina ? and Fomichevella, as well as numerous chaetetid demosponges. Many of the conical coralla are inverted and occur within well-sorted, shallow-water, skeletal grainstones. In the upper beds of the Kapitol Member solitary caniniids and bothrophyllids of Late Carboniferous (Kasimovian-Gzhelian) age are dominant, including Caninophyllum, Cornuphyllum, Gshelia, Amygdalophylloides, Carinthiaphyllum, Fomichevella spp., and tabulate colonies (Roemeripora and Syringopora). The overlying Tyrrellfjellet Member has only a few corals near the base, where there is widespread development of Palaeoaplysina bioherms, and rare Asselian representations of Heintzella, Tschussovskenia and cerioid Kleopatrina are recorded. In the Billefjorden Trough to the East, the Cadelfjellet Member (equivalent to the Kapitol Member) has phylloid algal bioherms near the base (Pyefjellet Beds) with large solitary rugose corals (Cornuphyllum and 'Caninia') in packstones. These are succeeded by concentrations of 'Caninia' and Fomichevella in skeletal packstones of Late Carboniferous (Kasimovian-Gzhelian) age, within the otherwise sparsely fossiliferous micrites (Black Crag Beds). Skeletal wackestones and packstones near the top of the Tyrrellfjellet Member have abundant cerioid colonies (Kleopatrina (Kleopatrina), Stylastraea and 'Thysanophyllum'), together with solitary rugosans (Bothrophyllum, Gshelia, Timania, Pseudotimania and Siedleckia) of Early Permian (Sakmarian) age. Two main periods of cerioid development are recognised in the corals of the Wordickammen Formation. The first occurred in the late Moscovian (=Myachkovian of the Moscow Basin) with a dominance of petalaxids, followed by a later event in the Sakmarian, (age confirmed with fusulinacean and conodont data). The Upper Carboniferous-Lower Permian rugose coral assemblages from central Spitsbergen have strong affinities with those of the western part of Russia (Urals, northern Timan, Moscow Basin) and the Sverdrup Basin, Arctic Canada and in the late Moscovian form part of the Uralo-Arctic Province. This province can be distinguished from the Mediterranean Province to the south and the isolated coral faunas from California in the west and Japan to the east. Later in the Early Permian the coral faunas from Russia, Spitsbergen, Canada and the western USA form the 'circum-Pangaea' faunal realm.^1";
- 191 s[188] = "CHWIEDUK E. (2009).- Polish palaeontological research in the Arctic.- Geologos 15, 2: 133-143.http://www.geologos.com.pl/.- FC&P 36, p. 52, ID=6435^Topic(s): geology, research history; research history; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Spitsbergen^[the paper is a review of Polish palaeontological studies in the Arctic, including research of Carboniferous and Permian Rugosa and Tabulata; a list of new coral taxa described by Polish palaeontologists (or in collaboration with other specialists) is given]^1";
- 192 s[189] = "IVANOVSKIY A.B. (1987).- Rugozy opisannye A. A. Shtukenbergom (1888-1905).- Nauka, Moskva: 45 pp., 24 pls [Rugosa described by A.A. Stuckenber (1888-1905); in Russian].- FC&P 16-1, p. 61, ID=1963^Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: Russia^This book contains a list of revised

- Carboniferous and partly Permian rugose corals described by Stuckenberg. In case of necessity lectotypes as well as neotypes were chosen; if possible stratigraphical range was also corrected. The Stuckenberg material is stored in the following institutions: (1) Central Museum of Scientific Research and Geological Sciences [CGM] - collection 321: publication of 1888; collection 305: publication of 1895 (partly); collection 336: publication of 1904 (partly); collection 337: publication of 1905 (partly); (2) Mining Museum of the Mining Institute at Leningrad [LGU] - collection 45: publication of 1885 (partly); collection 44: publication of 1904 (partly); (3) Museum of the Faculty of Geology of the Kazan University [KU] - collection SH.11";
- 193 s[190] = "EZAKI Y., KAWAMURA T. (1992).- Carboniferous-Permian corals from Skansen and Festningen, Central Spitzbergen: their faunal characteristics.- In Nakamura K. (ed.): Investigations on the Upper Carboniferous-Upper Permian Succession of West Spitsbergen 1989-1991; Publ. Hokkaido Univ. Sapporo: 59-75.- FC&P 21-2, p. 34, ID=3312^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: Spitsbergen^Successful marine Carboniferous-Permian strata containing fossil corals are widely distributed in Spitsbergen, providing some of the best reference areas in the Boreal province. Since Toula (1875) first described two species of rugose corals from the Nordenfjorden, several palaeontological works have been published (e.g., Holtedahl 1913; Heritsch 1993; Padget 1954; Fedorowski 1965, 1967, 1975; Tidten 1972; Birkenmajer & Fedorowski 1980; Nowinski 1982). Among them, Heritsch (1939) first clarified the overall faunal characteristics of the Carboniferous and Permian corals in Spitsbergen. A series of studies by Fedorowski (e.g. 1965, 1967, 1975) mainly focused on the Late Carboniferous to Early Permian from the Hornsund and Bellsund areas. Tidten (1972) described the Carboniferous and Permian Rugosa mainly from the Isfjorden. "Middle to Late" Permian Corals of the Boreal province have not been fully described as to their detailed lithostratigraphic and biostratigraphic data. This report provides a brief account of the Carboniferous to Permian coral fauna of the Nordenskioldbreen Formation at Skansen and the Permian fauna of the Kapp Starostin Formation at Festningen in Central Spitsbergen. Their faunal characteristics are also briefly discussed. The Nordenskioldbreen Formation is overlain by the Gipshuken Formation. The Kapp Starostin Formation represents the Uppermost Palaeozoic strata observed in Spitsbergen. The Formation overlies the Gipshuken Formation and is paraconformably overlain by the Lower Triassic Vardebukta Formation. For a lithologic and stratigraphic explanation of the Nordenskioldbreen and the Kapp Starostin Formation, see Nakamura et al. (1987 1990) and in the preceding chapter of the volume mentioned and edited by Nakamura.11";
- 194 s[191] = "TIDTEN G. (1972).- Morphogenetisch-ontogenetische Untersuchungen an Pterocorallia aus dem Permo-Karbon von Spitzbergen.- Palaeontographica A139, 1-3: 1-63.- FC&P 1-2, p. 18, ID=4664^Topic(s): morphology, ontogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: Spitsbergen^On the occasion of two stays in Spitzbergen during the summers of 1960 and 1961, a rich fauna of Corals from the Permo-Carboniferous deposits was collected. It was studied with the aim of revising and completing previous explorations. From the large amount of processed material, only those specimens were selected, in which modern morphogenetic analysis had led to new results. This analysis includes particularly: 1. the structure is the centre of the corallite of those genera which have a constantly or temporarily elongated counter septum, 2. the secondary thickening of the structural elements (previously called "stereoplasma"), particularly considering the reasons for their formation and their degeneration during the course of the ontogeny and 3. the fossula development. The results have been possible due to newly developed methods for thin

- sections, etching and preparations. Thus, the additional knowledge, presented in the systematics section, has led to a better identification of the characteristics and to a more sophisticated classification. The genus *Sassendalia* with the species *S. turgidiseptata* as well as the species *Pseudotimania latifossulata* are new. Furthermore, the following species are analysed: *Bothrophyllum conicum* Trautschold 1879 sensu Dobroľjubova 1937, *B. conicum robustum* Dobroľjubova 1940, *B. pseudoconicum* Dobroľjubova 1937, *Gshelia rouillieri* Stuckenbergr 1888 sensu Dobroľjubova 1940, *Timania schmidti* Stuck. 1895, *Pseudotimania mosquensis* (Dobroľj. 1937), *Caninophyllum calophylloides* (Holstedahl 1913), *Yuanophyllum* sp., *Campophyllum kiaeri* Holstedahl 1913, *Lithostrotion* (*Siphonodendron*) affine (Martin 1809).¹¹;
- 195 s[192] = "NOWINSKI A. (1991).- Late Carboniferous to Early Permian Tabulata from Spitsbergen.- *Palaeontologia Polonica* 51; 74 pp.- FC&P 21-1.1, p. 20, ID=3204Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U - Permian L; Geography: Spitsbergen¹¹;
- 196 s[193] = "FEDOROWSKI J. (1983).- Coral thanatocoenoses and depositional environments in the upper Treskelodden beds of the Hornsund area, Spitsbergen.- *Palaeontologia polonica* 43: 17-68.- FC&P 13-1, p. 20, ID=0393Topic(s): taphonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Spitsbergen^{Field observations made in 1975 supplement existing data and make possible a new interpretation of depositional environments of the upper Treskelodden beds. It is demonstrated that the entire coral fauna in all "Coral Horizons" represents re-deposited assemblages. Transportation in some cases was sufficient to abrade and round individual colonies; others were simply overturned from growth position. The upper Treskelodden beds were deposited in very shallow marine environments although some beds and parts of the studied area may have been temporarily exposed above sea level. Environmental changes observed are developed on a local scale only. Tectonic factors are interpreted herein as causing the faunal and sedimentological variations observed rather than the global climatological mechanisms suggested by earlier workers. This interpretation is supported by the small scale and character of the sedimentological variations observed.}11;
- 197 s[194] = "BIRKENMAJER K., FEDOROWSKI J. (1980).- Corals of the Treskelodden Formation (Lower Permian) at Triasnuten, Hornsund, South Spitzbergen.- *Studia Geologica Polonica* 66, 11: 7-27.- FC&P 11-1, p. 53, ID=1782Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Spitsbergen¹¹;
- 198 s[195] = "ARETZ M., DEBRENNE F., LEGRAND-BLAIN M. (2009).- Pierre Semenoff-Tian-Chansky, 13 September 1925 - 11 October 2003.- *FC&P* 35: 24-29.- FC&P 35, p. 24, ID=7260Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[obituary note, with attached list of Semenoff's publications]¹¹;
- 199 s[196] = "NOWINSKI A. (1997).- A new trachypsammiid cnidarian from the Late Permian of Spitsbergen.- *Polish Polar Research* 18: 159-169.- FC&P 27-2, p. 15, ID=3894Topic(s): new taxa; Cnidaria, Trachypsammiida; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian U; Geography: Spitsbergen¹¹;
- 200 s[197] = "WEYER D. (1981).- *Paracaninia variabilis* (Soshkina 1941) aus dem Kazanian der Russischen Plattform (Antozoa, Rugosa, Mittelperm).- *Abhandlungen und Berichte für Naturkunde und Vorgeschichte* 12, 4: 65-78.- FC&P 12-1, p. 33, ID=1905Topic(s): ; Rugosa, Paracaninia; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian Capit; Geography: Russia, Russian Platform^{Topotypes of Plerophyllum variabile Soshkina, 1941, from the lower Kazanian stage (Capitanian) of the Onega river basin are revised. Serial sectioning demonstrates remarkable ontogenetic and}

- intra-specific variations in septal configuration.¹¹";
- 201 s[198] = "CHWIEDUK E. (2007).- Middle Permian rugose corals from the Kapp Starostin Formation, South Spitsbergen (Treskelen Peninsula).- Acta Geologica Polonica 57, 3: 281-304.http://www.geo.uw.edu.pl/agp/table/pdf/57-3/chwieduk.pdf.- FC&P 35, p. 49, ID=2332Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian Guad word ?; Geography: SpitsbergenThe rugose corals from the topmost part of the Kapp Starostin Formation on the Treskelen Peninsula, South Spitsbergen, are described. The collection consists of 22 specimens, representing the genera Calophyllum, Allotropiochisma and Euryphyllum. These solitary and non-dissepimented taxa, considered to be cold-water forms, are representatives of the Calophyllum Province of the Cordilleran-Arctic-Uralian Realm, and confirm a biogeographical connection between Alaska, Ural Mts., Central European Basin, Sverdrup Basin, and Arctic Canada in the Middle Permian. In southern Spitsbergen the Kapp Starostin Formation yields apparently the latest representatives of the Rugosa in the whole Hornsund region, dated to the Guadalupian and probably to the Wordian.11";
- 202 s[199] = "IVANOVSKIY A.B. (1989).- solitary rugose corals from the Upper Permian of the east of Russian Platform [Oдиночные ругозы из верхней Перми востока Русской платформы; in Russian].- Trudy Instituta geologii i geofiziki 732 [Dagis A. C. & Dubatolov V. N. (eds): Verkhniy Palaeozoy i Trias Sibiri (Upper Palaeozoic and Triassic of Siberia)]: 31-39.- FC&P 18-2, p. 32, ID=2475Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Russia, Russian PlatformDescribed are the following genera and species from Upper Permian beds (Kasan): Amplexocarinia muralis Soshkina 1928, Paralleynia permiana Soshkina 1936, Calophyllum profundum (Germar in Geinitz 1842), Groenlandophyllum teichertii Fluegel 1973, G. variabile (Soshkina 1941), "Gerthia" sp., Sassendalia bashkirica sp.nov., Pentaphyllum hexaseptatum (Soshkina 1928), and Euryphyllum minor Fontaine 1961. This fauna was never described before with exception of few specimens briefly introduced by A. N. Nechaev (1894) and B. K. Likharev (1913).11";
- 203 s[200] = "EZAKI Y. (1997).- Cold-water Permian Rugosa and their extinciton in Spitsbergen.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 381-388.- FC&P 26-2, p. 35, ID=3728Topic(s): cold-water corals, extinctions P/T; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: SpitsbergenMarine Permian successions, containing various kinds of invertebrate fossils, are distributed widely in Spitsbergen. The Kungurian to Tatarian Kapp Starostin Formation is the uppermost Palaeozoic unit and is characterized by a cold-water fauna dominated by brachiopods, bryozoans and sponges. Non-dissepimented solitary Rugosa also occur, especially in shallow-water carbonates. The coral fauna is entirely different in composition and diversity from that of the underlying Nordenskioldbreen Formation, which was deposited in tropical and / or subtropical conditions. However, similar cold-water faunas are commonly found in contemporaneous formations in other present day Arctic regions such as Greenland and the Canadian Arctic, belonging to the same faunal province. Almost the same faunal succession appeared throughout this province during a climatic cooling characteristic of the Arctic region. The abundance of corals decreases upwards in the Kapp Starostin Formation, showing a strong facies dependence on a local scale. The cold-water, solitary Rugosa disappeared earlier than the other level-bottom organisms, and the warm-water adapted Rugosa in the Tethys. The fauna was primarily affected by a climatic cooling, but was also diminished by various factors of sea-level, tectonic, geochemical and biological origins on local and global scales.11";
- 204 s[201] = "STEVENS C.H. (1975).- Occurrence and migration of the "northern" massive rugosa in the Early Permian.- Drevniye

- Cnidaria [B.S. Sokolov (ed.)], 2: 197-205.- FC&P 5-1, p. 30, ID=5370^Topic(s): massive, origins migrations; Rugosa massive; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: Arctics^[origin and migration of Early Permian coral faunas in Arctic region]^1";
- 205 s[202] = "CHWIEDUK E. (2009).- Early Permian solitary rugose corals from Kruseryggen (Treskelodden Fm., Hornsund area, southern Spitsbergen).- Geologos 15, 1: 57-75.http://www.geologos.com.pl/geologos15.html.- FC&P 36, p. 52, ID=6434^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: Spitsbergen^A collection of solitary rugose corals collected from the Treskelodden Formation of the Kruseryggen Hill, Hornsund area, south Spitsbergen, consists of 30 specimens representing the Bothrophyllidae family with the genera Bothrophyllum, Caninophyllum, Hornsundia, and Timania (5 species), and an indeterminate family with the genus Svalbardphyllum (one species). These large, dissepimental forms, dating from the Early Sakmarian (Tastubian), indicate a warm-water environment. The lithology, the thickness of the succession, the reddish hue and the abrasion of the fossils indicate that the area of the inner Hornsund showed a relief that enabled considerable erosion of the elevated areas and redeposition of the fossils at remote locations. The changing morphology of this area during the Early Permian was probably influenced by synsedimentary block tectonics. [original abstract]^1";
- 206 s[203] = "NOWINSKI A. (1983).- Some new species of Tabulata from the Lower Permian of Hornsund, Spitsbergen.- Palaeontologia polonica 43: 83-96.- FC&P 13-1, p. 44, ID=0493^Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian Sak - Art; Geography: Spitsbergen^Four new tabulate corals: Roemeripora aspinosa of the order Favositida, Armalites laminatus and Hayasaksia compacta of the order Syringoporida and Fuchungopora arctica of the order Sarcinulida are described from the Sakmarian to Artinskian (Lower Permian) strata of the Treskelodden Formation, Hornsund, Spitsbergen.^1";
- 207 s[204] = "NOWINSKI A., ZAPALSKI M.K. (2001).- New taxa of tabulate corals from the Lower Permian of Spitsbergen and their stable isotopic data.- Polish Polar Research 22, 2: 81-88.- FC&P 31-2, p. 47, ID=1697^Topic(s): new taxa, stable isotopes; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian L; Geography: Spitsbergen^New coral taxa Tetraporinus siedleckii sp. n. and Roemeripora aspinosa major ssp. n. are erected from the Lower Permian (Sakmarian and Artinskian) Treskelodden Formation of Hornsund area, Spitsbergen and Syringopora sp. similar to S. subreticulata Nowinski, 1991 are described. Studies on stable isotope ratios of carbon and oxygen in skeletons of Tabulate and Rugose corals from Hyrnefjellet and Treskelodden areas show that these organism did not fractionate the isotopes too much. The differences in isotope fractionation, both for carbon and oxygen, reached 2 % comparable to the concurring brachiopods, accepted as reference level.^1";
- 208 s[205] = "EZAKI Y., KAWAMURA T., NAKAMURA K. (1995).- Kapp Starostin Formation in Spitsbergen: A sedimentary and faunal record of Late Permian palaeoenvironments in an Arctic region.- Mem. Canadian Soc. Petrol. Geol. 17: 647-655.- FC&P 24-1, p. 56, ID=4463^Topic(s): geology, paleontology; Systematics: ; Stratigraphy: Permian U; Geography: Spitsbergen^The Kapp Starostin Formation is the uppermost Palaeozoic stratigraphic unit in Spitsbergen, ranging from Kungurian to the Tatarian. It contains a cold water adapted fauna dominated by brachiopods, bryozoans and sponges. Four depositional facies are recognised in central Spitsbergen: 1) a cold water carbonate facies on the shallow shelf; 2) a terrigenous sand facies on the deep shelf; 3) a siliceous mud facies on the deep shelf and slope; and 4) a black mud facies in the basin. The cold water carbonates with a limited fauna contain rare non-skeletal carbonate

- components and carbonate muds and were deposited on a shallow carbonate shelf. The siliceous mudstones, containing numerous sponge spicules, were deposited below normal wave base. At the same depth terrigenous sands with glauconite were distributed in places. The black mudstones are characterised by rare benthic fauna and less bioturbation, implying deposition in a stagnant condition. The sequence of the Kapp Starostin Formation shows four cyclic facies successions, with several transgressive-regressive couplets from shallow carbonate facies to terrigenous sand, deep siliceous or basinal mud facies and vice versa. The whole sequence comprises one transgressive-regressive cycle commonly observed in the Arctic region. The organisms of the Kapp Starostin Formation vary in abundance and taxonomic diversity, showing a strong facies dependence. The faunal diversity decreases with increase in water depth and terrigenous sediment content. The Permian fauna shows strong faunal similarities in composition within Arctic and peri-Gondwana regions and flourished temporarily in a colder climate in the northern hemisphere. The fauna, however, disappeared in a tectonic framework established in the mid-Permian. Relative sea level fluctuations coupled with local and regional tectonism induced a marked variety of adverse conditions for the cold water organisms.¹";
- 209 s[206] = "STEMMERIK L., LARSON P.A., LARSEN G.B., MORK X., SIMONSEN B.T. (1994).- Depositional evolution of Lower Permian Paleaplysina buildups, Kapp Duner Formation, Bjornoya, arctic Norway.- *Sedimentary Geology* 92: 161-174.- FC&P 24-2, p. 96, ID=4602^Topic(s): reefs, sedimentology; reefs; Systematics: ; Stratigraphy: Permian L; Geography: Norway, Bjornoya^[buildup complex 45m thick of Paleaplysina, enigmatic encruster is described]^1";
- 210 s[207] = "LUKIN I.V., GALITSKIY I.V. (1974).- On bioherms from Lower Permian deposits of the Dniepr-Donetz.- *Dokl. AN SSSR* 1974, 215, 1: 170-173; Moskva.- FC&P 3-2, p. 40, ID=4958^Topic(s): bioherms; reefs; Systematics: ; Stratigraphy: Permian L; Geography: Ukraine, Donets Basin^1";
- 211 s[208] = "ATLASMANN Y.Y. (2004).- Morphology of ancient reef massifs of Permian near-Urals and their oil-bearing character.- *Petroleum Geology* 38: 191-202.- FC&P 33-1, p. 80, ID=7227^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian; Geography: Russia, Povolzhye^1";
- 212 s[209] = "HELM C., SOLCHER J. (1999).- Weitere Funde oberjurassischer Korallen (*Thamnasteria concinna* und *Isastrea* sp.) aus quartären Ablagerungen von Niedersachsen.- *Geschiebekunde aktuell* 15, 1: 1-8.- FC&P 30-1, p. 29, ID=1480^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Germany, erratics^ES werden zwei oberjurassische Stockkorallen aus quartären Ablagerungen von Niedersachsen beschrieben. Die in Aragonit-Erhaltung vorliegende *Thamnasteria concinna* stellt einen Geschiebefund aus Schmelzwassersand von Egestorf in der Nordheide dar. Entsprechende Geschiebefunde aus Polen und E-Deutschland deuten auf ein östlich gelegenes Herkunftsgebiet ("Pommerscher Ma") hin. Für *Isastrea* sp. Aus dem Leinkies von Schliekum S Hannover ist die Heimat als Geröll aus dem anstehenden korallenführenden NW-deutschen Oberjura (Korallenoolith, Oxfordium) anzunehmen. ^1";
- 213 s[210] = "RONIEWICZ E. (1984).- Aragonitic Jurassic corals from erratic boulders on the South Baltic coast.- *Annales Societatis Geologorum Poloniae* 54, 1-2: 63-77.- FC&P 14-1, p. 23, ID=6612^Topic(s): aragonitic; Scleractinia; Systematics: Cnidaria; scleractinia; Stratigraphy: Jurassic; Geography: Baltic S, erratics^1";
- 214 s[211] = "BRUCKNER A., JANUSSEN D. (2005).- The first entirely preserved fossil sponge species of the genus *Rossella* (Hexactinellida) from the Upper Cretaceous of Bornholm, Denmark.- *Journal of Paleontology* 79, 1: 21-28.- FC&P 34, p. 23,

- ID=1189^Topic(s): ; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cretaceous U; Geography: Denmark^A new lyssacinoid hexactinellid, *Rossella bromleyi* n.sp., is described from the Upper Cretaceous of Arnager Pynt, Bornholm (Denmark). The sponge shows a cup-shaped form with a broad, moderately dense roottuft, which contains three- and four-rayed, orthotropical anchors characteristic for *Rossella*. The skeleton is composed of bundles of diactines, hexactines of two orders, and pentactines. Diactine bundles are mainly in the growth direction or diagonal to it. Hypodermalia are pentactines with the paratangential rays protruding beyond the outer surface of the sponge body.^1";
- 215 s[212] = "LOSER H. (2003).- Internodien der Gattung *Moltkia* (Octocorallia) aus einem Maastricht-Geschiebe (Oberkreide) von Niedersachsen (Deutschland).- Berliner Beiträge zur Geschiebeforschung 2: 99-101.- FC&P 33-2, p. 33, ID=1163^Topic(s): taxonomy; Octocorallia, *Moltkia*; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous Maas; Geography: Germany, erratics^From glacial drift material of a Maastricht age from Lüneburg (Niedersachsen, Germany), internodes of the octocoral genus *Moltkia* are described. The material is assigned to the species *Moltkia minuta* Nielsen 1918, form C sensu Voigt 1958.^1";
- 216 s[213] = "FLORIS S. (1980).- Mid-Cretaceous Scleractinians from Denmark.- FC&P 9, 2: 11.- FC&P 9-2, p. 11, ID=6299^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous M; Geography: Denmark Bornholm^Mid-Cretaceous Scleractinians from Denmark are very few and are known only from outcrops on the island of Bornholm (stratigraphy summarized by Christensen 1978). They have now been revised, and the results are given here. * Upper Albian: gen. & sp. indet. (oculinid?); gen. & sp. indet. (discoid-patellate); gen. & sp. indet. (1 or 2 species, turbinate-subcylindrical). (The material was earlier recorded by Ravn, 1925 (p.21), who also found it to be badly preserved and hardly determinable remains). * Lower and/or Middle Cenomanian: *Micrabaoia* cf. *coronula* (Goldfuss 1826). (The material was recorded as *M. coronula* by Ravn 1916 (p. 14-15).). * From the Late Coniacian Arnager Limestone (also on Bornholm), that for a long time was referred to the Upper Turonian, *Parasmilia fittoni* Edwards & Haime (1850) is known (already recorded by Ravn 1918 (p.18). [full text of a brief paleontological note]^1";
- 217 s[214] = "FLORIS S. (1979).- Maastrichtian and Danian corals from Denmark.- Cretaceous-Tertiary Boundary Events [T. Birkelund & R.G. Bromley (eds)]: 92-94; University of Copenhagen.- FC&P 10-1, p. 57, ID=6003^Topic(s): corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous / Paleogene; Geography: Denmark^1";
- 218 s[215] = "BERNECKER M., WEIDLICH O. (1990).- The Danian (Paleocene) Coral Limestone of Fakse, Denmark: A Model for Ancient Aphotic, Azooxanthellate coral Mound.- Facies 22: 103-138.- FC&P 19-1.1, p. 56, ID=2673^Topic(s): coral mounds; coral mounds; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleocene; Geography: Denmark^The Danish-Polish Trough - a northwest to southeast striking basin - is bordered by the Fennoscandian Shield in the north and the Ringkøbing-Fyn High in the south. During the Late Cretaceous and the Early Tertiary carbonate sedimentation prevailed. Locally small bryozoan mounds were formed during the Upper Maastrichtian. The bulk of bryozoan bioherms originated during Danian B to C. Coral communities and coral mounds are confined to the Danian C. About five coral limestone localities occur within the Danish-Polish Trough; Fakse is the most important one. Paleontological and sedimentological data of the coral limestones point to the interpretation of the coral reefs as " cold- and deep-water coral bioherms". Important criteria are the (1) absence of algae, (2) low-diverse azooxanthellate coral community, (3) dominance of dendroid

- growth forms in the corals, (5) occurrence of pelagic organisms (globigerinid foraminifera, coccoliths) within the micrite of the mound facies and intermound facies, (6) breakdown of framebuilders predominantly by bioerosion instead of mechanical destruction, (7) mound- or bank-like structure of the buildups, (8) occurrence at a high paleolatitude. Three major facies types can be distinguished: (1) bryozoan limestones, (2) transitional facies, and (3) coral limestones which include five subfacies types defined by the predominating coral taxa. Most coral mounds are composed of facies types 2 and 3. Diagenesis is characterized by the formation of early marine-phreatic fibrous and bladed cements and by late diagenetic meteoric-phreatic dog-tooth cements and the replacement of calcite cements by quartz. The mounds have an asymmetrical shape caused by unidirectional currents from the south. The maximum length is 200 m, the height 30 m and the width 80 m. The distribution of colonial corals within the mounds indicates a zonation pattern. Framebuilders are represented only by azooxanthellate organisms: Colonial scleractinian corals, stylasterine hydrozoans and octocorals. Scleractinian corals have dendroid and arborescent growth forms, whereas hydrozoans and octocorals form fan-like colonies. Strong bioerosion of the framebuilding organisms was responsible for the breakdown of the skeletons; the bioclasts formed the substrate for other framebuilders. The soft bottom between the framebuilders was burrowed by bivalves and crustaceans. The comparison with coral mounds occurring in the eastern Atlantic at similar latitudes and in a position comparable with that of the Paleocene Danish-Polish Trough suggests a paleo-depth between 100 and 300 m.¹¹;
- 219 s[216] = "ZIBROWIUS H., VOIGT E. (1993).- Ein Faksekalk-Geschiebe (Danium, Unter-Palaeozan) aus der Umgebung von Hamburg mit Stylasteriden (Cnidaria: Hydrozoa). [in German, with English summary].- Archiv für Geschiebekunde 1, 6: 359-368.- FC&P 23-1.1, p. 78, ID=4177^Topic(s): taxonomy; Hydrozoa, Stylasteridae; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Paleocene Dan; Geography: Germany, erratics^A geschiebe (= glacial erratic boulder) of Fakse limestone (Danian, Lower Paleocene) from near Hamburg yielded stylasterids (Cnidaria: Hydrozoa) which represent the first finding of fossil stylasterids from Northern Germany and geschiebes. The studied piece of deep water-coral limestone is of the type well known from the quarry of Fakse on the Danish island of Sealand and is presumed to originate from the Baltic area east of that island. The stylasterid fauna comprises 4 species of 4 genera (Congregopora, Errina, ? Stylaster, ? Pliobothrus). All these forms were already known from the quarry of Fakse. In this early stylasterid fauna (the group is known since the Cretaceous / Tertiary boundary) Congregopora is the only genus that did not survive to the present.¹¹;
- 220 s[217] = "BERNECKER M., WEIDLICH O. (2006).- Paleocene bryozoan and coral mounds of Fakse, Denmark: Habitat preferences of isidid octocorals.- Courier Forschungsinstitut Senckenberg 257: 7-20.- FC&P 35, p. 92, ID=2413^Topic(s): reefs ecology; reefs, Octocorallia; Systematics: Bryozoa Cnidaria; Octocorallia; Stratigraphy: Paleocene; Geography: Denmark^The Danish-Polish Trough - a northwest to southeast striking basin - is bordered by the Fennoscandian Shield in the north and the Ringkøbing-Fyn High in the south. During the Late Cretaceous and Early Tertiary carbonate sedimentation prevailed. Locally small bryozoan mounds were formed during the Upper Maastrichtian. The bulk of bryozoan bioherms originated during the Danian B to C. Coral communities and coral mounds are confined to the Danian C. About five coral limestone localities occur within the Danish-Polish Trough; Fakse is the most important one. Paleontological and sedimentological data of the coral limestones point to the interpretation of the coral reefs as "cold- and deep-water coral bioherms". Important criteria are the (1) absence of algae, (2) low-diverse azooxanthellate coral community, (3) dominance of dendroid growth forms in the corals, (4)

surrounding pelagic facies adjacent to the coral mounds, (5) occurrence of pelagic organisms (globigerinid foraminifera, coccoliths) within the micrite of the mound facies and intermound facies, (6) breakdown of framebuilders predominantly by bioerosion instead of mechanical destruction, (7) mound- or bank-like structure of the buildups, (8) occurrence at a high paleolatitude. Three major facies types can be distinguished: (1) bryozoan limestones, (2) transitional facies, and (3) coral limestones which include five subfacies types defined by the predominating coral taxa. Most coral mounds are composed of facies types 2 and 3. Diagenesis is characterized by the formation of early marine-phreatic fibrous and bladed cements and by late diagenetic meteoric-phreatic dog-tooth cements and the replacement of calcite cements by quartz. The mounds have an asymmetrical shape caused by unidirectional currents from the south. The maximum length is 200 m, the height 30 m and the width 80 m. The distribution of colonial corals within the mounds indicates a zonation pattern. Framebuilders are represented only by azooxanthellate organisms: colonial scleractinian corals, stylasterine hydrozoans and octocorals. Scleractinian corals have dendroid and arborescent growth forms, whereas hydrozoans and octocorals form fan-like colonies. Strong bioerosion of the framebuilding organisms was responsible for the breakdown of the skeletons; the bioclasts formed the substrate for other framebuilders. The soft bottom between the framebuilders was burrowed by bivalves and crustaceans. The comparison with coral mounds occurring in the eastern Atlantic at similar latitudes and in a position comparable with that of the Paleocene Danish-Polish Trough suggests a paleodepth between 100 and 300 m. ^1";

- 221 s[218] = "WILLUMSEN M.E. (1995).- Early lithification in Danian azooxanthellate scleractinian lithoherms, Faxe Quarry, Denmark.- Beiträge zur Paläontologie 20: 123-131.- FC&P 25-2, p. 77, ID=3185^Topic(s): reefs diagenesis; reefs; diagenesis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleocene Dan; Geography: Denmark^Penecontemporaneous lithification is shown to be a fundamental part of the construction of the Faxe coral mounds. Internal structures and textural features of the rocks of one of the larger coral mounds exposed in the Faxe Quarry are presented. A close correlation between biological processes and early lithification of interstitial muds, controls both the shape and internal structure of the mounds as well as the textures of the coral limestone. This accentuates a close resemblance between the Faxe coral limestone and recent lithoherms as well as "mudmounds" in general.^1";
- 222 s[219] = "DEBRENNE F. (1984).- Archaeocyatha from the Caledonian rocks of Soroy, North Norway, a doubtful record.- Norsk Geologisk Tidsskrift 64: 153-154.- FC&P 14-1, p. 59, ID=6622^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Geography: Norway^dubious record^1";
- 223 s[220] = "LANGE H. (1987).- Ein seltener Fund einer Orgelkoralle aus dem Geschiebe von Sylt.- Fossilien von Sylt 2 [Hacht O. von (ed.)]: 123-124 [in German].- FC&P 16-1, p. 75, ID=2015^Topic(s): Octocorallia, Tubipora; Systematics: Cnidaria; Octocorallia; Stratigraphy: Geography: Germany, erratics^[a small colony of Tubipora from erratics of the the Isle of Sylt (locality Hornum). northern W-Germany, is mentioned and figured]^1";
- 224 s[221] = "KLAAMANN E. (1971).- Ueber einige Korallen aus der Bohrung von File Haidar (Gotland, Schweden).- Eesti NSV Teaduste Akad. Toimetised 20, Keemia Geologia 1: 73-77.- FC&P 1-2, p. 15, ID=4648^Topic(s): Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Geography: Sweden, Gotland^Beschreibung der Arten: Acidolites latesepatus (Lind.), Paleofavosites balticus (Ruk.), Mesofavosites dualis (Sok.), Catenipora martinssoni n.sp.^1";

- 225 s[222] = "STEL J.H. (1978).- Studies on the paleobiology of Favositids.- Groningen University, unpublished Thesis: 274 pp. [ISBN 9061083400].- FC&P 7-2, p. 27, ID=0215^Topic(s): aragonite vs calcite; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Sweden, Gotland^The thesis deals with a palaeobiological analysis of an extensive collection of favositid tabulates from the Silurian of Gotland, Sweden. Discussed are: systematic affinities of the Tabulata (possible interpretation as sponges), morphology of the Tabulata, environment and quantitative morphology of some Silurian tabulates from Gotland. * The following genera and species are described: Favosites hisingeri Edwards & Haime 1851, Favosites obliquus (Sokolov 1950), Syringolites kunthianus (Lindstrom 1896), Favosites forbesi Edwards & Haime 1851, and Alveolites suborbicularis Lamarck 1801. [ISBN 9061083400]^1";
- 226 s[223] = "STEL J.H. (1991).- Lower Palaeozoic erratic favositids from the Island of Sylt, Germany.- Scripta Geologica 97: 1-32.- FC&P 21-1.1, p. 51, ID=3259^Topic(s): taxonomy, new taxa; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Germany, erratics^Twelve species of favositids are described. They are derived from silicified boulders found in Pliocene (?) deposits of the Island of Sylt, Germany. Paleofavosites is the dominant genus in this material. Two new species are described viz. Paleofavosites oekentorpi and Favosites schuddebeursi.^1";
- 227 s[224] = "STEL J.H. (1975).- Erratische Favositidae der Noerdlichen Niederlande.- Das Geschiebe-Sammler 1975, 2: 100 pp., 52 pls, 20 figs; Hamburg.- FC&P 4-2, p. 62, ID=5293^Topic(s): taxonomy; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Netherlands, erratics^In this paper limy Favositidae from the boulder clay of Groningen and siliceous Favositidae from the preglacial sands of the northern Netherlands are studied. The number of species proves to be much greater than was expected; fourteen species of Palaeofavosites, thirteen of Favosites, four of Mesofavosites, two of Priscosolenia, and two of Multisolenia are described. * A redescription of Favosites staringi Martin 1878 is given. The values given in this description are derived from the measurements to the holotype unfortunately thin sections of which cannot be made and to the fragments from the collection of the author.^1";
- 228 s[225] = "TUINDER A.H.M. PLOEG R.van der, HUISMAN H. (1985).- Aantrekkelijke vondsten van noordelijke kalksteen zwerfstenen.- Grondboer & Hamer 3/5: 72-83.- FC&P 15-1.2, p. 36, ID=0830^Topic(s): ; Tabulata, Sarcinulidae; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Netherlands, erratics^From the NE Netherland provinces Groningen and Drenthe are mentioned Saalian erratics, among them rich fauna of tabulate corals (Sarcinula, Paleofavosites, Favosites, Syringolites, Subalveolites, Syringopora, Catenipora, Halysites, Thecia, Laceripora, Thamnopora, Heliolites), rugose corals (Acervularia, Entelophyllum, weissermelia, Strombodes) and stromatoporoids.^1";
- 229 s[226] = "BARTHOLOMAUS W.A. (1993).- Ein astylospongiider Schwamm von Sylt mit dreieckiger Gestalt.- Geschiebekunde Aktuell 9, 4: 107-108. [in German].- FC&P 23-1.1, p. 82, ID=4187^Topic(s): taxonomy; Porifera, Astylospongia; Systematics: Porifera; Stratigraphy: Quaternary erratics; Geography: Germany, Sylt^^1";
- 230 s[227] = "JELL J.S., SUTHERLAND P.K. (1990).- The Silurian Rugose Coral Genus Entelophyllum and Related Genera in Northern Europe.- Palaeontology 33, 4: 769-821.- FC&P 20-1.1, p. 55, ID=2823^Topic(s): ; Rugosa, Entelophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Sweden, England^Restudy of Entelophyllum from Gotland (including

- the type species) and Great Britain indicates restriction of Entelophyllum to phaceloid forms with peripheral, parricidal increase. Typical forms also have smooth or carinate septa, well-developed biserial tabularia, and dissepimentaria composed of globose interseptal dissepiments. On Gotland the genus ranges from the late Telychian to the Ludfordian. Stereoxylodes Wang and Carinophyllum Strelnikov are considered junior synonyms of Entelophyllum. Species from Gotland with nonparricidal budding are referred to Donacophyllum Dybowski. Cerioid forms internally similar to Entelophyllum are referred to Prohexagonaria Merriam. Petrozium Smith is retained for some Early Silurian forms. Newly described taxa are: Entelophyllum articulatum anglicum subsp.nov., E. dendroides sp.nov., E. lauense sp.nov., E. hamraense sp.nov., E. sp. A, Prohexagonaria favia sp.nov., P. gotlandica sp.nov., Donacophyllum neumani sp.nov., and D. wallstenense sp.nov.^1";
- 231 s[228] = "HECKER M.R. (2002).- Revision of Orionastraea Smith, 1917 (Rugosa) from the Lower Carboniferous (uppermost Viséan) of Moscow Basin, and comments on patterns of variability, evolution and range of the genus in Eastern Europe and in the British Isles.- Coloquios de Paleontologia 53: 3-20.- FC&P 32-2, p. 60, ID=1392^Topic(s): revision; Rugosa, Orionastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Russia, Britain^Studies of variability of Orionastraea from the Moscow Syncline formerly (Dobrolyubova, 1958) attributes to four species allow to prove the synonymy of three specific names. The genus is confined to the upper part of the Aleksin horizon (uppermost Viséan) and includes two species, O. kurakovensis Dobrolyubova, 1958 restricted to the southern part of the Moscow Syncline and O. rareseptata Dobrolyubova, 1958 restricted to its north-western part.The range and synonymy of the genus are discussed. Patterns of variability based on examination of Orionastraea specimens from the Coelenterata collections of the Natural History Museum, London are outlined. Three stages of evolution of the genus are discerned. Both Russian species appeared during the first stage. ^1";
- 232 s[229] = "WEYER D. (1978).- Neue Sutherlandiniinae (Rugosa) aus dem Skandinavischen Silur und aus dem thuringischen Devon.- Freiburger Forschungsheft C342: 91-116.- FC&P 9-1, p. 33, ID=0255^Topic(s): new taxa; Rugosa, Sutherlandiniidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: Scandinavia, Germany, Thuringia^Three new species of Sutherlandina and 1 new species of Laccophyllum are described. Aspects of the genera assigned to the subfamily Sutherlandiniinae are discussed.^1";
- 233 s[230] = "VASILYUK N.P., KOZYREVA T.A. (1981).- Opyt korrelyatsyi po korallam verkhney chasti srednego karbona Moskovskoy sineklizy, Donetskogo basseina i Severnogo Ispanii. [correlation of the uppermost part of the Middle Carboniferous of the Moscow syncline, Donetz basin, and northern Spain by corals; in Russian].- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 56, 5: 109-117.- FC&P 12-2, p. 35, ID=6218^Topic(s): biostratigraphy; stratigraphy corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Russia, Ukraine, Spain^^1";
- 234 s[231] = "KOSSOVAYA O.L. (1997).- Rugozy tipovykh razrezov gzhel'skogo-artinskogo yarusov Severnogo Timana i Zapadnogo sklona Urala. [Rugosa of type sections of Gzhelian-Artinskian interval of N Timan and W slopes of Urals].- Atlas etalonnnykh kompleksov.- Атласэталонныхкомплексовпалеозойскойбентосной

- фауны
 северо-востока
 ЕвропейскоййРосссии:
 Остракоды,
 брахиоподы,
 ругозы [А.Ф.
 Абушик,, О.Л.
 Коссовaя,, Т.Л.
 Модзалевская]: 53-96, 106-115; vserossiiskij
 nauchno-issledovatel'skij geologicheskij Institut; Sankt
 Peterburg. [atlas of fossils] - FC&P 30-2, p. 23,
 ID=1576^Topic(s): ; Rugosa; Systematics: Cnidaria;
 Rugosa; Stratigraphy: Carboniferous, Permian; Geography:
 Russia, Timan, Urals^^1";
- 235 s[232] = "COPE J.C.W. (2005).- Octocorallian and hydroid fossils from
 the Lower Ordovician of Wales.- Palaeontology 48, 2: 433-445.-
 FC&P 34, p. 93, ID=1351^Topic(s): taxonomy;
 Octocorallia, Hydrozoa; Systematics: Cnidaria; Octocorallia
 Hydrozoa; Stratigraphy: Ordovician L; Geography: Britain,
 Wales^Octocorallian and hydroid fossils are described from the Lower
 Ordovician (Arenig Series) of Wales. They include gorgoniids that are
 the earliest known fossils of this group: Petilavenula varifurcata gen.
 et sp.nov. and P. surculosa gen. et sp.nov. Pennalina crossi gen. et
 sp.nov. is probably also a gorgoniid but may be a hydroid. A new
 hydroid, Pontifennia gracilis gen. et sp.nov., is also described.^1";
- 236 s[233] = "ORITA S., EZAKI Y. (2001).- Ordovician rugose corals of
 Britain and their palaeobiogeographic significance.- Bulletin of the
 Tohoku University Museum 1 [Proceedings of the 8th International
 Symposium on Fossil Cnidaria and Porifera]: 245-253.- FC&P
 30-1, p. 21, ID=7073^Topic(s): biogeography; Rugosa;
 Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician;
 Geography: Britain^Ordovician Rugosa are abundant in Britain
 (England, Scotland and Wales), but have not been comprehensively
 studied recently. They were examined for this study from the viewpoint
 of faunal composition and provincialism. The Craighead Limestone of the
 Girvan area, Scotland, contains a fauna of Caradoc age that is marked
 by the presence of Grewingkia and Streptelasma. However, Lambeophyllum,
 Paliphyllum, Coelostylis, and Leolasma are conspicuously absent in
 Scotland. When tabulate corals are also taken into account, the
 Scottish fauna implies a possible North American affinity and
 represents a warm water association. The English and Welsh faunas of
 Ashgill age have been examined at several places, as follows: (1) the
 Coniston Limestone in the Lake District, northern England; (2) the
 Conway Castle Grit of Llandudno, as well as the Dolhir Limestone Member
 of the Dolhir Formation, and the Glyn Limestone of the Glyn Formation,
 in the Glyn Ceiriog area, North Wales; and (3) the Robeston Wathen
 Limestone in Robeston Wathen and Whitland, South Wales. These English
 and Welsh Ashgill faunas contain Bodophyllum, Grewingkia, Helicelasma,
 Leolasma, Streptelasma, Rectigrewingkia, and Coelostylis. They show a
 close affinity to faunas from other parts of the East Avalonia Terrane
 and are also akin to those of Baltoscandia, which constituted the
 palaeocontinent of Baltica. These two allied faunas may have been
 strongly influenced by a relatively cold water environment. In
 contrast, the Laurentian coral fauna differs in composition from the
 fauna of Avalonia. These faunal differences apparently reflect
 palaeoclimatic and palaeoceanographic variations, rather than
 differences in age and terrane. Knowledge of the Late Ordovician rugose
 corals of Britain, together with palaeoenvironmental studies, is
 important for further elucidating faunal migration patterns in terms of
 the palaeobiogeography of Laurentia, Avalonia and Baltica. [original

- abstract]^1";
- 237 s[234] = "SCRUTTON C., CLARKSON E. (1989).- A new Palaeozoic scleractiniamorph coral.- FC&P 18-2, p. 21, ID=6779^Topic(s): ; scleractiniamorpha; Systematics: Cnidaria; Scleractinia; Stratigraphy: Ordovician Car; Geography: Scotland S^We [...] report a remarkable find from the Middle Ordovician (Caradoc) of southern Scotland. A new solitary coral, represented by several specimens from a rich, shallow water invertebrate fauna preserved in a massive slump deposit shows unquestioned scleractinian characteristics. [fragment of a short note]^1";
- 238 s[235] = "SCRUTTON C.T., CLARKSON E.N.K. (1991).- A new scleractinian-like coral from the Ordovician of the Southern Uplands, Scotland.- Palaeontology 34: 179-194.- FC&P 20-1.1, p. 58, ID=2812^Topic(s): scleractiniamorpha, new family; Anthozoa Kilbuchophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Ordovician M; Geography: Scotland, UplandsS^New, discoidal fossils preserved as moulds from the middle Ordovician (Caradoc) of the Southern Uplands are shown to possess characteristic microarchitecture. They are solitary, zoantharian corals with cyclic, hexamerall septal insertion. Successive cycles are arranged in a system of nested triads similar to patterns associated with septal substitution in scleractinian corals. The corallum lacks tabulae or dissepiments but is epithecate with the point of origin of a basal disc as in Scleractinia rather than a cone as in Rugosa. The new coral is named Kilbuchophyllum discoidea gen. et sp.nov., and is placed in the family Kilbuchophyllidae and the new order Kilbuchophyllida. It is interpreted as an early example of skeletal acquisition by the group of anemones that ultimately gave rise to the Scleractinia in the Middle Triassic. The phylogeny of the Zoantharia is briefly discussed in the light of this new material.^1";
- 239 s[236] = "SCRUTTON C.T. (1993).- New Kilbuchophyllid corals from the Ordovician of the Southern Uplands, Scotland.- Courier Forschungsinstitut Senckenberg 164: 153-158. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 15, ID=3449^Topic(s): scleractiniamorpha; Anthozoa Kilbuchophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Ordovician; Geography: Scotland, UplandsS^New material from the mid Ordovician of Tract 2 in the Northern Belt of the Southern Uplands, Scotland, between Biggar and Leadhills extends the range of the coral Kilbuchophyllia discoidea. The previous scleractiniamorph interpretation of this species is confirmed and details of septal insertion refined. The shape of the coral is shown to vary between flat and shallowly conical. A new, conical species of the genus, K. clarksoni sp.nov., is described, in which the free septal margin may become smooth and a substantial axial structure is developed. It is broadly codistributed with K. discoidea.^1";
- 240 s[237] = "SCRUTTON C.T., JERAM A.J., ARMSTRONG H.A. (1998).- Kilbuchophyllid corals from the Ordovician (Caradoc) of Pomeroy, Co. Tyrone: implications for coral phylogeny and for movements on the Southern Uplands Fault.- Transactions of the Royal Society of Edinburg, Earth Sciences 88: 117-126.- FC&P 27-1, p. 4, ID=3778^Topic(s): scleractiniamorpha; Anthozoa Kilbuchophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Ordovician Car; Geography: Scotland, UplandsS^^1";
- 241 s[238] = "WEBBY B.D. (1977).- Labechia aldonensis sp.nov., an Ordovician stromatoporoid from Scotland.- Geol. Mag. 114, 1: 53-56.- FC&P 6-2, p. 18, ID=5542^Topic(s): ; stroms, Labechia; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Scotland^^1";
- 242 s[239] = "WHITE D.E., YANG S.-W. (2004).- British Ordovician tabulate

- corals.- Monograph of the Palaeontographical Society 157 (620): 144 pp., 3 pls.- FC&P 33-2, p. 23, ID=1135^Topic(s):distribution, systematics, biogeography; Tabulata; Systematics:Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography:Britain^Of the 13 families of tabulate corals represented in the Ordovician successions of South and North Wales, Lake District, Northwest Yorkshire, Cross Fell and Southwest Scotland, three (Cryptolichenariidae, Lichenariidae, Paleoalveolitidae) are exclusive to the Caradoc Series, being the oldest tabulate corals recorded from Britain, five (Favositidae, Proheliolitidae, Proporidae, Sibiriolitidae, Taeniolitidae) are exclusive to the Ashgill Series, while the remaining five (Billingsariidae, Coccoserididae, Halysitidae, Syringophyllidae, Tetradiidae) are represented in both the Caradoc and Ashgill series. The total known fauna consists of 26 genera, of which Elkanopora and Girvanopora are new. Of the 63 species and subspecies, two are described under open nomenclature and 25 are new. The palaeogeographical distribution of these tabulate corals was affected by the separation of the Laurentia and Avalon palaeocontinents in Caradoc and Ashgill times, the Iapetus Ocean acting as a barrier that prevented the mixing of their coral faunas.^1";
- 243 s[240] = "SCRUTTON C.T., PARKES M.A. (1992).- The age and affinities of the coral faunas from the lower Silurian rocks of the Charlestown Inlier, County Mayo, Ireland.- Irish Journal of Earth Sciences 11: 191-196.- FC&P 22-1, p. 29, ID=3132^Topic(s):biostratigraphy; coral faunas; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian L; Geography:Ireland^The biostratigraphy and palaeobiogeography of the coral faunas of the Lower Silurian succession in the Charlestown inlier, County Mayo, are discussed. Coral faunas are restricted in the fine sandstone lithology of the Cloonnamna Formation, but more common and highly diversified in the Uggool Limestone Member at the base of the formation. The fine sandstones contain the Palaeocyclus porpita - Favosites multipora association, widespread in similar lithologies in the circum-lapetus area where it is dated as of late Telychian (Lower Silurian) crenulata Biozone age. The Uggool Limestone Member contains 25 identifiable coral species together with 3 stromatoporoids, most known only from one to three specimens. The fauna indicates an early crenulata or possibly griestoniensis Biozone age and contains a mix of species of Laurentian and Avalonian affinities.^1";
- 244 s[241] = "SCRUTTON C.T. (1993).- Growth-form variation and control in two British Silurian species of Propora.- Courier Forschungsinstitut Senckenberg 164: 273-281. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 19, ID=3462^Topic(s):colony growth mode; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Britain^Growth-form variation in two British Silurian species of Propora is illustrated using the ternary diagram format of Young & Scrutton (1991). External form is related to an analysis of the internal distribution and angle of growth of corallites and coenenchyme in these corals. The two species are shown to possess quite distinct internal spatial arrangements of corallites which are considered to be genetically determined. Growth-form results from the interaction of these determinative patterns and environmental factors, principally sedimentation. Corallite growth vectors and resultant growth-form are important taxonomic factors in these corals.^1";
- 245 s[242] = "FRYER G., STANLEY G.D.jr (2004).- A Silurian porpitooid hydrozoan from Cumbria, England and a note on porpitooid relationships.- Palaeontology 47, 5: 1109-1119.- FC&P 34, p. 96, ID=1355^Topic(s):systematics; Hydrozoa, Porpitoida; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Silurian; Geography: Britain, Wales^A porpitooid hydrozoan, Pseudodiscophyllum windermereensis gen. et sp.nov., from Cumbria,

- represented by a well-preserved internal float (pneumatophore), is only the fourth porpitooid reported from Silurian rocks world-wide and the first to be found in any geological formation in England. Its circular pneumatophore is more than 110mm in diameter. Because of the paucity of hard parts, these animals are not common as fossils but may have been important elements of the Palaeozoic oceanic plankton. Although the new species is superficially similar to the Ordovician *Discophyllum*, there are what appear to be fundamental differences. Similarities to species of *Paropsonema*, from the Devonian and Silurian, are also probably superficial. The wider relationships of these animals have long been misinterpreted in the palaeontological literature. They are not siphonophores. Correct understanding involves a complete re-interpretation of various homologies and of the evolutionary history of the group.¹¹;
- 246 s[243] = "IVANOVSKIY A.B., LATYPOV Yu.Ya. (1979).- Nekotorye rugozy iz Wenloka Uelsa.- Paleontologicheskii Zhurnal 1979, 1: 137-140.- FC&P 9-1, p. 34, ID=0262Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian wen; Geography: Britain, WalesBeschrieben werden die Arten Tryplasma loveni (Edwards & Haime 1851), Cystiphyllum siluriense Lonsdale 1839, und Plasmophyllum brevilamellatum (McCoy 1850). Species, as mentioned above, are described from the wenlockian of wales.¹¹;
- 247 s[244] = "SHURYGINA M.V. (1981).- Rugozy. [in Russian].- Obyasnitelnaya zapiska k skheme stratigrafii verkhnesiluriyskikh otlozheniy Vaygachsko-Yuzhnonovozemelskogo regiona: 126-134; Sevmorgeo.- FC&P 12-1, p. 17, ID=6312Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Russia, Vaygach, Novaya Zemlya[species of Neocystiphyllum, Pseudopilophyllum, Stereoxylodes, Entelophyllum, Nordastraea, Rhabdacanthia]^11;
- 248 s[245] = "POWELL J.H. (1991).- The association between the stromatoporoid *Diplostroma yavorskyi* Nestor and calcareous algae from Much Wenlock Limestone, England.- *Lethaia* 24: 289-299.- FC&P 20-2, p. 73, ID=2977Topic(s): ecology; strom alga association; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Britain, ShropshireThe paired laminae characteristic of the species are intergrown with *Girvanella*, *Rothpletzella*, *wetheredella*, *Rhabdoporella* and micrite. The skeleton is nodular in form, was initiated around a nucleus of biomicrite or skeletal clasts and grew during intermittent rolling. Growth is suggested to have been lateral at the edge zone. Epiphytes are described.¹¹;
- 249 s[246] = "NESTOR H. (1999).- Telychian (Lower Silurian) Stromatoporoids from the Charlestown Inlier, Co. Mayo, Ireland.- *Irish Journal of Earth Sciences* 17: 115-121.- FC&P 29-1, p. 70, ID=7049Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Tel; Geography: IrelandFour stromatoporoid species: *Pachystylostroma* sp., *Petridiostroma* cf. *simplex* (Nestor, 1966), *Gerronostroma juveneforme* sp.nov. and *Eostromatopora ringerikensis* (Mori, 1978), are described from the Ugool Limestone Member of Cloonnamna Formation (Upper Llandoverly) in the Charlestown Inlier, Co. Mayo, Ireland. A new genus *Eostromatopora* is established with the type species *Stromatopora impexa* Nestor, 1966. The fauna described here is closely related to the Telychian stromatoporoid faunas from the Vik Formation of the Oslo area and from the Baillarge Formation of north-western Baffin Island, Canada. [original summary]^11;
- 250 s[247] = "MARKOVSKIY V.A., SMIRNOVA M.A. (1982).- siluriyskie otlozheniya arhipelaga Severnaya Zemlya. [Silurian deposits of the Severnaya Zemlya archipelago; in Russian].- *Geologiya arhipelaga Severnaya Zemlya*: 39-60, 1 fig.; *Sevmorgeologiya*, Leningrad.- FC&P 12-1, p. 40, ID=6179Topic(s): geology; geology, Tabulata; Systematics: Cnidaria; Tabulata;

- Stratigraphy: Silurian; Geography: Russia, Novaya Zemlya^A detailed description of profiles from Silurian deposits at the Ymakov River on the main island "October Revolution" is given for the Severnaya Zemlya for the first time. They are subdivided into five sequences. The Snezhinska sequence is distinguished. With the aid of the Tabulata the profiles are correlated and the stratigraphic division of the Silurian deposits of the Severnaya Zemlya Archipelago are corroborated on a palaeontological basis.^1";
- 251 s[248] = "SMIRNOVA M.A. (1982).- Pervye nakhodki pozdnesiluriyskih Tabulyat na Severnoy Zemle. [first records of the late Silurian Tabulate corals of the Novaya Zemlya Archipelago; in Russian].- Geologiya arhipelaga Severnaya Zemlya: 61-79, 4 pls; Sevmorgeologiya, Leningrad.- FC&P 12-1, p. 41, ID=6180^Topic(s): new records; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian U; Geography: Russia, Novaya Zemlya^In der Samoylovichskaya-Folge des Silurs von Severnaya Zemlya konnen Wenlock und Ludlow nachgewiesen werden. Auf der Basis eines Vergleichs der Ludlow-Tabulata mit den Gebieten Ural - Vaigach - Novaya Zemlya wie auch dem Baltikum wird eine Verbindung des Severnaya Zemlya Beckens mit dem nordlichen Becken der westlichen Gebiete in spatsilurischer Zeit gefolgert. * Beschrieben werden 7 Arten, von denen drei Arten und zwei Unterarten neu sind: Laceriporella matussevichkaja n.sp., Laceripora cribrosa nordica n.ssp., Thecia swinderniana severosemelica n.ssp., Riphaeolites menneri n.sp., R. uschakovensis n.sp., Parastriatopora admirabilis Chekhovich, P. arctica (Chernyshev).^1";
- 252 s[249] = "SCRUTTON C.T., POWELL O.H. (1980).- Periodic development of dimetrisism in some Favositid corals.- Acta Palaeontologica Polonica 25, 3-4: 477-491.- FC&P 11-1, p. 50, ID=1776^Topic(s): dimetrisism, annual periodicity ?; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Wen; Geography: Britain, Wenlock^Sporadic dimetrisism in some specimens of two English Wenlock favositid coral species, Favosites multipora and Palaeofavosites rugosa, is investigated by serial sectioning. The diametric appearance is found to be periodically developed within a colony where it occurs and to be caused by fluctuating rates of corallite increase. Peak increase corresponds in a regular pattern to other periodic features in these corals. Zones of close-spaced tabulae, thickened corallite walls and well-developed septal spines form bands of denser growth occurring with an annual periodicity and it is concluded that increase and, therefore, diametrisism is also seasonally controlled in these corals. Entraining factors and the cause of modifications in the relative timing of peak increase are discussed. Diametrisism in these corals is considered to be wholly of ecophenotypic origin and of no taxonomic significance.^1";
- 253 s[250] = "SCRUTTON C.T., MCCURRY J.A. (1987).- The derivation, biostratigraphy and palaeobiogeographic significance of corals from Silurian deep-sea turbidite facies in the south-west Southern Uplands.- Scott. J. Geol. 23, 1: 49-64.- FC&P 16-2, p. 25, ID=2057^Topic(s): ex deep sea turbidites; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Silurian Llan; Geography: Scotland^Two new records are described and one previous record reviewed of isolated coral colonies from Llandoverly turbidites in the south-west Southern Uplands. Criteria allowing the distinction between modes of origin of such specimens by floatation, bedload transportation and/or reworking are discussed. Two of the specimens, the tabulate corals Propora exigua and P. edwardsi, are interpreted as derived from contemporaneous shelf environments and transported by floatation and sinking to their points of interment. The third, a rugose coral Ceriaster sp., was probably transported in the same way initially, but may have reached its final locus of deposition as part of a turbidite bedload. All three corals are of biostratigraphic or palaeobiogeographic interest. Propora exigua is

- characteristic of the Telychian whilst *P. edwardsi* sensu stricto has only been recorded previously from earlier Llandovery rocks near Girvan. The geographical range of the genus *Ceraster* was hitherto restricted to Asia.¹";
- 254 s[251] = "HARPER D.A.T., SCRUTTON C.T., WILLIAMS D.M. (1995).- Mass mortalities on an Irish Silurian seafloor.- *Journal of the Geological Society* 152: 917-922.- FC&P 25-2, p. 25, ID=6870^Topic(s): mass mortalities; benthic communities; Systematics: ; Stratigraphy: Silurian Llan; Geography: Ireland w^Recurrent deep-water benthic communities, dominated by diverse tabulate corals, colonized soft substrates during the late Llandovery transgression in western Ireland. A number of autochthonous shelly assemblages dominated by brachiopods, corals and crinoids occur in the upper parts of the Kilbride Formation; the highest and most distal levels are dominated by in situ tabulate corals that are mantled by a thin layer of volcanic ash. Most of the coral colonies could cope with limited sedimentation: growth ceased after the volcanoclastic surge. This catastrophic mode of preservation permits an accurate analysis of an early stage of community development in deep-water benthos on a soft Llandovery seabed, periodically swept by volcanoclastic debris. The Kilbride faunas have implications for the palaeoenvironments and taphonomy of deep-water marine faunas associated with areas of active volcanism. [original abstract]¹";
- 255 s[252] = "LAKHOV G.V. (1983).- Nakhodka favistellopodobnykh korallov (Rugosa) v rannem devone Novoy Zemli [finding of Favistella-like rugose corals in the lower Devonian of Novaya Zemlya].- *Dokl. Akad. Nauk SSSR* 270, 2: 429-430.- FC&P 16-1, p. 57, ID=1951^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Russia, Novaya Zemlya^^1";
- 256 s[253] = "LAKHOV G.V. (1981).- Novye vidy kolonialnykh devonskikh rugoz Novoy Zemli. [new species of Devonian colonial Rugosa of Novaya Zemlya; in Russian].- *Zapiski Lening. Gorn. Inst.* 85: 65-74.- FC&P 12-1, p. 26, ID=6309^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Novaya Zemlya^[species of Zelolasma, Peneckiella, Stellatophyllum]¹";
- 257 s[254] = "STOLBOVA V.P. (2007).- Devonskiye rugozy poluostrova Podgornogo Novoy Zemli (kabaninskiy gorizont). [Devonian Rugosa of Podgorniyi peninsula of Novaya Zemlya (kabanino horizon); in Russian].- *Trudy NIIGA-VNII, Okeangeologiya* 211: 50-63.- FC&P 36, p. 68, ID=6466^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Novaya Zemlya^^1";
- 258 s[255] = "SUTHERLAND A. (1978).- The coral fauna of the Middle Longcraig Limestone at Aberlady Bay.- *The Edinburgh Geologist* 3: 1-5.- FC&P 15-2, p. 33, ID=0699^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Scotland^^1";
- 259 s[256] = "MITCHELL M., STRANK A.R.E., THORBURY T.M., SEVASTOPULO G.D. (1986).- The distribution of platform conodonts, corals and foraminifera from the Black Rock Limestone (late Tournaisian and early Visean) of Tears Point, Gower, South Wales.- *Proc. Yorks. Geol. Soc.* 46: 11-14.- FC&P 16-1, p. 22, ID=1941^Topic(s): biostratigraphy; Anthozoa, fossils; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Tour / Vise; Geography: Britain, Wales^This paper gives the first range data for the Tears Point section which was one of the sequences discussed in Mitchell 1981 (*Acta Paleontologica Polonica* 25: 577-585) as part of his review of Black Rock Limestone faunas of the Bristol-Mendip and South Wales area of Britain [Scrutton].¹";
- 260 s[257] = "SOMERVILLE I.D., MITCHELL M., STRANK A.R.E. (1986).- An Arundian fauna from the Dyserth area, North Wales and its correlation

- within the British Isles.- Proc. Yorks. Geol. Soc. 46: 57-75.-
 FC&P 16-1, p. 22, ID=1942^Topic(s): taxonomy,
 biostratigraphy; Anthozoa, fossils; Systematics: Cnidaria;
 Anthozoa; Stratigraphy: Carboniferous Arund; Geography:
 Britain, Wales^This paper lists and describes an Arundian fauna
 from Dyserth and re-describes some of the corals from the classic
 Arnside (Arundian) fauna of Garwood (1913). Biostratigraphical
 correlations are also discussed throughout Britain and Ireland
 [Scrutton].^1";
- 261 s[258] = "MITCHELL M., SCRUTTON C.T. (1991).- The Lower Carboniferous
 coral faunas of England.- Excursion Guidebook of the VI International
 Symposium on Fossil Cnidaria; Muenster, 63 pp.- FC&P
 20-1.1, p. 24, ID=2813^Topic(s): excursion guide; corals;
 Systematics: Cnidaria; Anthozoa; Stratigraphy:
 Carboniferous L; Geography: Britain^^1";
- 262 s[259] = "SOMERVILLE I.D. (1994).- Early Carboniferous rugose coral
 assemblages from the Dublin Basin, Ireland: possible bathymetric and
 palaeoecologic indicators.- Courier Forschungsinstitut Senckenberg 172
 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International
 Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 223-229.-
 FC&P 23-1.1, p. 19, ID=4078^Topic(s):
 biostratigraphy; coral assemblages; Systematics: Cnidaria;
 Anthozoa; Stratigraphy: Carboniferous L; Geography:
 Ireland, Dublin Basin^Rugose coral assemblages from the late
 Tournaisian and early Visean of the Dublin Basin appear to be strongly
 influenced by water depth and lithofacies, associated with the
 evolution of a carbonate ramp. This ramp later evolved into a
 deep-water basin flanked by shallow-water platforms. Shallow-water
 shelf assemblages in the late Tournaisian are characterised by
 low-diversity non-dissepimented taxa. These pass up into high-diversity
 assemblages dominated by large, dissepimented solitary rugose taxa
 (Caninophyllum patulum, Cyathodisia modavensis, Siphonophyllia sp. A),
 which colonised deeper-water slope settings on a carbonate ramp. In the
 latest Tournaisian deep-water Waulsortian mudbank limestones supported
 a sparse coral assemblage, but locally abundant caninioids with rare
 Siphonophyllia cylindrica are recorded. An influx of terrigenous
 sediment into the Basin during active tectonism, caused suppression of
 carbonate sediment and only a low-diversity assemblage survived.
 However, on the flanking shallow-water platforms an abundant
 high-diversity rugose fauna (Sychnoelasma urbanowitschi, Axophyllum
 simplex, Koninckophyllum cyathophylloides, Palaeosmia murchisoni,
 Carruthersella compacta) became established in the early Visean. Rugose
 coral biozones can be recognised in the Basin similar to those in
 western Europe and compliment foraminiferal and conodont
 biozonations.^1";
- 263 s[260] = "KATO M. (1971).- J. Fleming's species of British Lower
 Carboniferous Corals.- Trans. Proc. Palaeont. Soc. Japan N.S. 81:
 1-10.- FC&P 2-2, p. 16, ID=4802^Topic(s): revision;
 Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy:
 Carboniferous L; Geography: Britain^The purpose of this
 article is to mention the present status of the Fleming's material
 of Lower Carboniferous Corals (Royal Scottish Museum, Edinburgh) in
 order to establish and to interpret Fleming's old species.
 Lectotypes of some species are chosen. The following Fleming's
 species were examined: Lithostrotion striatum, L. floriforme, L.
 marginatum, Caryophyllia fasciculata, C. duplicata, C. juncea,
 Siphonodendron affine, Turbinolia fungites, Porites cellulosa, Tubipora
 catenata, T. ramulosa, T. radiatus, Favosites depressus^1";
- 264 s[261] = "TAYLOR F.M. (1972).- The Lower Carboniferous Coral
 environments of Derbyshire and adjacent areas.- The Mercian Geologist
 4, 2: 81-95.- FC&P 3-1, p. 30, ID=4895^Topic(s):
 ecology; coral environments; Systematics: Cnidaria;
 Anthozoa; Stratigraphy: Carboniferous L; Geography:

- Britain, Derbyshire^A comparison is made between recent and Lower Carboniferous coral faunas from morphological and stratigraphical aspects. The environment of recent corals is summarized and comparisons and contrasts made of this environment with that of the Lower Carboniferous, deduced from a study of Derbyshire rocks and fossils. It is considered that the Lower Carboniferous corals lived in an equatorial warm water marine environment developing mainly as patch reefs, just below sea level, with an associated fauna. Outer barrier reefs, knoll limestone, possibly controlled by abundant crinoid growth, with or without algae and generally devoid of coral, separated the coral patch reefs from the surrounding deeper water. Land areas would be restricted to small, low islands lying to the south, the remnants of an earlier more extensive St. Georges Land. The possibility that the main Derbyshire limestone area subsided as a result of an ancient volcanic platform, floundering, allowing the accumulation of over 2,500 feet of limestones, is investigated.^1";
- 265 s[262] = "RAMSBOTTOM W.H.C., MITCHELL M. (1980).- The recognition and division of the Tournaisian Series in Britain.- Jour. geol. Soc. London 137: 61-63.- FC&P 9-2, p. 17, ID=5868^Topic(s): biostratigraphy; stratigraphy corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Tour; Geography: Britain^[4 new biozonal names are proposed for division of Tournaisian and early Visean strata, and these are largely based on the distribution of the coral faunas]^1";
- 266 s[263] = "MITCHELL M. (1981).- The distribution of Tournaisian and early Visean (Carboniferous) coral faunas from the Bristol and south Wales areas of Britain.- Acta Palaeontologica Polonica 25, 3-4: 577-585.- FC&P 10-2, p. 71, ID=6090^Topic(s): distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Britain^1";
- 267 s[264] = "ADAMS A.E. (1983).- Development of algal-foraminiferal-coral reefs in the Lower Carboniferous of Furness, Northwest England.- Lethaia 17: 233-249.- FC&P 13-2, p. 52, ID=0591^Topic(s): reefs; reefs; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Carboniferous L; Geography: Britain NW^Most carbonate buildups of Dinantian age are mud-mounds lacking direct evidence of abundant framework organisms. This contribution describes apparently unique structures containing abundant frame-building organisms interpreted as true reefs. They occur in the Red Hill Oolite, part of the Carboniferous Limestone succession in the Furness area of northwest England. Reefs were initiated by the attachment of numerous Syringopora colonies to a firm substrate. Encrusting organisms, dominantly the supposed foraminifer Aphralysia, colonised sediment and corallite surfaces leading to the development of a rigid framework. Thrombolites also assisted in the establishment of bindstone textures. During the later stages of reef growth. Syringopora became less common and its place in the reef was taken by upright, branching growths of solenoporoid algae. Rapid sedimentation and subsidence resulted in reefs with near vertical sides, but little topographic expression on the sea-floor during growth. The occurrence of these reefs cannot be attributed to any single environmental factor but probably resulted from an unusual combination of favourable circumstances. (Original summary)^1";
- 268 s[265] = "GRAY D.J. (1980).- Spicule pseudomorphs in a new Palaeozoic Chaetetid and its sclerosponge affinities.- Palaeontology 23, 4: 803-820.- FC&P 10-1, p. 56, ID=5999^Topic(s): spiculae; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous L; Geography: Britain^A Palaeozoic chaetetid, bearing intramural spicule pseudomorphs, Chaetetes (Boswellia) mortoni sp.nov., is described from the British Dinantian. Spicules are preserved as calcite, pyrite and silica pseudomorphs. Only silica pseudomorphs retain detail of their tylostyle form. Neomorphism locally obliterates the spicular fabric. A primary

- mineralogy is suggested consisting of an aragonitic calcareous skeleton, with entrapped opal¹; spicules. Comparison of morphology and microstructure with extant and fossil sclerosponges indicates a close relationship between this chaetetid and the Ceratoporellida, and support the sclerosponge nature of some Palaeozoic chaetetids.¹";
- 269 s[266] = "COSSEY P.J. (1997).- Hexaphyllia: a spiny heterocoral from Lower Carboniferous reef limestones in Derbyshire, England.- Palaeontology 40, 4: 1031-1059.- FC&P 27-1, p. 5, ID=3779^Topic(s): morphology; Heterocorallia, Hexaphyllia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: Britain, Derbyshire^Exceptionally well preserved and abundant corallites of Hexaphyllia are recorded from limestones of the Lower Carboniferous Castleton Reef Belt, north Derbyshire, UK. Details of corallite morphogenesis are presented and the growth attitude of corallites is determined. Tabulae curve down at their margins and fuse together to form the tabulotheca. Conversely, spines curve upward and point in the direction of corallite growth. Soft tissue reconstructions infer the presence of polyps sitting exposed upon and totally enclosing the distal tips of the corallites, with polyp lobes extending down their sides. Much of the corallite is therefore regarded as endoskeletal in origin. Rows of spines projecting from between the polyp lobes gave some degree of protection to the exposed polyps. Assemblages of corallites from different positions in the reef show notable differences in morphology. Variations in shape, wall thickness and tabulae spacing are attributed to contrasting growth rates at different positions within the reef. Examination of approximately 1300 corallites from two localities in the reef reveals the presence of a single species, Hexaphyllia marginata (Fleming), which shows considerable intraspecific variation. Systematic studies indicate that criteria used to distinguish Hexaphyllia: species in the past are invalid and that the majority of previously described taxa are junior synonyms of H. marginata. Heterocoral mode of life is discussed in the light of observations made on this species.¹";
- 270 s[267] = "SUTHERLAND P.K., MITCHELL M. (1980).- Distribution of the coelenterate order Heterocorallia in the Carboniferous of the British Isles.- Rep. Inst. Geol. Sci. 80, 3; 18 pp.- FC&P 9-2, p. 17, ID=5869^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous; Geography: British Isles^^1";
- 271 s[268] = "COZAR P., SOMERVILLE H.E.A., SOMERVILLE I.D. (2005).- Foraminifera, calcareous algae and rugose corals in Brigantian (late Viséan) limestones in NE Ireland.- Proceedings of the Yorkshire Geological Society 55, 4: 287-300.- FC&P 34, p. 32, ID=1228^Topic(s): stratigraphy; fossils, Rugosa; Systematics: Foraminifera algae Cnidaria; Rugosa; Stratigraphy: Carboniferous Visé; Geography: Ireland^Upper Viséan rocks in the Kingscourt, Armagh and Cookstown areas of NE Ireland are dated using foraminifera, calcareous algae and rugose corals, and new positions are proposed for the Asbian/Brigantian and early/late Brigantian boundaries. Of particular interest are assemblages of foraminifera and calcareous algae from the Poulmore Scarp section (Kingscourt), which is now recognized as the only section in Ireland to be composed of platform carbonates of latest Brigantian age. This late Brigantian section is correlated with the interval from the Three Yard Limestone to the Great Limestone in northern England.¹";
- 272 s[269] = "COZAR P., SOMERVILLE I.D., ARETZ M., HERBIG H.-G. (2005).- Biostratigraphical dating of Upper Viséan limestones (NW Ireland) using foraminiferans, calcareous algae and rugose corals.- Irish Journal of Earth Sciences 23: 1-23.http://www.jstor.org/pss/30002418.- FC&P 34, p. 32, ID=1229^Topic(s): biostratigraphy; stratigraphy, Rugosa; Systematics: Foraminifera algae Cnidaria;

- Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ireland NWForaminiferans, calcareous algae and rugose corals from many sections in the Glencar Limestone, Dartry Limestone, Bricklieve Limestone and Meenymore formations in north-western Ireland have been analysed. Results from the fauna and microflora suggest that these formations constitute the early to late Asbian for the Glencar Limestone Formation and lower Bricklieve Limestone Formation (Cf6_-Cf6_foraminiferal subzones), and the upper part of the late Asbian for the Dartry Limestone Formation and upper Bricklieve Limestone Formation (Cf6_Subzone). The succeeding Meenymore Formation in the studied area is assigned to the Brigantian (Cf6_Subzone). Goniatite biozonal schemes established previously for equivalent strata to the east in the Cuilcagh Mountains that are not in harmony with the dating proposed here are discussed.^1";
- 273 s[270] = "NUDDS J.R. (1977).- A new species of Aulina (Rugosa) from the Namurian of northern England.- Yorkshire Geological Society Proceedings 17: 189-196.- FC&P 6-2, p. 16, ID=0132Topic(s): new taxa; Rugosa, Aulina; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Nam; Geography: Britain N^^1";
- 274 s[271] = "NUDDS J.R. (1979).- The Carboniferous coral Orionastraea in Ireland.- Journal of Earth Sciences, Royal Dublin Society 1979, 2: 65-70.- FC&P 9-2, p. 41, ID=0327Topic(s): ; Rugosa, Orionastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Ireland^^1";
- 275 s[272] = "SEMENOFF-TIAN-CHANSKY P., NUDDS J.R. (1979).- Revision de quelques especes de Lithostrotion des iles Britanniques decrites par Milne-Edwards et Haime (Tetracoraliaires carboniferes).- Bulletin du Museum national d'histoire naturelle 3: 245-283.- FC&P 9-1, p. 16, ID=0332Topic(s): ; Rugosa, Lithostrotion; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: British Isles^Quatre espèces de Lithostrotion sont redécrites d'après le matériel original. La position stratigraphique de L. maccoyanum et de L. martini est précisée. Les deux autres espèces, L. portlocki et L. phillipsi, sont considérées comme synonymes de L. decipiens (M'Coy) pour le premier et de L. martini pour le second.^1";
- 276 s[273] = "SOMERVILLE I.D., STROGEN P., MITCHELL W.I., SOMERVILLE H.E.A., HIGGS K.T. (2001).- Stratigraphy of Dinantian rocks in WB3 borehole from Co. Armagh, N. Ireland.- Irish Journal of Earth Sciences 19: 51-78.- FC&P 31-2, p. 45, ID=1670Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Ireland^[documents, among others, some rugose corals of Arundian-Brigantian age]^1";
- 277 s[274] = "NUDDS J.R. (1981).- Discovery of the Carboniferous coral Dorlodotia in northern England.- Proceedings of the Yorkshire Geological Society 43, 3: 331-340.- FC&P 11-1, p. 53, ID=1789Topic(s): ; Rugosa, Dorlodotia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Britain N^^1";
- 278 s[275] = "MITCHELL M., SOMERVILLE I.D. (1988).- A new species of Sychnoelasma (Rugosa) from the Dinantian of the British Isles; its phylogeny and biostratigraphical significance.- Proc. Yorks. Geol. Soc. 47, 2: 155-162.- FC&P 18-1, p. 29, ID=2228Topic(s): new taxa; Rugosa, Sychnoelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Britain^^1";
- 279 s[276] = "NUDDS J.R., SOMERVILLE I.D. (1988).- Two new species of Siphonodendron (Rugosa) from the Visean of the British Isles.- Proc. Yorks. Geol. Soc. 46: 293-300.- FC&P 18-1, p. 29, ID=2229Topic(s): new taxa; Rugosa, Siphonodendron; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Britain^^1";

- 280 s[277] = "ARETZ M., NUDDS J. (2005).- The coral Fauna of the Holkerian/Asbian boundary stratotype section (Carboniferous) at Little Asby Scar (Cumbria, England) and implications for the boundary.- Stratigraphy 2005, 2: 167-190.- FC&P 35, p. 48, ID=2331^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Britain, Cumbria^Five coral assemblages from the Holkerian-Asbian succession at the stratotype section at Little Asby Scar, Cumbria (England) have been studied. The stratotype section is located near the fault zone, and contact of the Potts Beck Limestone (earlier Asbian) and the Knipe Scar Limestone (later Asbian) is tectonically controlled. The coral fauna of the Limestone bed which defines the base of the Asbian consists of a coral assemblage which does not contain any coral taxa appearing in the Asbian. The first Dibunophyllum, the traditional coral genus for the Asbian-Brigantian, is not known until the overlying Knipe Scar Limestone. However, other coral taxa from the Knipe Scar Limestone are typical of the later Asbian. No coral assemblage can be doubtless assigned to the earlier Asbian. The coral assemblages of the Little Asby Scar proved that the first appearance of Siphonodendron junceum is in the upper Asbian. The distribution of other important biostratigraphic groups, the foraminiferans and brachiopods, support a relocation of the originally defined Holkerian-Asbian boundary. However, the bases of the biozones of the two most abundant groups, corals and foraminiferans, do not coincide; Asbian foraminiferans appear earlier than Asbian corals. The attempt to correlate the Little Asby Scar succession to the Belgian Namur-Dinant basin and its standardized sedimentary sequences based on a simple presence-absence comparison of corals and foraminiferans does not result in a definite correlation. It is evident that the Holkerian-Asbian boundary as originally defined is lithostratigraphic, and that the absence of any biostratigraphic support prevents the use of that level in a chronostratigraphic context. Therefore, after a consensus on the criterion for the base of the Asbian, the stratotype should be relocated to a better exposed section.^1";
- 281 s[278] = "SOMERVILLE I.D., COZAR P., RODRIGUEZ S. (2007).- Late Viséan rugose coral faunas from South-Eastern Ireland: composition, depositional setting and paleoecology of Siphonodendron biostromes.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 307-327.- FC&P 35, p. 58, ID=2350^Topic(s): biostromes, taxonomy, ecology; Rugosa, biostromes; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ireland SE^1";
- 282 s[279] = "MITCHELL M. (1989).- Biostratigraphy of Visean (Dinantian) rugose coral faunas from Britain.- Proceedings of the Yorkshire Geological Society 47, 3: 233-247.- FC&P 20-2, p. 58, ID=2937^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Britain^1";
- 283 s[280] = "NUDDS J.R., DAY A. (1997).- The effects of clastic sedimentation on a fasciculate rugose coral from the Lower Carboniferous of Northern England.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 93-097.- FC&P 26-2, p. 10, ID=3675^Topic(s): ecology; Rugosa, Siphonodendron; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Britain N^Fasciculate coralla of the rugose coral, Siphonodendron martini (Milne-Edwards & Haime), preserved in life position in soft argillaceous shales within the Arundian (Lower Carboniferous) Ash Fell Sandstone of Cumbria, northern England, exhibit several peculiar features. Corallite diameter is significantly reduced, with a corresponding decrease of the dissepimentarium and in septal member; colony growth form tends towards phaceloid with slender, parallel corallites devoid of lateral budding; and finally, some corallites exhibit rejuvenescence, a feature

previously unknown in this genus. It is suggested that all of these features are a result of an increase in clastic sedimentation in this area. The introduction of large quantities of mud onto the coral thicket would also lead to an imbalance in food supply and a reduction in available light, the later inhibiting photosynthesis by endodermal symbiotic algae. This in turn would inhibit the secretion of calcium carbonate, leading to all of the morphological features observed. Growth rate data, already published from this area, lend support to this theory. The resulting stunted corallites are phenotypic homeomorphs of the descendant species, *Siphonodendron intermedium* Poty, *S. irregulare* (Phillips) and *S. pauciradiale* (M'Coy), which appear in the succeeding Holverian and Asbian stages. This may help to explain some of the long-held misconceptions surrounding the missing syntypes of *S. irregulare*.¹;

- 284 s[281] = "SOMERVILLE I.D. (1997).- Rugose coral faunas from Upper Visean (Asbian-Brigantian) buildups and adjacent platform limestones, Kingscourt, Ireland.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 035-047.- FC&P 26-2, p. 22, ID=3700Topic(s): ; rugose coral faunas; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ireland, KingscourtDetailed sampling from two working quarries at Mokeeran and Ardagh, near Kingscourt have yielded locally abundant Upper Visean coral faunas, with several rugose genera and species new to Ireland. Pale grey, thickly bedded, crinoid-rich platform limestones of late Asbian age at Mokeeran have produced 8 rugose coral genera and 16 species. Colonial corals predominate over solitary rugosans by a ratio of 4:1, with most of the solitary corals occurring within a darker, algal-rich limestone interval. Almost two-thirds of all colonial specimens collected are either *Siphonodendron pauciradiale* or *Lithostrotion decipiens* in approximately equal proportions. In the coeval massive buildup ('reef') facies at Ardagh, in contrast, corals are sparse with rare *Axophyllum*, *Siphonophyllia*, *Siphonodendron* and *Lithostrotion* within the >95 m thick buildup. Several solitary genera (*Siphonophyllia*) are found in both buildup and platform facies, but individual species are restricted to one facies only. In the top 3m of the buildup at Ardagh, however, abundant fasciculate colonial corals have been recovered including *Corwenia rugosa* and 'koninckophyllum' cf. *volgense* which establish a Brigantian age for the top of the buildup. Cerioid colonies though are rare and suggest unfavourable conditions for colonization. At Rathgillen Quarry, 10km to the south of Ardagh, bedded limestones above a similar buildup at Cregg have yielded the Brigantian coral *Actinocyathus floriformis*, which is its first reported occurrence in the Kingscourt Outlier.¹;
- 285 s[282] = "NUDDS J.R. (1999).- A new Carboniferous rugose coral genus from Northern England.- Palaeontology 42, 2: 223-229.- FC&P 28-2, p. 22, ID=4019Topic(s): new taxa; Rugosa, Pleionastraea; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Britain NPleionastraea gen.nov. of the family Lithostrotionidae is described from the Lower Carboniferous Brigantian Stage of Northern England. Two species, *P. magna* and *P. matura*, are referred to it. This astraeoid / thamnasterioid genus is distinguished from *Orionastraea* by its larger dimensions, but is considered to have followed the same evolutionary trend of a gradual breakdown of the corallite wall.¹;
- 286 s[283] = "TAYLOR F.M. (1974).- Skeletal variation in colonial Rugose Corals.- The Mercian Geologist 5, 1: 1-18.- FC&P 3-1, p. 30, ID=4896Topic(s): skeletal variability; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Britain, DerbyshireSkeletal variation in a number of colonial Rugose corals from the Carboniferous Limestone of Derbyshire is described. The variation is attributed to the presence of corallites representing different stages of ontogenetic

development, to genetic variation and the consequent appearance of phylogenetic trends, and to the effects of external environmental controls. Some types of extreme variation may be caused by pathological factors.¹";

287 s[284] = "SOMERVILLE I.D., RODRIGUEZ S. (2010).- A new genus and species of colonial rugose coral from late Tournaisian (waulsortian) mud-mounds in Ireland: Its ecological associations and depositional setting.- *Palaeoworld* 19, 3-4: 414-425.- FC&P 36, p. 65, ID=6460Topic(s): new taxa; Rugosa Howthia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: IrelandA new genus and species of fasciculate rugose coral, Howthia suttonensis Somerville and Rodriguez, has been recorded from Howth peninsula, County Dublin, Ireland, in waulsortian mud-mound limestones of upper Tournaisian age. The new colonial genus is characterized by having an axophyllid axial structure, steeply inclined tabellae, and presence of interseptal and lonsdaleoid dissepiments. It evolved probably from a solitary Axophyllum by the development of peripheral offsets. This new taxon may have been an ecological pioneer adapting to a specialised niche near the top of a large waulsortian mud-mound in shallower water than most waulsortian settings and, as such, may have provided a novel evolutionary opportunity. Howthia suttonensis is associated with Amplexocarinia and an unusual form of 'Fasciculophyllum';, both of which display budding and protoclonality, as well as the fasciculate tabulate coral Syringopora. [original abstract]¹";

288 s[285] = "ARETZ M., HERBIG H.-G., SOMERVILLE I., COZAR P. (2010).- Rugose coral biostromes in the late Viséan (Mississippian) of NW Ireland: Bioevents on an extensive carbonate platform.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 292, 3-4: 488-506.- FC&P 36, p. 112, ID=6548Topic(s): reefs biostromes; coral biostromes; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: IrelandThe extensive upper Viséan (Asbian) platform carbonates in NW Ireland (Bricklieve Limestone Fm, Glencar Limestone Fm and Dartry Limestone Fm) contain distinctive rugose coral biostromes, which are dominated by different species of the genus Siphonodendron. These are in stratigraphic sequence: pauciradiale biostrome (oldest), martini biostrome and several junceum biostromes (youngest). They represent bioevents caused by special short-lasting ecological conditions and can be used as approximately synchronous horizons to correlate within the region. The pauciradiale biostrome is the thickest, laterally most persistent and most variable in facies and biotic composition of all biostromes. It formed on a tectonically influenced platform with a landward-seaward zonation from northwest to southeast, mainly above storm wave-base and below fair-weather wave-base. The northwestern Streedagh facies is characterized by the presence of clusters of large sheet-like colonies of S. pauciradiale. The intermediate 'Donnell's Rock facies is unique for the predominance of the fasciculate genus Solenodendron. The southeastern Bricklieve facies represents the amalgamation of autochthonous and allochthonous coral debris and bioclastic debris with localized small patches of coral boundstone. Mass occurrences of fasciculate rugose corals re-appear in the martini biostrome. This biostrome developed in a shallower water setting, just above fair-weather wave-base on a levelled carbonate platform. The junceum biostromes are thinner, decimetre to some metres thick, and less persistent. They formed in deeper water mostly below storm wave-base, except for the composite 2nd junceum biostrome of the Bricklieve Mountains, which records a period of shallowing. According to facies and coral morphologies, which were compared with modern scleractinian growth forms, sea-level variation exerted one of the strong controls on the rise and decline of the biostromes. The pauciradiale biostrome formed during an extended shallowing-upward cycle in a depth interval leading to the climax of Siphonodendron

- pauciradiale. The cycle ended with the development of the martini biostrome in shallow water. Its demise is probably caused by drowning during the late Asbian sea-level rise. During that time slice the junceum biostromes flourished in deeper water on the platform. Coral growth ceased almost completely after formation of the junceum biostromes during the falling sea level of the latest Asbian. siliciclastic input and resulting turbidity, as well as turbulence formed a complex cascade of ecological constraints. In addition to the local tectonic influences, they combined to result in the depth factor which controlled the distribution of predominating coral populations and the succession of the different biostromes in the Asbian of NW Ireland.¹;
- 289 s[286] = "NUDDS J.R. (1981).- An illustrated key to the British lithostrotionid corals.- Acta Palaeontologica Polonica 25, 3-4: 385-394.- FC#038;P 10-2, p. 71, ID=6091^Topic(s):identification key; Rugosa, Lithostrotionidae; Systematics:Cnidaria; Rugosa; Stratigraphy:Carboniferous; Geography:Britain¹";
- 290 s[287] = "NUDDS J.R. (1983).- The Carboniferous coral Palaeacis in Ireland.- Palaeontology 26, 1: 211-255.- FC#038;P 12-2, p. 34, ID=6215^Topic(s):Tabulata, Palaeacis; Systematics:Cnidaria; Tabulata; Stratigraphy:Carboniferous; Geography:Ireland¹";
- 291 s[288] = "COZAR P., SOMERVILLE I.D. (2005).- Stratigraphy of Upper Viséan carbonate platform rocks in the Carlow area, southeast Ireland.- Geological Journal 40, 1: 35-64.- FC#038;P 33-2, p. 10, ID=1098^Topic(s):carbonates stratigraphy; stratigraphy, carbonates; Systematics:; Stratigraphy:Carboniferous Visé; Geography:Ireland^The stratigraphy of the upper Viséan (Asbian to Brigantian) carbonate succession in southeast Ireland is revised on the basis of seven quarry and two borehole sections. Six lithological units have been distinguished, two units (units 1 and 2) in the upper Asbian Ballyadams Formation, and four units (units 4 to 6) in the Brigantian Clogrenan Formation (both formations are dated precisely using foraminiferans, calcareous algae and rugose corals). The boundary between the Ballyadams and Clogrenan formations is redefined 19 m below the horizon proposed by the Geological Survey of Ireland, and thus, lithological characteristics of both formations are redescribed. The upper part of the Ballyadams Formation is characterized by well-developed large-scale cyclicity, with common subaerial exposure surfaces. Fine- to medium-grained thin-bedded limestones with thin shales occur in the lower part of cycles, and passing up into medium-grained pale grey massive limestones in the upper part. The Clogrenan Formation is composed mainly of medium- to coarse grained thick limestone beds with variable presence of shales; but no large-scale cyclicity. There is a decrease in the number of subaerial exposure surfaces towards the top of the formation and common chert nodules; macrofauna occurs mostly concentrated in bands. The six units recognized in the Carlow area are comparable with other units described for the same time interval (Asbian-Brigantian) from south and southwest Ireland, demonstrating the existence of a stable platform for most parts of southern Ireland, controlled principally by glacioeustatics.¹";
- 292 s[289] = "SOMERVILLE I.D. (2003).- Review of Irish Lower Carboniferous (Mississippian) mud-mounds: depositional setting, biota, facies and evolution.- SEPM Special Publications 78 / American Association of Petroleum Geologists Memoir 83: 239-252.- FC#038;P 33-2, p. 45, ID=1209^Topic(s):reefs, mud mounds; reefs; Systematics:; Stratigraphy:Carboniferous L; Geography:Ireland^Lower Carboniferous (Mississippian) mud-mounds in Ireland occur in two main depositional settings: distal part of ramps and in the outer shelf margins. They formed predominantly during the Late Tournaisian and Late Viséan, associated with major transgressive

- episodes. The majority of the massive mounds have peloidal mud-matrix textures and development of stromatoloid cavities.¹";
- 293 s [290] = "SEVASTOPOLU G.D., NUDDS J.R. (1987).- Courceyan (Early Dinantian) biostratigraphy of Britain and Ireland: coral and conodont zones compared.- Courier Forschungsinstitut Senckenberg 98: 39-46.- FC&P 19-1.1, p. 43, ID=2598Topic(s): biostratigraphy; coral & conodont zonations; Systematics: ; Stratigraphy: Carboniferous Tour; Geography: Britain, Ireland¹";
- 294 s [291] = "SOMERVILLE I.D., STRANK A.R.E., WELSH A. (1989).- Chadian faunas and flora from Dyserth: depositional environments and palaeogeographic setting of Visian strata in northeast Wales.- Geological Journal 24: 49-66.- FC&P 19-1.1, p. 43, ID=2600Topic(s): ecology; environments; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Britain, Wales¹";
- 295 s [292] = "SOMERVILLE I.D., PICKARD N.A.H., STROGEN P., JONES G.L.I. (1992).- Early to mid-Visian shallow water platform buildups, north Co. Dublin, Ireland.- Geological Journal 27: 151-172.- FC&P 21-2, p. 22, ID=3309Topic(s): reefs, shallow water; reefs; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Ireland, Dublin¹";
- 296 s [293] = "MEISCHNER D., WARNKE K. (1996).- Origin and depositional environments of Lower Carboniferous Mud Mounds of Northwestern Ireland.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: 333-337.- FC&P 26-1, p. 43, ID=3612Topic(s): reefs, mud mounds; reefs; Systematics: ; Stratigraphy: Carboniferous; Geography: Ireland¹The Asbian mud mounds in of the Sligo syncline in northwestern Ireland have been investigated by applying sedimentological and geochemical methods. The mud mounds were deposited in a deeper shelf setting, water depth was about 200m. They consist of micrite and peloidal micrite. Mound builders are siliceous sponges and associated microbes. Carbonate forming the mounds was produced and accumulated in situ via microbial decomposition of sponge soft tissue. Stable isotope fractionation was in equilibrium with ambient seawater. Diagenetic processes changed the sponge images to a point that they are hard to recognize. Stromatoloid cavities were left, if calcification of sponges was incomplete. Radial fibrous cements lining the cavities were precipitated almost syndepositionally under marine phreatic conditions. During the transgressive part of the basin history the sponges grew continuously more important. This development finally resulted in the establishment of sponge-microbial mud mounds.¹";
- 297 s [294] = "STROGEN P., SOMERVILLE I.D., PICKARD N.A.H., JONES G.L.I. (1995).- Lower Carboniferous (Dinantian) stratigraphy and structure in the Kingscourt Outlier, Ireland.- Geological Journal 30: 1-23.- FC&P 24-1, p. 59, ID=4448Topic(s): biostratigraphy, facies; geology; Systematics: ; Stratigraphy: Carboniferous L; Geography: Ireland, Kingscourt¹Logging of 55 recent boreholes, together with remapping, has resulted in a fundamental reassessment of the stratigraphy and sedimentology of the Dinantian Kingscourt Outlier. Despite the present isolated position of the outlier within the Longford-Down Massif, the Kingscourt rocks are an integral part of the Dublin Basin succession. The newly defined Ardagh Platform marks the most northerly limit to basinal sedimentation in the Dinantian Dublin Basin. The Courceyan is a typical but thinner, north Dublin Basin succession with two new formal units: the Rockfield Sandstone Member and the Kilbride Formation. The latter, a coarse-grained, well washed limestone of latest Courceyan to early Chadian (late Tournaisian) age is the shallow water equivalent of the Feltim Formation (Waulsortian facies), which is absent in the outlier.

The Courceyan interval in the north of the outlier is markedly attenuated. In the succeeding Chadian-Brigantian interval basinal facies predominate in the south, but on the Ardagh Platform an almost complete coeval Visean shallow water sequence is found. A new platform unit (Deer Park Formation) of latest Asbian to Brigantian age is defined in the Ardagh area. The Dee Member (Chadian) is newly defined for the lower part of the basinal Tober Colleen Formation and the Altmush Shale Member is formally defined for the upper part of the Loughshinny Formation. Two major structures dominate the Kingscourt Outlier: the NE SW trending Moynalty Syncline in the south and the N-S trending Kingscourt Fault. Both are Hercynian structures, but probably represent reactivated Caledonide basement-controlled structures. Dinantian syndepositional faulting is indicated in both the Courceyan ('Kingscourt Sag') and Chadian-Asbian. The latter period of faulting in the Ardagh area separates platform facies in the north from basinal facies to the south. In the late Asbian, platform facies with carbonate build-ups prograded south into the basin as far south as Nobber, but in the latest Asbian to Brigantian, basinal facies extended northwards over the collapsed platform margin. Foraminifers, corals and conodonts are mentioned with the stratigraphic units.¹¹;

298 s[295] = "BROADHURST F.M., SIMPSON I.M. (1973).- Bathymetry on a Carboniferous reef.- *Lethaia* 06, 4: 367-381.- FC&P 2-2, p. 13, ID=4783Topic(s): reefs, bathymetry; reefs; Systematics: ; Stratigraphy: Carboniferous L; Geography: Britain, DerbyshireIn the Lower Carboniferous deposits of Castleton, Derbyshire, well bedded 'shelf' limestones, apparently of shallow water origin, pass northwards into a marginal tract of poorly bedded apron-reef limestones which dip at about 30° downwards and away from the 'shelf'. Geopetal infillings of shell cavities in the apron-reef indicate only minor movement since deposition and the observed dip must be due to deposition on a sloping sea floor. At certain times this sea floor was colonised by stromatolitic algae and corals such as *Lithostrotion* at the apron-reef crest where there was minimum water depth, followed to progressively increasing depths by a fauna dominated by the coral *Michelinia*, a fauna of small brachiopods, bryozoa, molluscs, trilobites, and other organisms and a fauna dominated by *Pseudamussium*. At other times crinoidal debris was the dominant component of the apron-reef, when an alignment of crinoid stems parallel to the dip of the slope occurred at low levels, but a random orientation at the apron-reef crest. Other sediments on the apron-reef are apparently devoid of macrofossils. Volcanic activity occurred during the development of the apron-reef, and it is suggested that uplift of the shelf area preceded the subaerial flow of a lava tongue which reached and plunged down the apron-reef slope and into the sea.¹¹;

299 s[296] = "SOMERVILLE I.D., COZAR P., ARETZ M., HERBIG H.-G., MITCHELL I., MEDINA-VAREA P. (2009).- Carbonate facies and biostromal distribution in a tectonically controlled platform in northwest Ireland during the late Visean (Mississippian).- *Proceedings of the Yorkshire Geological Society* 57, 3-4: 165-192.- FC&P 36, p. 122, ID=6566Topic(s): carbonates reefs; carbonates, reefs; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Ireland NWThe North-West Carboniferous Basin (NWCB) contains a c. 3 km-thick succession of Mississippian (Courceyan to Arnsbergian) limestone, mudstone and sandstone, mostly of marine origin. The litho- and biostratigraphy of some sections in the basin are revised and new logged sections described in upper Viséan, limestone-dominated platform successions. In the O'Donnell's Rock area, a precise correlation of the Glencar Limestone Formation with the lower part of the Bricklieve Limestone Formation, and the Dartry Limestone Formation with the upper part of the Bricklieve Limestone Formation is confirmed. Consequently, in late Viséan (Asbian) times the NWCB developed as an extensive (>12,000 km²) carbonate

- platform, in which sediments of the facies typical of outer, middle and inner parts of the platform were deposited. [first part of extensive abstract]^1";
- 300 s[297] = "NEGUS P.E., BEAUVAIS L. (1979).- The Corals of Steeple Ashton (English Upper Oxfordian), Wiltshire.- Proc. Geol. Ass. 90, 4: 213-227.- FC&P 10-1, p. 58, ID=6014^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: Britain^^1";
- 301 s[298] = "NEGUS P.E. (1974).- On the present state of some famous British Jurassic Coral Localities.- FC&P 3, 2: 23-27.- FC&P 3-2, p. 23, ID=6278^Topic(s): sampling sites; coral-bearing localities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Britain^Since it is now nearly a century since most of these coral localities were recorded and commented on in the literature, it seems interesting and useful to review the present state of the exposures as far as possible, particularly in view of the rapid changes taking place in the country. Inevitably, most of the quarries and other exposures concerned have become overgrown, flooded, filled with rubbish or otherwise obscured. [initial fragment of a paper]^1";
- 302 s[299] = "NEGUS P.E. (1991).- Stratigraphical table of scleractinian coral genera and species occurring in the British Jurassic.- Proc. Geol. Assoc. 102, 4: 251-259.- FC&P 22-1, p. 39, ID=3400^Topic(s): distribution of species & genera; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Britain^A list of scleractinian coral species is presented in stratigraphical sequence through the British Jurassic together with relevant localities. The information has been drawn largely from 19th and 20th century literature with some additional museum records.^1";
- 303 s[300] = "RONIEWICZ E. (1970).- Scleractinia from the Upper Portlandian of Tisbury, Wiltshire, England.- Acta Palaeontologica Polonica 15, 4: 519-537.- FC&P 1-2, p. 23, ID=4687^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Tith; Geography: Britain, Wiltshire^Four species of Scleractinia: Pseudodiplocoenia oblonga (Fleming), Ellipsasteria gracilis n.gen., n.sp., Edwardsastraea tisburyensis n.gen., n.sp. and Ebrayia dightonthomasi n.sp. from the uppermost Portlandian of Tisbury, west of Salisbury, Wiltshire, England, are here described. The histological structure of the skeleton of Pseudodiplocoenia oblonga, preserved in silicified colonies is presented. ^1";
- 304 s[301] = "TALBOT M.R. (1972).- The preservation of Scleractinian Corals by calcite in the Corallian beds (Oxfordian) of Southern England.- Geol. Rundschau 61, 2: 731-742.- FC&P 2-2, p. 23, ID=4827^Topic(s): diagenesis, calcite; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Oxf; Geography: Britain S^^1";
- 305 s[302] = "NEGUS P.E., BEAUVAIS L. (1975).- The Fairford Coral Bed (English Bathonian), Gloucestershire.- Proceed. Geologists' Assoc. 8, 2: 185-204.- FC&P 4-2, p. 53, ID=5245^Topic(s): coral bed; coral bed; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Bath; Geography: Britain, Gloucestershire^Sixty-one scleractinian coral species are recorded from the Fairford Coral Bed at the top of the White Limestone, Great Oolite'Series' (Bathonian) of Fairford, Gloucestershire. Five new species are described and figured: Keriphyllia oolitica, Paramontlivaltia obliqua, Microsolena hemispherica, Microphyllia punctata and Collignonastrea negusi, also one new variety Collignonastrea grossouvrei Beauvais var. digitiformis and comments are made on the associated fauna.^1";
- 306 s[303] = "NEGUS P.E. (1972).- On the occurrence of Heterastraea murchisoni (Wright) associated with Thecosmilia martini (Fromentel) in

- the Isle of Skye.- FC&P 1, 2: 6.- FC&P 1-2, p. 6, ID=6262^Topic(s): taxonomy, stratigraphy; Scleractinia, Heterastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Hett; Geography: Britain^^1";
- 307 s[304] = "NEGUS P.E. (1975).- British Jurassic Corals in the literature.- FC&P 4, 2: 34-36.- FC&P 4-2, p. 34, ID=6289^Topic(s): bibliography; Scleractinia, literature; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Britain^In the 17th and 18th centuries, there were a number of isolated references to what we know as Jurassic corals, including, of course, the work of Linnaeus (1758-59). The 19th century saw a great deal of interest in British Jurassic corals and a number of collectors and authors turned their attention to this group. Early in the century, Parkinson (1808) described and figured several Jurassic corals in his "Organic Remains". Later came Milne-Edwards and Haime (1851) "A Monograph of the British Fossil Corals" and then Duncan (1872) "Supplement", followed by Tomes (1878, 1879, 1882, 1883, 1885, and 1886). During the century, other authors gave stratigraphical details and made general comments on famous localities and recorded various species. [first fragment of a note; accompanying is the list of publications]^1";
- 308 s[305] = "NEGUS P.E. (1984).- The ploughed field habitat.- FC&P 13, 2: 24-27.- FC&P 13-2, p. 24, ID=6368^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Britain^There are two Jurassic localities which have become famous for the number of corals ploughed up on certain fields over many years. One is Fairford, Gloucestershire - Great Oolite, (Bathonian) and the other is Steeple Ashton, Wiltshire - Corallian, (Oxfordian). [] There are, of course, some disadvantages to ploughed field material. It is not in situ and unless you are able to dig a trench, the stratigraphy remains uncertain. The corals are subject to dispersal by farming activities and damage by machinery. Also there is the possibility of intrusions, that is, fossils from nearby exposures becoming mixed with the ploughed up material. However, since the basic material of palaeontology is often fragmentary and incomplete as many of you are well aware, I suggest that ploughed fields can be rewarding, despite their drawbacks. [first and last fragments of a transcript of a talk given to the Coelenterate Club at Nottingham University in March 1984; submitted to FC&P by C.T. Scrutton]^1";
- 309 s[306] = "ALI O.E. (1983).- Microsolenid corals as rock-formers in the Corallian (Upper Jurassic) rocks of England.- Geol. Mag. 120, 4: 375-380.- FC&P 12-2, p. 39, ID=6227^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Britain^Microsolenia thurmanni Koby and M. foliosa Roniewicz (Scleractinia) are important rock-formers in the Upper Oxfordian Stage of Upware and, to a lesser extent, of Yorkshire. [original summary]^1";
- 310 s[307] = "INSALACO E. (1999).- Facies and Palaeoecology of Upper Jurassic (Middle Oxfordian) Coral Reefs in England.- Facies 40, 1: 81-100.- FC&P 28-1, p. 66, ID=4007^Topic(s): reefs, facies; reefs; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Britain^This study documents the facies and fauna of Late Jurassic (Middle Oxfordian) coral reefs in England. Sedimentological and palaeoecological analysis of these reefs distinguishes three generic reef types: (1) small reef patches and thickets associated with siliciclastic deposits; (2) small reef patches and thickets associated with siliciclastic-free bioclastic grainstones and packstones; and (3) biostromal unites associated with deep water facies. The depositional environments of these reef types are discussed. Two coral assemblages are identified: (1) the microsolenid assemblage; and (2) the Thamnasteria, Isastraea, Fungiastraea and Thecosmilia assemblage (Thamnasteria assemblage). The Thamnasteria

- assemblage developed in all shallow water environments in the study area, regardless of local environmental conditions. The fauna is very eurytopic, r-selected and can tolerate significant environmental fluctuations on short temporal scales (sub-seasonal). The main control on the development of the microsolenid assemblage was low light intensity, low background sedimentation rates and low hydrodynamic energy levels.¹¹";
- 311 s[308] = "TALBOT M.R. (1973).- Major sedimentary cycles in the Corallian Beds (Oxfordian) of southern England.- Palaeogeography, Palaeoclimatology, Palaeoecology 014, 4: 293-317.- FC&P 3-2, p. 46, ID=4981^Topic(s): eustacy; eustacy; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Britain S^The Corallian Beds of southern England consist of 4 asymmetric, upward shallowing cycles. Each cycle is separated from the next by a non-sequence, usually an erosion surface, which marks a marine transgression. Transgression was the result of a sudden rise in sea level, the period of rise being perhaps less than 7000 years. There is evidence of the same non-sequences occurring elsewhere in Britain and abroad, suggesting that the transgressions were the result of world-wide, eustatic changes in sea level.¹¹";
- 312 s[309] = "TAYLOR P.D. (1988).- A probable thecate hydroid from the Upper Cretaceous of southern England preserved by bioimmuration.- Paläontologische Zeitschrift 62, 3-4: 167-174.- FC&P 18-1, p. 46, ID=2286^Topic(s): bioimmuration; Hydrozoa, Hydroidea; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous Sant; Geography: Britain S^An inferred thecate hydroid, moulded on the attachment scar of the bivalve Pycnodonte vesiculare, is described from the Santonian Chalk of Kent. The living hydroid was evidently overgrown by the P. vesiculare shell and is preserved as a bioimmuration. Eisenackiella thanetensis gen. et sp.nov. is characterized by a hydrorhiza whose stolons bear hydrothecae alternately to the left and right, and a hydrocaulus consisting of several unbranched stems with alternating hydrothecae. The widely spaced stolonial Hydrothecae have adnate proximal parts and erect distal parts. Assignment to an extant hydroid family is difficult: whereas the hydrorhiza resembles that of the family Lafoeidae, the hydrocaulus is reminiscent of the family Sertulariidae.¹¹";
- 313 s[310] = "LAURIDSEN B.W., GALE A.S., SURLYK F. (2009).- Benthic macrofauna variations and community structure in Cenomanian cyclic chalk-marl from Southerham Grey Pit, SE England.- Journal of the Geological Society 166, 1: 115-127.- FC&P 36, p. 93, ID=6507^Topic(s): benthos, ecology; benthos, corals; Systematics: ; Stratigraphy: Cretaceous Cen; Geography: Britain SE^[some corals (Onchotrochus, Micrabacia) are mentioned in this article]¹¹";
- 314 s[311] = "BALSON P.S. (1983).- Temperate, meteoric diagenesis of Pliocene skeletal carbonates from eastern England.- J. geol. Soc. London 140: 377-385.- FC&P 12-2, p. 41, ID=6236^Topic(s): carbonate platforms; carbonate diagenesis; Systematics: ; Stratigraphy: Pliocene; Geography: Britain E^The Crags of eastern England include marine skeletal carbonates which were deposited and lithified under temperate conditions. The Coralline Crag (Pliocene), in particular, exhibits a variety of carbonate cement types which indicate exposure to meteoric ground-waters during a regressive period. * The Coralline Crag has been divided into an upper division of dominantly well sorted skeletal calcarenites and calcirudites and a lower, poorly sorted silty calcarenite division. 'Dogtooth' spar cement and rudimentary syntaxial cement overgrowths on echinoderm fragments are characteristic of the sediments of the upper division, which has undergone extensive aragonite dissolution. This division is consequently relatively evenly cemented. In the underlying sediments aragonite dissolution has not occurred and the sediments have remained largely uncemented, with

- cement restricted to irregular patches where growth of intra- and inter-particle equant spar has effectively eliminated porosity. In contrast with the upper leached sediments, syntaxial echinoderm overgrowths show a greater development but only where interference from surrounding sediment and sparry cement was absent. The elongate shape of the Coralline Crag outcrop may be the result of preferential cementation of the upper, coarser, well sorted calcarenites originally deposited as an elongate sediment body, possibly as an offshore sandbank. [original summary]^1";
- 315 s[312] = "BENTON M.J., TREWIN N.H. (1978).- Catalogue of the type and figured material in the Palaeontology Collection, University of Aberdeen, with notes on the H.A. Nicholson collection.- Publs Dep. Geol. Miner. Univ. Aberdeen 2: 1-28.- FC&P 7-2, p. 9, ID=5602Topic(s): collections of fossils; coral collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Britain^catalogue of a collection of fossils; Aberdeen University^1";
- 316 s[313] = "NUDDS J.R. (1975).- A key to the identification of the Lithostrotiontidae species.- Arthur Holmes Soc. Jour. 5, 3: 34-37.- FC&P 5-2, p. 9, ID=5432Topic(s): key to pecies; Rugosa, Lithostrotionidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Britain^Key to British species of Lithostrotion and Orionastraea.^1";
- 317 s[314] = "SOMERVILLE I.D., RODRIGUEZ S. (2007).- Rugose coral associations from the Late Viséan of Western Tethys: examples from Ireland, Britain and Spain.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 329-351.- FC&P 35, p. 58, ID=2351Topic(s): ecology; Rugosa associations; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ireland, Britain, Spain^^1";
- 318 s[315] = "WALLACE C. (2008).- New species and records from the Eocene of England and France support early diversification of the coral genus Acropora.- Journal of Paleontology 82, 2: 313-328.- FC&P 36, p. 107, ID=6539Topic(s): early diversification; Scleractinia Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Britain, France^Five new species of the highly successful reef-building coral genus Acropora are described from Eocene locations in England and France (Acropora britannica, A. alvarezi, A. wilsonae, A. bartonensis, and A. proteacea) and additional records are given for six fossil species (A. deformis, A. anglica, A. solanderi, A. roemeri, A. lavandulina, and A. ornata), based on re-examination of material in the collections of the Natural History Museum, London. Specimens came from the Lutetian (49.0 to 41.3 Ma) of France, Bartonian (41.4 to 37.0 Ma) of England and France and Priabonian (36.0-34.2 Ma) of England. Included are the earliest record of a species with tabular or plate-like colonies similar to those in the modern "hyacinthus" species group (A. proteacea n.sp.) and the earliest records of simple hispidose forms (A. bartonensis n.sp. and A. roemeri), similar to those in the modern "florida" species group. The Priabonian material from southern England (A. britannica n.sp. and A. anglica) shows the earliest occurrence of two sturdy species groups, the "humilis II" and "robusta" groups respectively, which now occur together on reef fronts throughout the modern Indo-Pacific. The new descriptions and records contribute to evidence that the genus diversified rapidly after its appearance in the fossil record. This diversification may have contributed to the rapid speciation and dispersal, observed in this genus during the Neogene, culminating in its extraordinary dominance of modern Indo-Pacific reefs. [original abstract]^1";
- 319 s[316] = "CHEVALIER J.P. (1980).- Aperçu sur les formations récifales en France.- Geobios Mem. special 4 [26th Geol. Congress (Paris)

- Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale]: 7-16.- FC#038;P 9-2, p. 13, ID=5859^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: fossil; Geography: France^^1";
- 320 s [317] = "MORENO-EIRIS E. (1987).- Los montículos arrecifales de algas y arqueociatos del Cambrico Inferior de Sierra Morena.- Publ. esp. del Bol. geol. y miner. 98, 1-4; 127 pp., 16 pls, 16 figs.- FC#038;P 18-1, p. 54, ID=2316^Topic(s): reefs; reefs; Systematics: algae Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain, Sierra Morena^Majority of Lower Cambrian Sierra Morena reef mounds are mainly built by algae while archaeocyaths are accessory elements. However, some presented an archaeocyathan-algal framework. The archaeocyath taxonomic diversity leads to recognize the types of archaeocyaths which are predominant in different facies. Paleogeographic relationships and stratigraphical correlations are established on their basis.^1";
- 321 s [318] = "PEREJON A., MORENO E. (1978).- Nuevos datos sobre la fauna de Arqueociatos y las facies carbonatadas de la serie de Los Campillos.- Estudios geol. 34, 4: 193-194.- FC#038;P 9-1, p. 50, ID=0294^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Spain, Los Campillos^^1";
- 322 s [319] = "DEBRENNE F., COURTJAULT-RADE V. (1986).- Decouverte de faunules d'Archeocyathes dans l'Est des Monts de Lacaune, flanc Nord de la Montagne Noire.- Bulletin de la Societe geologique de France . 285-292.- FC#038;P 15-1.2, p. 46, ID=0794^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: France, Montagne Noire^Some Archaeocyathan cups have been found in two different localities of the same Brusque Unit, along the Arnac-Brusque road (Tarn). The first one is correlated with the small carbonaceous lenses containing Epiphyton. Cyanophyceans and Archaeocyathans (Retecoscinus boyeri Debrenne), situated in the Minervois to the base of the mixed carbonate/siliciclastic transitional horizon (alternances; Upper Orbiel Formation) in the Southern flank of the Montagne Noire. The second one (Donnot and Guerangue 1978, contains highly distorted cups (Graphoscyphia and Coscinocyathus) which are not correlable with any formation of the Southern Flank. The generic composition of the Archaeocyathan fauna suggests a Middle Lower Cambrian age for the fossiliferous rocks of the Northern part of the Montagne Noire.^1";
- 323 s [320] = "PEREJON A., MORENO-EIRIS E., HERRANZ P. (1981).- Datacion con Arqueociatos del Cambrico inferior al norte de Llerena, Badajoz (SE de Espana).- Estudios Geol. 37: 86-96.- FC#038;P 11-2, p. 22, ID=1818^Topic(s): biostratigraphy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain SE^^1";
- 324 s [321] = "COURJAULT-RADE P., DEBRENNE F. (1987).- Tectono-climatic controls on Archaeocyathan fauna development in Lower Cambrian sequences of Montagne Noire.- International Symposium Terminal Precambrian and Cambrian Geology, Yichang (Sept. 8-14 1987), Abstracts volume: 14-15.- FC#038;P 17-1, p. 43, ID=2169^Topic(s): ecology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: France, Montagne Noire^^1";
- 325 s [322] = "PEREJON A., MORENO-EIRIS E. (2007).- Ovetian cryptic archaeocyaths, lower Cambrian from Las Ermitas (Córdoba, Spain).- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 113-137. ISBN 978-3-7001-3826-6.- FC#038;P 35, p. 44, ID=2323^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian Ovetian; Geography: Spain, Cordoba^^1";

- 326 s[323] = "ABAD A. (1987).- Primera cita de Arqueociatidos en Cataluna. [in Spanish].- Trab. Mus. geol. Seminario Barcelona 222: 10.- FC&P 20-1.1, p. 64, ID=2840^Topic(s): taxonomy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Spain, Catalonia^^1";
- 327 s[324] = "PEREJON A. (1994).- Palaeogeographic and biostratigraphic distribution of Archaeocyatha in Spain.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 341-354.- FC&P 23-1.1, p. 23, ID=4091^Topic(s): biogeography, biostratigraphy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain^The biostratigraphy for the Lower Cambrian succession in Spain as proposed by Perejon (1986) is here modified on the basis of new observations. The finding of new outcrops of unquestionable Lower Cambrian age in the Spanish Pyrenees (Gerona) which bear a diverse and abundant archaeocyath assemblage (Abad 1987, 1989), the recently revised archaeocyath systematics, palaeogeography and biostratigraphy and new data on Spanish palaeontology suggest a revision of the biostratigraphic framework. This also allows new observations to be made upon archaeocyath systematics, biostratigraphy and palaeogeography. The Lower Ovetian Substage includes Capsulocyathus and another 22 genera in Zone I; Robertocyathus, Tumulocyathus, Sclerocyathus, Gordonifungia, Tumulifungia, Geocyathus, Spinosocyathus and another 25 genera appear in Zone II; Echinocyathus and 21 further genera appear in Zone III. The Upper Ovetian Substage includes three archaeocyath genera in Zone IV; five genera of wide stratigraphic range appear in Zone V; Dictyofavus and another seven genera are presented in Zone VI; and Anthomorpha, Porocoscinus, Prismocyathus and 19 further genera appear in Zone VII. The Lower Marianian Substage includes eight archaeocyath genera in Zone VIII; Mennericyathus, Densocyathus, Chouberticyathus and another 18 genera occur in Zone IX.^1";
- 328 s[325] = "ELICKI O., DEBRENNE F. (1993).- The Archaeocyatha of Germany.- Freiburger Forschungshefte C450: 3-41.- FC&P 23-1.1, p. 84, ID=4192^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Germany^^1";
- 329 s[326] = "PEREJON A. (1973).- Contribucion al conocimiento de los Arqueociatidos de los yacimientos de Alconera (Badajoz).- Estud. geol. 29, 2: 179-206.- FC&P 4-1, p. 47, ID=5192^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain, Badajoz^^1";
- 330 s[327] = "PEREJON A. (1975).- Nuevas faunas de Arqueociatos del Cambrico inferior de Sierra Morena (I).- Tecniterrae 8: 8-29.- FC&P 5-2, p. 11, ID=5448^Topic(s): new taxa; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain, Sierra Morena^Historique des recherches sur le Cambrien d'Espagne et particulièrement de la Sierra Morena, liste de faune et description des genres et des espèces notamment les nouvelles formes Cordobicyathus deserti Per., Aldanocyathus pedrochei Per., A.valdegrajensis Per., A.zaharensis Per.^1";
- 331 s[328] = "PEREJON A. (1975).- Arqueociatos de los subordenes Monocyathina y Dokidocyathina.- Boletin de la Real Sociedad Espanola de Historia Natural, seccion Geologica 73: 125-145.- FC&P 5-2, p. 11, ID=5449^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Spain^Les espèces décrites des genres Archaeolynthus, Tumuliolynthus, Dokidocyathus (en fait Dokidolynthus), Cordobicyathus, provenant de Las Ermitas donnent un âge de la base du Cambrien pour ces formations.^1";
- 332 s[329] = "PEREJON A. (1975).- Arqueociatos Regulares del Cambrico inferior de Sierra Morena, SW de Espana.- Boletin de la Real Sociedad

- Espanola de Historia Natural, seccion Geologica 73: 147-193.-
 FC&P 5-2, p. 11, ID=5450^Topic(s): taxonomy,
 biostratigraphy; Archaeocyatha; Systematics: Porifera;
 Archaeocyatha; Stratigraphy: Cambrian L; Geography:
 Spain, Sierra Morena^Description d'une faune abondante de la
 région Sud-Ouest de l'Espagne, comportant notamment des espèces
 des genres Aldanocyathus, Robustocyathus, Inessocyathus, Afiacyathus,
 Sibirecyathus, Taylorcyathus, et d'un nouveau genre Morenicyathus
 Per. L'age proposé par l'auteur serait Tommotien supérieur ou
 Atdabanien pour la région de Cordoue et Atdabanien plus tardif pour
 Alconera.^1";
- 333 s[330] = "PEREJON A. (1976).- Nuevas faunas de Arqueociatos del
 Cambrico inferior de Sierra Morena (II).- Tecniterrae 9: p7-24.-
 FC&P 5-2, p. 12, ID=5451^Topic(s): new taxa;
 Archaeocyatha; Systematics: Porifera; Archaeocyatha;
 Stratigraphy: Cambrian; Geography: Spain, Sierra
 Morena^Suite de l'article du décembre 1975 de la même publication;
 description des espèces des genres Afiacyathus, Sibirecyathus,
 Taylorcyathus et Morenicyathus, avec en plus l'étude des formes à
 planchers Retecoscinus et Mennericyathus et des Irréguliers Bicyathus,
 Chouberticyathus, Andalusicyathus (gen. nov.), genre très intéressant
 groupant les formes à courtes baguettes de type Dictyocyathus,
 associées à une muraille interne à plusieurs pores par espace
 intertaenial et une muraille externe simple.^1";
- 334 s[331] = "SEDLAK W. (1973).- Archaeocyatha fauna of St. Cross in
 Lysogory Chain.- Zeszyty Naukowe KUL 1973, 16, 1: 81-83; Lublin.-
 FC&P 6-1, p. 8, ID=5480^Topic(s): ; Archaeocyatha ?;
 Systematics: Porifera; Archaeocyatha; Stratigraphy:
 Cambrian U; Geography: Poland, Holy Cross^^1";
- 335 s[332] = "SEDLAK W. (1974).- Stratigraphic position of Archaeocyathid
 fauna from Lysa Gora (the Holy Cross Mountains).- Ann. Phil. 1974, 22,
 3: 103-119.- FC&P 6-1, p. 8, ID=5481^Topic(s): ;
 Archaeocyatha ?; Systematics: Porifera; Archaeocyatha;
 Stratigraphy: Cambrian U; Geography: Poland, Holy
 Cross^^1";
- 336 s[333] = "ZAMARRENO I., PEREJON A. (1976).- El nivel carbonatado del
 Cambrico de Pedrafita (zona asturoccidental-leonesa, NW de Espana):
 tipos des facies & fauna de Arqueociatidos.- Breviora geol.
 Asturica 20, 2: 17-32; Oviedo.- FC&P 6-1, p. 31,
 ID=5528^Topic(s): carbonates; carbonates Archaeocyatha;
 Systematics: Porifera; Archaeocyatha; Stratigraphy:
 Cambrian L; Geography: Spain NW^^1";
- 337 s[334] = "GIL CID M.D., PEREJON A., SAN JOSE de M.A. (1976).-
 Estratigrafia y paleontologia de las calizas cambricas de los
 Navalucillos (Toledo).- Tecniterrae Esp. 3, 13: 11-29.- FC&P
 7-1, p. 18, ID=5570^Topic(s): biostratigraphy; geology,
 Archaeocyatha; Systematics: Porifera; Archaeocyatha;
 Stratigraphy: Cambrian; Geography: Spain, Toledo Mts^^1";
- 338 s[335] = "PEREJON A., MORENO F., VEGAS R. (1976).- Datacion de las
 calizas del Cambrico inferior de los Navalucillos (Montes de Toledo):
 faunas de Arqueociatos.- Breviora geol. Asturica 20, 3: 33-46; Oviedo.-
 FC&P 7-1, p. 19, ID=5572^Topic(s): biostratigraphy;
 geology, Archaeocyatha; Systematics: Porifera; Archaeocyatha;
 Stratigraphy: Cambrian L; Geography: Spain, Toledo Mts^^1";
- 339 s[336] = "MARTIN-CARO I., MORENO-EIRIS E., PEREJON A., de SAN JOSE M.A.
 (1979).- Hallazgo de Arqueociatos en las calizas de la Estrella (Montes
 de Toledo occidentales, Toledo, Espana).- Estudios geol. 35: 384-387.-
 FC&P 9-1, p. 22, ID=5782^Topic(s): ; Archaeocyatha;
 Systematics: Porifera; Archaeocyatha; Stratigraphy:
 Cambrian L; Geography: Spain, Toledo Mts^^1";
- 340 s[337] = "LINAN E., PEREJON A. (1981).- El Cambrico inferior de la
 Unidad de Alconera, Badajoz (Sud de Espana).- Boletin de la Real
 Sociedad Espanola de Historia Natural, seccion Geologica 79: 125-148.-

- FC&P 11-1, p. 55, ID=6126^Topic(s): biostratigraphy; geology, Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain S^^1";
- 341 s[338] = "LINAN A., PEREJON A. (1981).- El Cambrico inferior de la "Unidad de Alconera", Badajoz (SW de Espana).- Boletin de la Real Sociedad Espanola de Historia Natural, seccion Geologica 79, 1-2: 125-148.- FC&P 11-2, p. 22, ID=6149^Topic(s): geology; geology, Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain SW^^1";
- 342 s[339] = "BIALEK D., RACZYNSKI P., SZTAJNER P., ZAWADZKI D. (2007).- Archaeocyatha from the Wojcieszow Limestone. [in Polish, with English summary].- Przegląd Geologiczny 55, 12, 2: 1112-1116.http://www.pgi.gov.pl/.- FC&P 36, p. 28, ID=6389^Topic(s): taxonomy, biostratigraphy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Poland, Sudetes^This is an introductory presentation of Archaeocyaths found near Myslow in the Kaczawskie Mountains [Sudetes]. Estimating the exact age of the Archaeocyaths-containing Wojcieszów Limestone, has been a matter of dispute. Previously regarded as Cambrian, they were recognised as Silurian in 2000 (Skowronek & Steffahn). After more than 120 years of controversies this finding finally proves Early Cambrian age of this unit. Introductory taxonomic studies have shown similarity between Myslow Archaeocyaths - represented, among others, by genera Dokidocyathella, Erismacoscinus, Afiacyathus, Leptosocyathus and Protopharetra - and those from the Doberlug syncline (Germany). This dating is of great importance for establishing the lithostratigraphic column of the Kaczawa Mountains and Cambrian palaeogeographic reconstructions.^1";
- 343 s[340] = "MORENO-EIRIS E. (1994).- Lower Cambrian reef mounds of Sierra Morena (SW Spain).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 185-192.- FC&P 23-1.1, p. 18, ID=4074^Topic(s): mounds microbial-archaeocyathan; reefs; Systematics: Monera Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain, Sierra Morena^The microbial-archaeocyathan reef mounds of Sierra Morena have different characteristics, related to the position in the carbonate platform, the spatial distribution of facies and the internal structure. The organic components are algal structures mainly, with cryptalgal and calcimicrobes boundstones; the archaeocyathans are accessory elements. The mixed platform in the Sierra de Cordoba presents reef mounds built by archaeocyathan framework in the Arroyo Pedroche section. A reef complex was developed in the Las Ermitas hill, where the bioherms are constituted by calcimicrobes and scattered archaeocyathans. The Alconera reef mounds are formed by cryptalgal structures, such as thrombolites, stromatactis and stromatolites, associated to scarce archaeocyathans. Other types of bioherms are constituted by calcimicrobes, stromatactis and archaeocyathans. These reef mounds are overlapping and Cambrian karstic structures have been recognized.^1";
- 344 s[341] = "SEDLAK W. (1981).- Cambrian megascopic alga-like forms accompanying Corallicyathida in quartzite beds of Lysa Góra.- Acta Palaeontologica Polonica 25, 3-4: 669-670.- FC&P 10-1, p. 35, ID=5957^Topic(s): problematica; Algae ?; Systematics: algae; Stratigraphy: Cambrian U; Geography: Poland, Holy Cross^^1";
- 345 s[342] = "SEDLAK W. (1976).- Kambryjska fauna Corallicyathida z Lysej Gory. [Cambrian Corallicyathid fauna from Lysa Gora; in Polish].- Kwartalnik Geologiczny 1976, 20, 4: 966-967.- FC&P 6-1, p. 8, ID=5482^Topic(s): ; Corallicyathida; Systematics: problematica; Stratigraphy: Cambrian U; Geography: Poland, Holy Cross^^1";

- 346 s[343] = "SEDLAK W. (1976).- Corallicyathida - nowy rzad kambryjskiej fauny z piaskowcow kwarcytowych Lysej Gory. [Corallicyathida - new order of Cambrian fauna from quartzitic sandstones of Lysa Gora; in Polish].- Materialy II Naukowej Konferencji Paleontologow, Kielce 1976: 28-29.- FC&P 6-1, p. 8, ID=5483^Topic(s): ; Corallicyathida; Systematics: problematica; Stratigraphy: Cambrian U; Geography: Poland, Holy Cross^^1";
- 347 s[344] = "SEDLAK W. (1977).- Some aspects on stratigraphy and taxonomy of Cambrian fauna found on Lysa Gora (the Swietokrzyskie Mountains, Central Poland).- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 42-48.- FC&P 6-1, p. 8, ID=5484^Topic(s): ; Corallicyathida; Systematics: problematica; Stratigraphy: Cambrian U; Geography: Poland, Holy Cross^^1";
- 348 s[345] = "ZAMARRENO I., DEBRENNE F. (1977).- Sedimentologie et biologie des constructions organogenes du Cambrien inferieur du Sud de l'Espagne.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 49-61.- FC&P 7-1, p. 19, ID=5573^Topic(s): reefs sedimentology; reefs, sedimentology; Systematics: ; Stratigraphy: Cambrian L; Geography: Spain S^^1";
- 349 s[346] = "LINAN E., MORENO-EIRIS E., PEREJON A., SCHMITT M. (1982).- Fossils from the basal levels of the Pedroche Formation, Lower Cambrian (Sierra Morena, Cordoba, Spain).- Boletin de la Real Sociedad Espanola de Historia Natural, seccion Geologica 79: 277-286.- FC&P 12-2, p. 19, ID=6203^Topic(s): paleontology; Systematics: ; Stratigraphy: Cambrian L; Geography: Spain, Sierra Morena^^1";
- 350 s[347] = "GALLE A., HLADIL J. (1991).- Lower Palaeozoic corals of Bohemia and Moravia.- Excursion B3, VI International Symposium on Fossil Cnidaria and Porifera, Muenster, 83 pp.- FC&P 20-2, p. 48, ID=2909^Topic(s): excursion guide; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic L; Geography: Czech Republic, Moravia^^1";
- 351 s[348] = "WEYER D. (1984).- Korallen im Palaeozoikum von Thuringen.- Hallischer Jahrbuch fur Geowissenschaft 9: 5-33.- FC&P 14-1, p. 51, ID=1016^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Germany, Thuringia^^1";
- 352 s[349] = "BOGOYAVLENSKAYA O.V., YANET F.Ye. (1980).- The fundamental stages of the evolution of the Stromatoporata and the tabulates of the Paleozoic as illustrated from the Urals.- Korally i rify fanerozoja SSSR [B.S. Sokolov (ed.)]: 25-33; Nauka, Moskva.- FC&P 9-2, p. 50, ID=0362^Topic(s): phylogeny; stroms, Tabulata; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: Russia, Urals^^1";
- 353 s[350] = "BOGOYAVLENSKAYA O.V., DANSHINA N.V. (1982).- Opyt izuchenia amfiporovykh soobshchestv (Stromatoporata) v paleozoe Urala i Volgo-Ural'skoi oblasti.- Teoriya i opyt ekostratigrafii, Tallin: 18-19.- FC&P 14-1, p. 54, ID=1032^Topic(s): stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: Russia, Urals^Attempt at a study of amphiporid communities (Stromatoporata) in the Paleozoic of the Urals and polar Uralian region.^1";
- 354 s[351] = "POTY E., in KIMPE W.F.M. et al. (1978).- Paleozoic deposits east of the Brabant Massif in Belgium and the Netherlands.- Mededelingen Rijks Geologische Dienst .- FC&P 9-2, p. 41, ID=0328^Topic(s): geology; geology; Systematics: ; Stratigraphy: Paleozoic; Geography: Ardennes, Brabant Massif^^1";
- 355 s[352] = "SERVAIS T., POTY E., TOURNEUR F. (1997).- The Upper Ordovician coral fauna of Belgium and its palaeobiogeographical

- significance.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 259-270.- FC&P 26-2, p. 30, ID=3718Topic(s): biogeography, E Avalonia; coral fauna; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician Ashg; Geography: Ardennes, Brabant MassifCarbonate facies are not common in the Lower Paleozoic sections of Belgium. Limestones and calcareous shales are only present in the Upper Ordovician Fosses Formation in the Sambre-et-Meuse area, between the Brabant Massif and the Ardenne. In these levels, dated as Ashgillian, numerous green algae, as well as rugose and tabulate corals have been found. Their presence was probably related to a general warming event in the Ashgillian. However, it also indicates possible palaeotropical conditions for the area of sedimentation, implying that the Sambre-et-Meuse area was probably located in low latitudes during latest Ordovician time. This is further evidence for the rapid drifting of the East Avalonia terrane from Gondwana towards Baltica.¹;
- 356 s[353] = "YANET F.E. (1977).- Novoe o tabulatakh i geliolitoidakh Ordovika zapadnogo sklona Urala. [New data on Ordovician Tabulata and Heliolitida of western slopes of Urals; in Russian].- Trudy Inst. geol. geokhim. AN SSSR, Ural. nauch. centr. 128 [G.N. Papulov & M.G. Breyvel (eds): Novye materialy po paleontologii Urala]: 31-48.- FC&P 8-2, p. 48, ID=5723Topic(s): ; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Ordovician; Geography: Russia, UralsThis is a report on the stratigraphical range of Tabulata and Heliolitoida from the late Middle and Upper Ordovician at the western slopes of central Urals, which is based on new identifications. Species previously described as from the Ordovician are in fact Silurian in age. The invalidation of the genus Praesyringopora Ivanov has been confirmed: it is a younger synonym of Uralopora Sokolov 1951. * Two species of the Tabulata are described: Uralopora flexibilis Sokolov 1931 and - as a new species - Lyopora crassiana, as well as three species of the Heliolitoida: Cyrtophyllum bellum Ivaniv 1930, and - again as a new species - Acdalopora ivanovi and Plasmoporella angusta.¹;
- 357 s[354] = "ANTOSHKINA A.I. (1996).- Ordovician Reefs of the Ural Mountains, Russia: A Review.- Facies 35, 1: 1-7.- FC&P 25-2, p. 64, ID=3165Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Ordovician U; Geography: Russia, UralsThe Upper Ordovician reefs of the Urals were formed at a subsiding shelf-margin during an early Late Ashgillian (Surya time interval) regressive phase. Reefs of this age were studied in detail from the western slope of the Northern, the Subpolar and the Polar Urals with respect to lithofacies, biotic composition and paleogeographical patterns. The thickness of the reefs varies between 100 and 500m. The backreef areas are characterized by lagoons with increased salinity and sabkha development. Microbial associations and a diverse algal flora (Cyanophyta, green and red algae and alga incertae sedis) are the main constituents of reefal boundstones. Tabulate and rugose corals, heliolitids, calcareous sponge-like fossils, bryozoans and problematic hydroids were also part of the reef communities. Each reef exhibits a characteristic framework-building association. Reef development was terminated by a rapid and abrupt sea-level rise at the end of the middle Upper Ashgillian connected with the global Late Ordovician glaciation.¹;
- 358 s[355] = "TOURNEUR F., VANGUESTAINE M., BUTTLER C., MAMET B., MOURAVIEFF N., POTY E., PREAT A., (1993).- A preliminary study of Ashgill carbonate beds from the lower part of the Fosses Formation (Condruz, Belgium).- Geological Magazine 130, 5: 673-679.- FC&P 22-2, p. 25, ID=3480Topic(s): sedimentology, carbonates; sedimentology, paleontology; Systematics: ; Stratigraphy: Ordovician Ashg; Geography: Ardennes, CondruzThe sedimentology and palaeontology of carbonate beds in the lower part of

- the Fosses Formation (Ashgill of the Condroz area, central Belgium) have been investigated. Two depositional interpretations are suggested: deposition either near a platform-ramp margin as bioclastic turbidites and interbedded shales or on a shelf as a transgressive sequence following a regressive event. Faunal affinities with the Baltic area and Wales are confirmed, and the location of Belgium in the tropics during the Ashgill is supported by the calcareous algae and the coral fauna. [note: tabulate and rugose corals are illustrated for the first time from the Belgian Ordovician; systematic works are still in progress on these groups, particularly the Halysitids, studied with B. Hubmann; new outcrops in the Upper Ordovician of the Condroz area are investigated by the same team]^1";
- 359 s[356] = "KRIZ J., FRYDA J., GALLE A. (2001).- The epiplanktic anthozoan, *Kolihaia eremita* Prantl, 1946 (Cnidaria), from the Silurian of the Prague Basin (Bohemia).- Journal of the Czech Geological Society 46, 3 [Havlíček volume]: 239-245.- FC&P 31-1, p. 53, ID=1609^Topic(s): epiplanktic; Anthozoa *Kolihaia*; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: Czech Republic, Barrandian^New material makes it possible to classify the epiplanktic species *Kolihaia eremita* Prantl, 1946, supposed to be a worm or cornulitid, from the Silurian of the Prague Basin as a member of the phylum Cnidaria and a possible member of Rugosa or Tabulata.^1";
- 360 s[357] = "VULYKH P.Ye. (1983).- Kolongites - novy rod Geliolitid. [Kolongites - a new Heliolitid genus; in Russian].- Paleontologicheskii Zhurnal 1983, 1: 39-44.- FC&P 13-1, p. 44, ID=0495^Topic(s): new taxa; Heliolitida, Kolongites; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian Prid; Geography: Russia, Urals^Revision of the genus *Heliolites* based on investigations of the microstructure and the astogeny. A new genus *Kolongites* with the type species *K. kolongensis* from the Pridolian of the eastern slope of the Ural is presented (named after the river Kolonga). The genera *Heliolites*, *Paraheliolites* and *Kolongites* show homeomorphic features. The new genus *Kolongites* is assigned to the suborder Proporina because of trabecular microstructure.^1";
- 361 s[358] = "VULYKH P.Ye. (1980).- Morfogeniya rogovidnykh geliolitoidей pozdnego silura vostochnogo sklona Urala. [morphogeny of horn-shaped (?) Upper Silurian heliolitids from Urals eastern slopes; in Russian].- Korally i rify fanerozooya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5833^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Russia, Urals^^1";
- 362 s[359] = "STRELNIKOV S.I. (1973).- Silurian Rugose Corals from Chernov's uplift and the Polar Urals.- Paleontologicheskii Zhurnal 1973, 2: 46-51.- FC&P 2-2, p. 20, ID=4815^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Russia, Chernov uplift, Urals N^[description de 4 espèces nouvelles (Ludlow et Epiludlow); création de *Niajuphyllum* (fam. inc.; assez proche des *Kodonophyllidae* et de *Thecacristatus* - *Zelophyllidae*)]^1";
- 363 s[360] = "SHURYGINA M.V. (1977).- Rugozy verkhnego silura Ufinskogo Amfiteatra. [Upper Silurian Rugosa of Ufa Amphitheatre; in Russian].- Trudy Inst. geol. geofiz. AN SSSR, Ural. nauch. centr. 128 [G.N. Papulov & M.G. Breyvel (eds): *Novye materialy po paleontologii Urala*]: 49-66.- FC&P 8-2, p. 41, ID=5715^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Russia, Ufa Amphitheatre^A Rugosa association is described from the Demidsk beds of the Pridoli stage of the Upper Silurian, which contains eight species one of which - *Entelophyllum polymorphum* - is newly described. There is a significant resemblance between the rugosan assemblages of the Demidsk beds and those of the Grebensk stage.^1";

- 364 s[361] = "BOGOYAVLENSKAYA O.V. (1973).- Stromatoporoidea du silurien de l'Ural. [en russe] .- Nauka, Moskva: 96 pp., 2 pls, 37 figs.- FC&P 3-2, p. 47, ID=4985^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Russia, Urals^1";
- 365 s[362] = "STASINSKA A. (1970).- Some Upper Silurian tabulate corals from Lezyce-Belcz section (Holy Cross Mts.).- Acta Palaeontologica Polonica 15, 4: 507-518.- FC&P 6-2, p. 23, ID=0164^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian U; Geography: Poland, Holy Cross^A tabulate coral assemblage from the Upper Silurian (Lower Rzepin beds) of the Holy Cross Mountains is described and facial characteristics of the profile are given. -The species are Mesofavosites imbellis KLAAMANN, Favosites pseudoforbesei pseudoforbesei SOKOLOV, Syringopora schmidti TOHKRUYCHEY. Aulopora enodis KLAAMANN. The colonial development of Syringopora is traced.^1";
- 366 s[363] = "STASINSKA A. (1974).- Silurian Tabulata from North-East Poland.- Acta Geologica Polonica 19, 4: 501-517.- FC&P 6-2, p. 23, ID=0166^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Poland NE^From a profile of the borehole widowo, in the vicinity of Bielsk Poslaski, NE Poland, seven genera of tabulate corals of Wenlockian age are described. The fauna contains Halysites (H. crassus n.sp., H. junioformis n.sp., H. senior Klaamann 1961, H. thomasi n.sp., Cystihalysites (C. blakewayensis Sutton 1964), Palaeofavosites (P. costatus Klaamann 1961, P. friyolus (Klaamann 1961), P. spiroddensis Stasinska 1967, P. tenuis Sokolov 1952, P. tersus Klaamann 1961), Mesofavosites (M. sp.), Favosites (F. lichenarioides Sokolov 1952), Cladopora (C. perrare Klaamann 1964), Coenites (C. juniperinus Eichwald 1829) and Syringopora (S. noyetta Klaamann 1961, S. yestita Tchudinova 1971).^1";
- 367 s[364] = "YANET F.E. (1999).- Nekotorye novye siluriyskie tabulyaty Urala.- Materialy po stratigrafii i paleontologii Urala. Vypusk 2. [Chuvashov B. I. (ed.); Institut Geologii i Geokhimii Ural'skogo Otdeleniya Rossiyskoy Akademii Nauk, Ural'skaya Regional'naya Mezhdovedomstvennaya Stratigraficheskaya Komissiya; 1-270, figs., tabs, pls. (160-174, 5 pls); Ekaterinburg].- FC&P 32-2, p. 64, ID=1401^Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Russia, Urals^Halysites liber sp.n., Aulocystella incomperta sp.n., Aulocystella ramificans sp.n., Fletcheria retrusa sp.n., Angopora? riphaea riphaea sp.subsp.n., Angopora? riphaea sera subsp.n., Angopora? mala sp.n., Mesofavosites opimus sp.n., Favosites foedus sp.n., Coenites crassimuralis sp.n., Coenites crassus sp.n. Coenites apertus sp.n. are described from the Silurian (Llandovery, Ludlow, but mainly Wenlock) of the eastern slope of the Urals.^1";
- 368 s[365] = "YANET F.E. (1977).- Novye tabulyaty i geliolitoidy silura vostochnogo sklona Urala. [new Silurian Tabulata and Heliolitida of western slopes of Urals; in Russian].- Trudy Inst. geol. geokhim. AN SSSR, Ural. nauch. centr. 129 [V.P. Sapelnikov & B.I. Chuvashov (eds): Paleontologiya nizhnego Paleozoya Urala]: 20-38.- FC&P 8-2, p. 49, ID=5724^Topic(s): ; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Silurian; Geography: Russia, Urals^Two new species of Tabulata are described: Issolites fallax n.gen. et n.sp. and Catenipora festina n.sp. as well as nine new species of Heliolitoida (Propora uralica, Diploepora bona, Helioplasmolites parvus, H. interruptus, H. lacer, H. bonus, H.(?) ramosus, Heliolites absonus, H. insolens). All of them are from the Llandovery, Wenlock and Ludlow and regarded to be an endemic fauna. * The new genus Issolites from the Ludlow is assigned to the family Favositidae DANA, 1846. * Diagnosis: Corallum mainly lump-shape. Corallites distinctly differentiated in size: large, polygonal corallites are separated from each other by 1-2 rows of

- smaller 4-6 edged corallites. Coralite walls relatively thick. Pores round, transformed into canals in the thick walls. Base normal, usually horizontal. Thorns present. Type species and holotype: *Issolites fallax* Yanet 1977: p. 21, pl. 1 1-2; pl. 2: 1; from the Issovskian horizon, Ludlow, eastern slopes of the Urals. Comments: The dimorphism of the corallites being an essential difference against *Favosites* is emphasized. *Issolites halisitoides* (Northrop 1969) from the Wenlock(?) of Canada is presented being a questionable synonym of *Issolites*.¹";
- 369 s[366] = "RIGBY J.K., GUTIERREZ-MARCO J.C., ROBARDET M., PICARRA J.M. (1997).- First articulated Silurian sponges from the Iberian Peninsula (Spain and Portugal).- *Journal of Paleontology* 71, 4: 554-563.- FC&P 27-1, p. 105, ID=3855Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Silurian; Geography: Iberian PeninsulaThe first-described articulated Silurian sponges from Spain and Portugal include a moderate assemblage of hexactinellids and a single monaxonid demosponge. The sponges were collected from a thin layer at the top of the *Cyrtograptus lundgreni*-*Monograptus testis* graptolite biozone, in a possible volcanic ash of latest Homeric (Wenlock) age. The sponges are from southeastern Portugal and southwestern Spain in the Ossa-Morena Zone of the Hesperian Massif. The hexactinellid collection includes several specimens of the new species, *Protospongia iberica*, and fragments of *Diagoniella* species and *Gabelia* (?) sp. Specimens of the latter two taxa are too small for species identification. Demosponges are represented by a single described specimen of a probably new genus and species preserved as a "wreath" of monaxon spicules. Dermal and gastral layers are of very fine spicules developed over the moderately coarse, aligned, principal body spicules.1";
- 370 s[367] = "ZHAVORONKOVA R.A. (1980).- K ekologicheskoy kharakteristike korallov iz pogranichnykh verknesiluriyskikh i nizhnedevonskikh otlozheniy zapadnogo sklona Yuzhnogo Urala. [ecological characteristics of corals of the Silurian / Devonian boundary beds of western slopes of southern Urals; in Russian].- *Korally i rify fanerozoia SSSR* [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5834Topic(s): corals ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian U / Devonian L; Geography: Russia, Urals1";
- 371 s[368] = "GALLE A. (1973).- Family *Heliolitidae* from the Bohemian Paleozoic.- *Sbornik Geol. Ved, Paleont.* 15: 7-48.- FC&P 2-2, p. 16, ID=4795Topic(s): revision; *Heliolitida*; Systematics: Cnidaria; *Heliolitida*; Stratigraphy: Silurian Devonian; Geography: Czech Republic, BarrandianThis paper describes all species of *Heliolitida* from the Silurian and Devonian of the Barrandian. The species established by previous authors are revised and two new species are established. Remarks concerning the morphology and ecology are included.1";
- 372 s[369] = "GALLE A. (1983).- *Spongophyllidae* (Rugosa) of Bohemian Silurian and Devonian.- *Sbornik narod. Mus. Praze* 39, 2: 115-126.- FC&P 12-2, p. 28, ID=0457Topic(s): Rugosa, *Spongophyllidae*; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: Czech Republic, Bohemian MassifThe family *Spongophyllidae* from the Silurian and Devonian of Bohemian Massif is reviewed. Two genera with three species, one of them new, are described: *Carlinastraea kettneri* (Prantl 1951), *Carlinastraea martinae* sp.nov., and *Kozłowiaphyllum inficetum* (Pocta 1902). Their relations to European and some North American and Asian faunas are discussed. [original abstract]1";
- 373 s[370] = "MAY A. (2005).- Die Stromatoporen des Devons und Silurs von Zentral-Böhmen (Tschechische Republik) und ihre Kommensalen.- *Zitteliana* B25: 117-250.- FC&P 34, p. 26, ID=1221Topic(s): commensalism; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian; Geography: Czech Republic, Bohemian MassifAll stromatoporoid

- species described by Pocta (1894) from the Silurian and Devonian of Bohemia have been revised. Very extensive new collections of stromatoporoids are coming from quarries near the Bohemian village Koneprusy (ca. 30 km southwesterly of Prague). These stromatoporoids have been collected in the Koneprusy Limestone of Pragian age and the Acanthopyge Limestone of Eifelian to Lower Givetian age. The Koneprusy Limestone contains a large reef complex. Most of the Koneprusy Limestone succession including all stromatoporoids and the reef complex belong to the kindlei conodont zone (middle Pragian). The stromatoporoids and the other reef-building organisms show a clear dependence on the facies (resp. position within the reef complex). The stromatoporoid fauna of the Koneprusy Limestone contains 15 species, but only 7 of them have been described by Pocta (1894). The new species *Stromatoporella anamariae* n.sp. is described. The Pragian of the Barrandian was no refuge for the stromatoporoids of the Eastern Americas Realm. Biogeographically, all stromatoporoid faunas of Bohemia belong to the Old World Realm. Nevertheless, the stromatoporoid fauna of the Acanthopyge Limestone is much more cosmopolitan than the fauna of the Koneprusy Limestone. The stromatoporoid fauna of the Acanthopyge Limestone is composed of 19 species, all of which are known from other occurrences in Europe, Asia, or Australia – except of *Actinostroma vastum* Pocta, 1894 and *Stromatoporella pertabulata preisleriensis* n.ssp. The stromatoporoids of the Koneprusy Limestone frequently contain commensalic worm-like organisms and only rarely the new auloporoid tabulate coral *Syringopora prae-hanshanensis* n.sp. In the Acanthopyge Limestone the new species *Syringopora hladili* n.sp. and three other *Syringopora* species occur. Possible reasons for the scarcity of stromatoporoids and reefs in the Lower Devonian may be the water temperature, the lack of branching and encrusting stromatoporoids, and the scarcity of commensalic *Syringopora* corals.¹¹ ;
- 374 s[371] = "MAY A. (1999).- Revision of the Silurian and Devonian stromatoporoids of Bohemia described by Pocta (1894).- *Journal of the Czech Geological Society* 44: 167-180.- FC&P 28-2, p. 38, ID=4035Topic(s): revision; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian; Geography: Czech Republic, BarrandianTwo species – one of them with 2 subspecies – come from Silurian strata, the other 9 valid species (and 2 synonyms) come from Lower Devonian strata. For every species, the recent name, the synonyms, the type material, the exact type locality, and a diagnosis is given. Lectotypes are designated for 6 species. The new species *Schistodictyon koneprusiense* – from the Middle Pragian of Koneprusy (central Bohemia) is described.11;
- 375 s[372] = "GALLE A. (1974).- List of paleontological types kept in the Geological Institute of Prague (Ustredni Ustav Geologicky, Praha).- *FC&P 3, 1*: 35-39.- FC&P 3-1, p. 35, ID=6257Topic(s): Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Silurian Devonian; Geography: Czech Republic, Bohemian Massif[lists of types of Rugosa and of Heliolitida from the Silurian (Liten Fm, Kopanina Fm) and Devonian (Upper Koneprusy Lst, Acanthopyge Lst, Zlichov Lst) of Bohemia]11;
- 376 s[373] = "SOTO F., GARCIA-ALCADE J.L. (1976).- La fauna silicificada del Devonico de Piedras Blancas.- *Trabajos de Geologia, Universidad de Oviedo* 8: 87-103.- FC&P 6-2, p. 15, ID=0123Topic(s): Anthozoa, Brachiopoda; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Spain, Piedras BlancasCorals and brachiopods from the Moniello Fm. including the description of one new species.11;
- 377 s[374] = "MAY A. (1983).- Ein Korallenriff im oberen Mitteldevon von Werdohl (Sauerland).- *Dortmunder Beiträge zur Landeskunde, naturwissenschaftliche Mitteilungen* 17: 35-46.- FC&P 13-1, p. 22, ID=0398Topic(s): reefs coral, structure, ecology; reefs, coral; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish MtsAt the

- road-side near Lothmecke a coral reef is exposed on top of a fossil-bearing siltstone. The fauna of the siltstone and the coral reef - as well as its composition - are described. From this conclusions are drawn regarding the environment at the time of sedimentation. The chronological dating is discussed. The reef belongs to the Ihmerter beds, part of the lower Honseler strata (of the lower Givetian). The silty bottom fauna of the Ihmerter beds is compared with the reef fauna. References are also given.¹";
- 378 s[375] = "GOODGER K.B., BUGLASS A., SCRUTTON C.T. (1984).- Sequence of coralline faunas and depositional environments in the Middle Devonian Daddyhole Limestone Formation stratotype section, Torquay, Devon.- Proceedings of the Ussher Society 6: 13-24.- FC#038;P 14-1, p. 55, ID=1040Topic(s): biostratigraphy, ecology; Anthozoa stroms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian M; Geography: Britain, DevonshireStromatoporoids are important elements of the faunas of the limestones and are briefly discussed in terms of their shapes.¹";
- 379 s[376] = "WEYER D., FEIST R., GIRARD C. (2003).- Conodonta, Trilobita, and Anthozoa near the Late Frasnian Upper Kellwasser Event of the Geipel Quarry section in Schleiz, Thuringian Mountains (Germany).- Fossil Record 6, 1: 71-78 [Mitteilungen des Museum f. Naturkunde, Berlin, Geowissenschaftliche Reihe 6 (2003): 71-78].- FC#038;P 33-2, p. 23, ID=1134Topic(s): ; paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Fra; Geography: Germany, ThuringiaNew recoveries of Trilobita, Anthozoa and Conodonta from the linguiformis Zone close to the Frasnian/Famennian boundary and immediately preceding the Upper Kellwasser Event level at Schleiz (Thuringia) are investigated. The trilobites species are Harpes neogracilis Richter & Richter, 1924, Palpebralia cf. brecciae (Richter, 1913) and Acuticryphops acuticeps (Kayser, 1889), the latter is represented by several morphs with different numbers of eye-lenses; the trend to eye-reduction is discussed. The Rugosa fauna that was nearly unknown from the psychrospheric facies worldwide, comprise six taxa of the Cyathaxoniina. The rich conodont faunas permit tracing the exact boundary between the top of the Late Palmatolepis rhenana Zone and the Palmatolepis linguiformis Zone.¹";
- 380 s[377] = "GLUCHOWSKI E. (2005).- Epibionts on upper Eifelian crinoid columnals from the Holy Cross Mountains, Poland.- Acta Palaeontologica Polonica 50, 2: 315-328.http://www.app.pan.pl/article/item/app50-315.html.- FC#038;P 34, p. 96, ID=1356Topic(s): epibiontic; Anthozoa epibionts; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Eif; Geography: Poland, Holy CrossMost of 378 Upper Eifelian crinoid columnals collected from the lower part of Skaly Beds in the Holy Cross Mountains display traces of borings produced by endobionts, but only approximately 20% of them show traces of epibionts. These infested crinoids are represented by 5 stem-based species: Tantalocrinus scutellus Le Menn, 1985, Schyschcatocrinus creber Dubatolova, 1975, Gilbertsocrinus vetulus Moore and Jeffords, 1968, Pentagonostipes petaloides Moore and Jeffords, 1968, and Cycloocetocrinus sp. They were fouled by 19 species of suspension-feeding epibionts, including saccamminid foraminiferans, rugose and tabulate corals, cyrtinitid and productid brachiopods, 'ctenostome bryozoans', 'cyclostome bryozoans', cystoporate bryozoans and rhabdomesid? bryozoans, crinoids, and organisms of uncertain affinities. The majority of these epibionts were opportunistic commensals colonizing living crinoids, and only some utilized dead crinoids as hard substrate for attachment. At least some of these epibionts seem to have settled selectively on particular crinoid host species.¹";
- 381 s[378] = "MAY A. (2003).- Die Fossilfuehrung des Mitteldevons im Raum Attendorn-Olpe (West-Sauerland; Rechtsrheinisches Schiefergebirge).-

- Geol.-Palaeont. westf., 60: 47-79.- **FC#038;P 32-2**, p. 53, ID=1412^**Topic(s):** atlas of fossils; Anthozoa; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Devonian M; **Geography:** Germany, Rhenish Mts^Fossiliferous localities in the Middle Devonian strata of the Attendorn-Olpe Area (western Sauerland) and their fossil contents are listed. Selected fossils are figured. This increases the knowledge of the Middle Devonian fauna of the south-western Sauerland significantly. Especially remarkable are the following fossils: the asterozoan Eospondylus sp. from the Upper part of the Selscheid Beds (Upper Eifelian), the tabulate coral Aulopora (Aulopora) ex gr. liber Scrutton 1990 from the Upper Newberria-Beds (Lower Givetian), the rugose coral Cyathopaedium paucitabulatum (Schlüter 1880) from the Upper Newberria-Beds (Lower Givetian), the stromatoporoid Taleastroma pachytextum (Lecompte 1952) from the Massenkalk limestone (Upper Givetian?), the tabulate coral Thamnopora bilamellosa Ermakova 1960 from the Massenkalk limestone (Upper Givetian?), and the rugose coral Smithiphyllum belanskii Pedder 1965 from the Massenkalk limestone (Upper Givetian?). Thamnopora schoupeii Brühl 1999 is a junior synonym of Coenites vermicularis (McCoy 1850). The whole material has been collected by Mr. Ludwig Korte. It is stored in the Kreisheimatmuseum Attendorn.^1";
- 382 s[379] = "NOSE M., FISCHER U., SCHRODER St. (2001).- Paläoökologie einer mergeligen Korallen-Assoziation aus dem höheren Mitteldevon der Eifel (Hillesheimer Mulde).- Terra Nova 13, 6: 81-82.- **FC#038;P 30-2**, p. 17, ID=1560^**Topic(s):** ecology; Anthozoa; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Devonian Giv; **Geography:** Germany, Rhenish Mts^^1";
- 383 s[380] = "JUNGHEIM H.J. (1987).- Korallen der Eifler Kalkmulden.- Fossilien 1987, 1: 31-36 [in German].- **FC#038;P 16-1**, p. 56, ID=1944^**Topic(s):** Anthozoa; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Devonian; **Geography:** Germany, Eifel^[a brief popular presentation of fossil corals of the Eifel limestone synclines]^1";
- 384 s[381] = "SOTO F. (1986).- Asociaciones coralinas del Devónico Astur-Leones (Cordillera Cantabrica, NO de España).- Trab. Geol. Univ. Oviedo 16: 25-35 [in Spanish, with English summary].- **FC#038;P 16-1**, p. 62, ID=1967^**Topic(s):** ecology; coral associations, reefs; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Devonian; **Geography:** Spain, Cantabrian Mts^The Devonian formations of the Asturoleones region in the Cantabrian mountains, entirely marine, are characterized from a paleontological point of view by their rich faunal content, specially in benthonic organisms. An important part of these faunas consists of corals (Rugose and Tabulates) and Stromatoporoids. In detrital formations Furada-San Pedro, Naranco-Huergas and Pineres-Nocedo, Fueyo, Ermita) corals are scarce due to unfavourable environmental conditions and the associations, if present, are almost exclusively referred to "Cyathaxonia-Fauna", whose stratigraphical value is relative and only local. However, calcareous formations (Raneces-La Vid, in part, Moniello-Santa Lucia and Candas-Portilla) show reef episodes with a great abundance of coral fauna, where the numerous associations have a notable stratigraphical value as also, in many cases, paleobiogeographical, not only on a merely local but also on a worldwide scale.^1";
- 385 s[382] = "COEN-AUBERT M., PREAT A., TOURNEUR F. (1986).- Compte rendu de l'excursion de la Societe belge de Geologie du 6 novembre 1985 consacre a l'etude du sommet du Couvinien et du Givetien au bord sud du Bassin de Dinant, de Resteigne a Beauraing.- Bulletin Soc. belge Geol. 95, 4: 247-256.- **FC#038;P 17-1**, p. 5, ID=2092^**Topic(s):** geology; geology; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Devonian Eif / Giv; **Geography:** Ardennes^[with lists of Rugose and Tabulate Corals and paleoecological remarks]^1";

- 386 s[383] = "SCRUTTON C.T., GOODGER K.B. (1987).- Sequence of coralline faunas and depositional environments in the Devonian carbonate succession of the Lemon Valley, near Newton Abbot, South Devon.- Proc. Ussher Soc. 6: 474-482.- FC&P 17-1, p. 22, ID=2124^Topic(s): biostratigraphy; coral faunas; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Britain SW^^1";
- 387 s[384] = "HLADIL J., KALVODA J., FRIAKOVA O., GALLE A., KREJCI Z. (1989).- Fauna from the limestones at the Frasnian / Famennian boundary at Mokra (Devonian, Moravia, Czechoslovakia).- Sbor. geol. Ved, Paleont. 30: 61-84.- FC&P 18-1, p. 33, ID=2233^Topic(s): ; fossils; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Fra/Fam; Geography: Czech Republic, Moravia^The reef-building fauna of the Mokra section, extincted in the upper part of the conodont *Palmatolepis crepida* Zone. Into the lower Famennian, penetrated namely less diversified euryfacies species. The decrease in the diversity is being associated with the Kellwasser eustatic and climatic events proved today, from a general viewpoint, from the mid-levels of the *Palmatolepis gigas* Zone up to its top (Walliser 1985, 1986) and supposed up to the mid-levels of the *Palmatolepis triangularis* Zone (the so-called Crickites Event - Kalvoda 1986). In the section, the Frasnian / Famennian boundary is restricted to the gap between the intervals I and II. Under the gap, occur *Scoliopora kaisini* (Lecompte) and the foraminifers *Nanicella* sp. - species so far found in Moravia exclusively up to the upper limit of the conodont *Palmatolepis gigas* Zone, while above the gap lower Famennian *Labechia cumularis* Yavorskiy and *Syringopora volkensis* Tschernyshev appear already. The gap very likely involves the current critical interval of the Frasnian / Famennian boundary corresponding to the lower third of the *Palmatolepis triangularis* Zone. By contrast, the prominent lithologic change between the Macocha and Lisen Formations (above int. IV) and extinction of sessile benthos (by 3 to 5 cm lower in the section) do not lack a biostratigraphic record - both the underlying and overlying levels provide autochthonous conodonts of the upper part of the *Palmatolepis crepida* Zone.^1";
- 388 s[385] = "MAY A. (1990).- Corals and other reef building organisms of the higher Eifelian and lower Givetian (Devonian) from the northwestern Sauerland (Rhenish Schiefergebirge).- Muenster University, Unpublished thesis: 452 pp., 51 figs., 49 pls [in German with English summary].- FC&P 19-2.1, p. 21, ID=2732^Topic(s): reef constructors; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Eif / Giv; Geography: Germany, Rhenish Mts^The Ihmert Formation is subdivided into Bergfeld-Member (lower Upper Eifelian). Gruenewiese-Member (uppermost Eifelian). and Dannenhoefer-Member (lowermost Givetian). The material has been collected mostly in the coral limestones of the Gruenewiese-Member and the Bredenbruch-Member (lower Lower Givetian) of the Unterhonsel-Formation. From the Middle Eifelian to middle Lower Givetian of the northwestern Sauerland (Eastern Rhenish Schiefergebirge) 30 different tabulate corals and 21 different rugose corals are described, as well as 21 species of stromatoporoids, 16 of calcareous algae, and 2 of chaetetids. Only the tabulate coral *Squamealveolites strigosus cusanorum* n.ssp., the rugose coral *Smithiphyllum kloeckneri* n.sp., and an unnamed calcareous red alga are new. 5 tabulate corals, 3 rugose corals, 3 stromatoporoids, and 1 calcareous alga are described for the first time from Central and western Europe, but this fauna is in good accordance with the reef-builder fauna of the Eifel Hills and Ardennes. Many species show an important expansion of their known stratigraphical range. The most Devonian reef-builders allow only rough stratigraphical classifications. [first fragment of extensive summary]^1";
- 389 s[386] = "MAY A. (1991).- Korallen und andere Riffbildner aus dem

Mitteldevon des Sauerlandes.- Dortmund. Beitr. Landeskd., naturwiss. Mitt. 25: 139-146. [in German, with English summary].- FC&P 20-2, p. 48, ID=2906Topic(s): ; paleontology, ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts, SauerlandIn the northwestern Sauerland (Eastern Rhenish Schiefergebirge) deposited shallow marine carbonatic sediments of upper Eifelian to Givetian (Middle Devonian) age contain numerous tabulate corals and rugose corals, stromatoporoids, chaetetids, and calcareous algae. Their investigation allows conclusions about the paleoecology and the paleobiogeography.^1";

390 s[387] = "WEYER D., ZAGORA K. (1990).- Die ehemalige Givet-Fossilfundstelle Buechenberg im Unterharz.- Hall. Jb. Geowiss. 15: 21-42. [in German, with English summary].- FC&P 20-2, p. 54, ID=2929Topic(s): ; paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv; Geography: Germany, HarzBuechenberg fossils (Rugosa, Trilobita), described by Roemer (1843 - 1855) come from locally developed Greifenstein facies within the off-reef realm of the Stringocephalus Limestone. Outcrops on the north flank of Buechenberg anticline (north of Elbingerode) had arisen and vanished in connection with iron ore mining, and most fossils always had been collected from loose debris material only. Conodonts indicate the varcus zone (probably middle varcus at all) in accordance with old ammonoid records (Koch 1896, Maenioceras terebratum zone) from nearby pelagic cephalopod limestones. The trilobite fauna corresponds to the facially identical Acanthopyge-Phaetonellus community of Bohemian Lower Eifelian. Concomitantly occurs a tentaculitic association of postotomari-bianulifera zones. Anthozoa bearing beds are differentiated into Amplexus-limestone and Bainbridgia-limestone. (Original summary) * The chapter Anthozoa contains figures of Amplexus? hercynicus Roemer 1855, Laccophyllum sp., Cyathaxonia? hercynica Roemer 1855, and Bainbridgia alternans (Roemer 1850).^1";

391 s[388] = "MAY A., BECKER T. (1996).- Ein Korallen-Horizont im Unteren Banderschiefer (hoechstes Mittel-Devon) von Hohenlimburg-Elsey im Nordsauerland (Rheinisches Schiefergebirge).- Berliner geowissenschaftliche Abhandlungen E18: 209-241.- FC&P 25-2, p. 38, ID=3122Topic(s): biostratigraphy; coral horizon; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts, SauerlandBasinal shales of the Lower Banderschiefer Formation (Upper Givetian, Pharciceras Stufe) yielded for the first time in Hohenlimburg-Elsey (City of Hagen, northern Rhenish Massiv) an allochthonous shallow-water fauna dominated by corals. Among a total of twenty-four taxa the solitary Rugosa Acanthophyllum concavum simplex and Macgeea multizonata as well as the branching tabulates Alveolites (Alveolitella) polenowi and Scoliopora denticulata are abundant. Other Rugosa, Tabulata, stromatoporoids, brachiopods, crinoid ossicles and nautiloids occur as minor faunal elements. M. multizonata, A. (Alv.) polenowi and &Chaetetes& barrandei are recorded for the first time from Germany. The unusual local lack of coarse crinoidal reef debris suggests as source a subtidal coral garden which grew marginally on top of the drowned Steltenberg Reef from where individual specimens were washed downslope during storm events. The fauna combines Upper Givetian and Lower Frasnian species and contributes to the understanding of coral biostratigraphy at the Middle / Upper Devonian transition.^1";

392 s[389] = "MAY A. (1992).- Paleoecology of Upper Eifelian and Lower Givetian Coral Limestones in the Northwestern Sauerland (Devonian; Rhenish Massif).- Facies 26: 103-116.- FC&P 21-1.1, p. 41, ID=3211Topic(s): coral horizons, ecology, paleontology; ecology, paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Eif / Giv; Geography: Germany, Rhenish Mts, SauerlandThe prevailing sandy / silty lower part of

- the Middle Devonian in the northwestern Sauerland includes two coral limestone horizons, which contain a rich fauna of corals, stromatoporoids, and calcareous algae. The Ihmert-Formation is subdivided into three parts. The older coral limestone horizon is the Gruenewiese-Member of the Ihmert-Formation (uppermost Eifelian), the younger is in the Bredenbruch-Member of the Unterhonsel-Formation (lower Lower Givetian). Conclusions about the environmental constraints are drawn from the sedimentology and the fossil content of the coral limestones. Predominant biostromes are built between storm wave base and normal wave base. Only the few bioherms grew above the normal wave base. These coral limestones were deposited in a tropical or subtropical normal marine environment in the shallow euphotic zone. Among the reef-builders epocism is very frequent, and until now this phenomenon has not been investigated in detail. Fragile rugose and tabulate corals lived as commensals with stromatoporoids. Some other aspects of paleoecology are concisely presented.¹";
- 393 s[390] = "MAY A. (1994).- Paleocology and paleobiogeography of corals and other reef-builders from the Middle Devonian of the Sauerland (Germany).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 147-159.- FC&P 23-1.1, p. 17, ID=4072^Topic(s): ecology, biogeography; ecology, biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Eif/Giv; Geography: Germany, Rhenish Mts^In the NW Sauerland the coral limestone horizons of the uppermost Eifelian and the Lower Givetian show a very rich content of fossils: 28 tabulate coral species, 21 rugose coral species, 21 stromatoporoid species, 2 chaetetid species, and 16 calcareous algae species were identified by the author. They generally lived in a warm, normal marine environment in the shallow euphotic zone. An analysis of the lagoonal Massenkalk sediments (upper Lower Givetian to Frasnian) shows intertidal to subtidal cyclic sedimentation. Herein several reef-builder associations can be recognized. Their composition and distribution depend on water depth as well as on the restriction of their environment. The Upper Eifelian and Lower Givetian reef-builder fauna of the Sauerland corresponds to the fauna of the Eifel Hills and the Ardennes, but a few of the Sauerland species are up to now only known from occurrences east of it. The "Rhenohercynian Basin" was a marginal sea, into which faunas from the Asiatic part of the "old World Realm" immigrated. A marine connection to the "Eastern Americas Realm" was opened in the Upper Givetian.¹";
- 394 s[391] = "CHENG Y.-M. (1969).- Ueber einen Goniatiten-Fund in einer devonischen Koralle.- Muenster. Forsch. Geol. Palaeont. 14: 49-56.- FC&P 1-2, p. 12, ID=4635^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^The specimen Diplochone macrocystis (Schlueter 1889) containing a shell of Goniatites within the corallite described by Schlueter (1889: 88) is sectioned and restudied. The Goniatites was not taken by the polyp as Schlueter believed. It is interpreted that the shell accidentally happened to slip into the gullet of the polyp.¹";
- 395 s[392] = "KARNEKAMP C. (1973).- Gerolstein in de Eifel.- Grond boor en hamer 1973, 4: 104-113.- FC&P 4-1, p. 33, ID=5112^Topic(s): paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Germany, Eifel^Faune de brachiopodes, p&lecypodes, coralliaires du D&vonian.¹";
- 396 s[393] = "GALLE A., CHLUPAC I. (1976).- Finds of corals in the metamorphic Devonian of the Jestedske pohori Mountains.- Vestn. ustr. Ust. geol. 51: 123-127.- FC&P 5-2, p. 5, ID=5396^Topic(s): metamorphosed; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Czech Republic, Jestedske Pohori^[recorded are: Peneckiella sp.,

- Disphyllum sp., Alveolites sp. cf. A. suborbicularis and ?Actinostroma sp.]^1";
- 397 s[394] = "ZHAVORONKOVA R.A. (1978).- Granica nizhnego i srednego devona na zapadnom sklone Juzhnogo Urala po dannym izucheniya korallov. [Lower / Middle Devonian boundary of western slopes of southern Urals as marked by corals; in Russian].- Voprosy stratigrafii paleozoya (devon, karbon): 46-50; Nauka, Leningrad.- FC&P 8-2, p. 31, ID=5695^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L/M; Geography: Russia, Urals^^1";
- 398 s[395] = "EISENLOHR H. (1969).- Stratigraphische und faunistische Untersuchungen der Unterhonsel'er Schichten am NE-Ende des Remscheid-Altener Sattels (Rheinisches Schiefergebirge).- Muenster. Forsch. Geol. Palaeont. 14: 57-104.- FC&P 10-1, p. 47, ID=5985^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^[described and figured are the Givetian Rugose and Tabulate corals: Macgeea (Thamnophyllum) caespitosum, Breviphyllum cf. dianthus, Breviphyllum cf. lindstroemi, Sparganophyllum cf. gracile, Sociophyllum cf. sociale, Favistella (Dendrostella) rhenana, Hexagonaria quadrigemina, Hexagonaria philomena, Syringopora tenuis, Syringopora cf. crista]^1";
- 399 s[396] = "BIRENHEIDE R. (1989).- Notes on the investigation of the Southern Eifelian limestone synclines.- FC&P 18, 2: 6-10. [short note] - FC&P 18-2, p. 6, ID=6778^Topic(s): geology, research history; research history; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^For more than 200 years the Middle Devonian limestone synclines of the Eifel have been famous for their great variety of fossils. These limestone synclines swim like a ship's formation in abeam line in the "water"; of the enormous sandstone-series and shales of the Rhenish Lower Devonian. The two "flankships"; the Sötenich syncline in the north and the Prüm syncline in the south, are the largest of all synclines, and - at the same time - the "cornerstones"; in the investigation of Middle Devonian of the Eifel. Their thick deposits are interspersed with biostromes and bioherms, which even reach up as far as the Upper Devonian in the Prüm syncline. [introductory part of a note]^1";
- 400 s[397] = "HLADIL J., PRUNER P., VENHODOVA D., HLADILOVA T., MAN O. (2002).- Toward an exact age of Middle Devonian Celechovice corals - Past problems in biostratigraphy and present solutions complemented by new magnetosusceptibility measurements.- Coral Research Bulletin 7: 065-071. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 33, ID=7100^Topic(s): biostratigraphy; coral fauna; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv; Geography: Czech Republic, Moravia, Celechovice^First discovery of the rich coral faunas of the Celechovice (Moravia) section was in the 1830s. This Celechovice section belonged to the classical outcrops which were visited by prominent geologists who first described the Devonian system. However, a mistaken identification of the brachiopod, "Stringocephalus burtini";, in a position below the coral horizon with Calceola sandalina presented a long-term biostratigraphic problem. Because of this identification, many paleontological papers pushed the age of this coral horizon to the Late Givetian. An opposite trend (i.e., to keep the age of the coral horizon close to the Eifelian/Givetian boundary) began with regional correlation of trilobites (Schizoproetus) in 1960s. This continued with revisions of thick-shelled brachiopods ("Stringocephalus"; = Kaplex obesissimus Ficner & Havlicek 1975) in the 1970s, and it culminated in 1990s, with numerous studies on trilobites, corals, conodonts, dacryoconarids and crinoids. In spite of these modern biostratigraphic data, the exact age of the coral horizon remained

- unclear. It fluctuated within a wide range between the Eifelian/Givetian and Lower/Middle Givetian boundaries. Magnetosusceptibility stratigraphy allows the projection of the E/G GSSP (Jbel Mech Irdane, Morocco) 5m below the base of the Celechovice Upper Dark-colored Interval (abbrev. CUDI; beds 117-146), approximately 10m below the most productive, world-famous Celechovice "Fossil Korallen-Lagerstatte". According to the correlation of the magnetics with the standard conodont zones, the age of the richest Celechovice coral fauna is between the earliest Givetian hemiansatus and Early varcus zones. [original summary]^1";
- 401 s[398] = "TYAZHEVA A.P., ZHAVORONKOVA R.A., GARIFULLINA A.A. (1976).- Korally i brachiopody niznego devona Yuzhnogo Urala. [corals and brachiopods of the Lower Devonian of S Urals; in Russian].- Nauka: 172 pp., 51 pls.- FC&P 7-1, p. 27, ID=5582^Topic(s): ; corals, brachiopods; Systematics: Cnidaria Brachiopoda; Anthozoa; Stratigraphy: Devonian L; Geography: Russia, Urals^[described are species of Favosites, Pachyfavosites, Rhipaeolites, Echyropora, Thamnopora, Gracilopora, Caliapora, Coenites, Rhabdacanthia, Rhizophylloides, Loboplasma, Columnaria, Fasciphyllum, Spongophyllum, Neomphyma, Lyriellasma, Disphyllum, Acanthophyllum, Rhizophyllum and Gyaloplasma n.g., Ceriocysta n.g.]^1";
- 402 s[399] = "KAEVER M., OEKENTORP Kl., SIEGFRIED P. (1980).- Fossilien westfalens. Invertebraten des Oberdevons.- Muenstersche Forschungen zur Geologie und Palaeontologie 50: 1-276.- FC&P 9-2, p. 39, ID=0301^Topic(s): ; paleontology; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Devonian; Geography: Germany, Westphalia^Illustrations and descriptions of Devonian corals and stromatoporoids from Westphalia.^1";
- 403 s[400] = "MAY A. (1986).- Biostratigraphische Untersuchungen im Mitteldevon des Nordwest-Sauerlandes (Rheinisches Schiefergebirge).- Dortmund Beitr. Landeskunde, natw. Mitt. 20: 23-55. [in German, with English summary].- FC&P 16-1, p. 75, ID=2016^Topic(s): geology; geology, stratigraphy; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^[extensive fossil-collections of sandy-shaly Middle Devonian deposits of the northwestern Sauerland are presented. By means of brachiopods (atrypids, spiriferids) it is possible to project the standard subdivision of the Eifel into this sedimentary sequence. Besides other fossil groups also corals and stromatoporoids are listed]^1";
- 404 s[401] = "AVLAR H., MAY A. (1997).- Zur Fauna und Stratigraphie der cultrijugatus-Schichten (Wende Unter- / Mittel-Devon) im West-Sauerland (Rheinisches Schiefergebirge).- Coral Research Bulletin 05: 103-119.- FC&P 27-1, p. 41, ID=3798^Topic(s): ; fossils; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Devonian L/M; Geography: Germany, Rhenish Mts^Within the southwestern part of the Ebbe Anticline (Western Sauerland, Rhenish Massif) the cultrijugatus Beds represent the upper Upper Emsian and Lower Eifelian. Based on lithological differences of the vertical sequence it is possible to subdivide these beds into the Lower, Middle and Upper cultrijugatus Beds in the area of Kierspe and Meinerzhagen. The Lower / Middle Devonian boundary is in the Middle cultrijugatus Beds. The previous "Meinerzhagener Korallenkalk" named Upper cultrijugatus Beds include reefoid structures (biostromes) and contain a rich fauna of reef-builders. The stromatoporoids Schistodictyon amygdaloides subvesiculosum (Lecompte 1951) and Clathrocoilona (Clathrocoilona) curiosa (Bargatzky 1881), the chaetetid Pachythea stellimicans Schlueter 1885, the tabulate corals Thamnopora angusta Lecompte 1939, Alveolites (Alveolites) edwardsi edwardsi Lecompte 1939, Alveolites (Alveolites) intermedius Smith 1933, Squamealveolites fornicatus (Schlueter 1889), Coenites vermicularis (McCoy 1850), and Platyaaxum (Roseoporella) gradatum (Lecompte 1939) as well as the rugose corals

Cyathophyllum (Peripaedium) planum (Ludwig 1866), Acanthophyllum heterophyllum (Milne-Edwards & Haime 1851), and Mesophyllum (Mesophyllum) cylindricum (Schlueter 1882) are described from the Upper Cultrijugatus Beds south of Kierspe, respectively west of Meinerzhagen. Schistodictyon amygdaloides subvesiculosum, Alveolites (Alveolites) intermedius, and Coenites vermicularis are found in the Eastern Rhenish Massif for the first time. The coral limestones originated in a period of reduced sediment supply within a tropical or subtropical, shallow marine environment. The stratigraphical ranges of the investigated reef-builders demonstrate, that the reef-builder fauna was not affected perceptibly by the Jugleri Event (= Chotec Event) of the Lower Eifelian. Instead of this, the reef-builder fauna shows a remarkable continuity within the whole Eifelian.¹¹;

405 s[402] = "MAY A. (1993).- Stratigraphie, Stromatoporen-Fauna und Paläoökologie von Korallenkalken aus dem Ober-Eifelium und Unter-Givetium (Devon) des nordwestlichen Sauerlandes (Rheinisches Schiefergebirge.- Geol. Palaeont. Westf. 24: 5-93. [in German, with English summary].- FC&P 23-1.1, p. 83, ID=4190Topic(s): biostratigraphy, ecology; stratigraphy, stroms, ecology; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Devonian Eif / Giv; Geography: Germany, Rhenish Mts, SauerlandThe prevailing sandy-silty lower part of the Middle Devonian in the northwestern Sauerland includes two coral limestone horizons, which contain a rich stromatoporoid fauna besides many corals (Tabulata and Rugosa) and calcareous algae. Bryozoans are unimportant reef-builders. The entire fossil content is listed up and concisely discussed. At first the lithostratigraphical subdivision, the biostratigraphical classification, and the facies of the sequence are discussed. The Ihmert-Formation is subdivided into Bergfeld-Member (lower Upper Eifelian), Gruenewiese-Member (uppermost Eifelian), and Dannenhoefer-Member (lowermost Givetian). 21 stromatoporoid species are described from the coral limestone horizon of the Gruenewiese-Member and the Bredenbruch-Member (lower Lower Givetian) of the Unterhonsel-Formation. The classification of stromatoporoids by Stearn (1980) is applied with minor modifications. Dendrostroma fibrosum Galloway 1960, Trupetostroma dushanense Yang & Dong 1963 and Stachyodes (Stachyodes) dendroidea kuznetskensis (Yavorsky 1957) have been found in Europe for the first time. 8 other stromatoporoids are described from the Rhenish Massif for the first time as well. Lectotypes are designated for Actinostroma dehornae densicolumnatum Lecompte 1951, Stromatoporella solitaria Nicholson 1892 and Stachyodes (Stachyodes) dendroidea kuznetskensis (Yavorsky 1957). Synthetostroma Lecompte 1951 is considered as a subgenus of Clathrocoilona Yavorsky 1931. Clathrocoilona spissa (Lecompte 1951) is so similar to Clathrocoilona solidula (Hall & Whitfield 1873) from the Upper Devonian of the U.S.A., that it is valued as a subspecies of solidula. Probably the stromatoporoid skeleton consisted originally of high-magnesian calcite, now less diagenetically altered than aragonite, but more than calcite. Remarks to the biogeography of Devonian stromatoporoids are given in this paper. Conclusions about the environmental constraints are drawn from the sedimentology and the fossil content of the coral limestones. The predominant biostromes are built between the storm wave base and the normal wave base. Only the few bioherms grew above the normal wave base. These coral limestones are deposited in a tropical or subtropical normal marine environment in the shallow euphotic zone. Among the reef-builders epocism is very frequent, and till now this phenomenon has not been investigated in such an extensive Devonian material. Some other aspects of palaeoecology are concisely presented.^11;

406 s[403] = "MAY A. (1991).- Catalogue of types and voucher material for the thesis of A. May (1990).- FC&P 20, 1.1: 91-103. [catalogue of specimens] - FC&P 20-1.1, p. 91, ID=6799Topic(s): collections of fossils; corals, stroms; Systematics:

- Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^The whole material is From the Middle Devonian of the northwestern Sauerland (MTB 4612 Iserlohn, MTB 4711 Lüdenscheid, and MTB 4713 Plettenberg). The Selscheid-Formation is of Middle Eifelian age, the Ihmert-Formation of Upper Eifelian age, and the Unterhonsel-Formation of Lower Givetian age. If not stated otherwise, the specimens are voucher material to the descriptions and plate-figures. * The whole material is stored in the Forschungsstelle für Korallenpaläozoologie, Geologisch-Paläontologisches Institut und Museum. [lists Tabulata, Chaetetida, Rugosa and stroms]^1";
- 407 s[404] = "FERNANDEZ-MARTINEZ E. (1998).- Estudio preliminar sobre la familia Heliolitidae (Tabulata) del Dévónico de la Cordillera Cantábrica (NW de España).- Comunicaciones Simposio Proyecto P.I.C.G. 421: 201-203. [abstract] - FC&P 29-1, p. 35, ID=1457^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^^1";
- 408 s[405] = "HLADIL J. (1994).- Ostracodes swallowed by Palaeozoic corals? .- Lethaia 26: 313-317.- FC&P 23-2.1, p. 31, ID=4224^Topic(s): as predator?; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian M; Geography: Czech Republic, Barrandian^Middle Devonian heliolitids and favositids from Central Bohemia, belonging to Heliolites 'intermedius'; LeMaitre and Favosites goldfussi Orbigny, incorporated ostracode shells within their living corallite structures. The ostracode shells were sealed in by skeletal tissue that was septal in origin (Heliolites) or they were roofed over by tabulae (Favosites). The foreign shell was near the axis of the polyp when trapped within the coral skeleton. Only ostracodes, not other rounded shells or sedimentary particles, were trapped in this way. Approximately one in 30 favositid corallites and one in 70 heliolitid corallites display this peculiar condition, where the ostracode shells seem to have been swallowed by the polyps. A probable scenario involves the injury of the mouth area and the trapping of the ostracodes. A high probability that the basal part of the polyp experienced a controlled penetration is the most striking part of the process.^1";
- 409 s[406] = "GALLE A., WEYER D. (1972).- Heliolitida (Anthozoa) aus dem Unterdevon von Thüringen.- Jb. Geol. 4: 425-457.- FC&P 2-2, p. 16, ID=4796^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian L; Geography: Germany, Thuringia^Rare Heliolitids found in the Upper Pragian (Lower Emsian) tentaculite limestone of Eastern Thuringia are revised and determined as Heliolites zagorae n.sp. and Heliolites cf. praeporosus Kettnerova 1933.^1";
- 410 s[407] = "GUNIA T. (1973).- Genus Heliolites (Tabulata) from the Chwaliszow conglomerates.- Biuletyn Instytutu Geologicznego 022, 264: 173-184.- FC&P 3-2, p. 38, ID=4947^Topic(s): redeposited; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian Fam; Geography: Poland, Sudetes^A limestone pebble with a fragment of a colony of Heliolites sp. was found in late Devonian (Famennian) conglomerates. This pebble representents older, possibly Silurian rocks. Limestones older than the late Devonian are most known in surface exposures in the region of Chwaliszów [Sudetes]. The finding of the pebble with Heliolites sp. has a great importance for palaeogeographic reconstructions.^1";
- 411 s[408] = "FERNANDEZ-MARTINEZ E.M. (1999).- Heliolitidae (Cnidaria, Tabulata) del Devonico de la Cordillera Cantabrica (NW de Espana). [in Spanish, with English abstract].- Trabajos de Geologia 21: 97-110; Oviedo.- FC&P 32-1, p. 27, ID=7145^Topic(s): taxonomy, ecology, biology; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian; Geography:

- Spain, Cantabrian Mts^This paper constitutes the first work on the order Heliolitida (Cnidaria, Tabulata) from the Devonian of the Cantabrian Mountains. In this area, the presence of heliolitids is restricted to two moments, upper Emsian-lower Eifelian and Upper Givetian, when reefal conditions were established. In spite of the preliminary condition of this study, the systematic conclusions allow to compare the cantabrian heliolitids with those from different regions with Devonian reefal sediments and to deduce several biological behaviours of these corals. [original English abstract]^1";
- 412 s[409] = "PIECHA M. (2004).- Late Famennian heterocorals from the Refrath 1 Borehole (Bergisch Gladbach-Paffrath Syncline; Ardennes-Rhenish Massif, Germany).- Courier Forschungsinstitut Senckenberg 251: 123-133.- FC&P 33-2, p. 20, ID=1124^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Germany, Rhenish Mts^The heterocoral Oligophylloides pachytheucus is described from the Refrath 1 Borehole. The borehole is 53m deep and consists of dark grey, in part marly mudstones with few thin intercalations of calcareous siltstones. The sediments are dated as Middle expansa Zone (late Famennian) by conodonts. The heterocorals are well preserved and multiple branched. The shape of the heterocorals suggests a procumbent living condition.^1";
- 413 s[410] = "CHWIEDUK E. (2001).- Biology of the Famennian heterocoral Oligophylloides pachytheucus.- Palaeontology 44, 6: 1189-1226.- FC&P 30-2, p. 15, ID=1556^Topic(s): biology; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Poland, Holy Cross^Studies on the taxonomy and morphology of the Famennian heterocoral Oligophylloides have placed great emphasis on the character of the soft tissue, coloniality and distal development of the skeleton with regard to the construction of the wall. Here, the existence of soft tissue covering the entire skeleton of the colony is proposed. Thirty-eight branching specimens have been found in addition to the predominant single fragments of corallites; these should be regarded as colonial with a well-developed branching form. It is here proposed that the external wall grew not only at the distal end, and that its thickening did not result from the overlapping of tabulae, but was built independently of tabulae by the soft tissue covering the whole skeleton of the colony. The following new characteristics of Oligophylloides are described: a change in the position of septa, so-called 'septal shifting', a rearrangement of the septal apparatus; the occurrence of aulos-like structures; a groove ornamentation on the external wall; and the granular microstructure of the axial part of septa. A detailed study of Late Devonian Oligophylloides corals shows that O. tenuicinctus Rozkowska and O. pachytheucus pentagonus Rozkowska are synonymous with O. pachytheucus Rozkowska. [original abstract]^1";
- 414 s[411] = "KARWOWSKI L., WRZOLEK T. (1987).- Skeletal microstructure of the heterocoral Oligophylloides from the Devonian of Poland.- N. Jb. Geol. Palaeont. Mh. 1987, 6: 321-331.- FC&P 17-1, p. 13, ID=2100^Topic(s): microstructures; Heterocorallia, Oligophylloides; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Poland, Holy Cross^^1";
- 415 s[412] = "WEYER D. (1989).- Heterocorallia aus dem Unter-Famenne von Thuringen.- Bulletin de la Societe belge de Geologie 98, 3/4: 327-334.- FC&P 20-2, p. 55, ID=2931^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Germany, Thuringia^Oligophylloides and Heterophyllia are recorded from cephalopod limestones of upper Cheiloceras-Stufe (Lower marginifera zone) at Berga anticline (locality Roepisch creek) in the Thuringian Mountains.^1";

- 416 s[413] = "GLINSKI A. (1998).- Eine Heterokoralle aus dem Mittel-Devon der Eifel.- Senckenbergiana lethaea 77, 1/2: 37-41.- FC&P 27-2, p. 56, ID=3915^Topic(s): taxonomy; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^A new species of Mariaphyllia Fedorowski 1991, M. eifeliensis n.sp. (Heterocorallia) has been discovered in the Rohr syncline (Eifel, Rheinisches Schiefergebirge). 1st stratigraphic record in the lower Middle Devonian Ahrdorf Formation represents one of the earliest occurrences of the Heterocorallia. The new species represents the first discovery of the order in the central European Middle Devonian.^1";
- 417 s[414] = "SUTHERLAND P.K., FORBES C.L. (1981).- Septal development of Oligophylloides pachytheucus from the Famennian of Poland.- Acta Palaeontologica Polonica 25, 3-4: 497-504.- FC&P 10-1, p. 46, ID=5979^Topic(s): ontogeny; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Poland, Holy Cross^[serial sections show a pattern of septal insertion markedly at variance with that postulated for Lower Carboniferous heterocorals]^1";
- 418 s[415] = "WRZOLEK T. (1981).- Coral growth in Oligophylloides pachytheucus Rozkowska 1969.- Acta Palaeontologica Polonica 25, 3-4: 513-517.- FC&P 10-2, p. 66, ID=5983^Topic(s): growth mode; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Poland, Holy Cross^Coral growth in Heterocorallia is described and illustrated for the first time. It has been studied in Oligophylloides pachytheucus Rozkowska 1969 from the Upper Famennian of the Swietokrzyskie (Holy Cross) Mountains, Poland. One single offset at a time was formed laterally with respect to the parent polyp. It did not inherit any septa from the parent corallite forming its own, independent set of septa. The young polyp was for a long time connected with the parent by soft tissue being separated from its skeleton by a tabulotheca. The theca and possibly all the other skeletal elements of the species studied grew centrifugally. Evidence is presented that O. pachytheucus had a distal part of its corallite in the shape of a slender distal cone with a set of septa protruding on top of the cone. [original abstract]^1";
- 419 s[416] = "RIGBY J.K., RACKI G., WRZOLEK T. (1981).- Occurrence of dictyid hexactinellid sponges in the Upper Devonian of the Holy Cross Mts.- Acta Geologica Polonica 31, 3-4: 163-168.- FC&P 11-2, p. 43, ID=1875^Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^Hexactinellid sponges with rigid, laterally fused, dictyonine skeletons are reported from the Frasnian rocks of the Holy Cross Mts., Central Poland. This occurrence with nearly contemporary undescribed forms from Belgium and Western Australia, extend the range of the Hexactinosa back from the Triassic, the previously earliest described sponges of an order. [original summary]^1";
- 420 s[417] = "MEHL D., WUTTKE M., KOTT R. (1997).- Beitrage zur Spongien-Fauna des Hunsrueckschiefers (II). Beschreibung eines neuen Kieselschwammes (Hexactinellida, "Rosellimorpha", fam., gen. et sp. indet.).- N. Jb. Geol. Palaeont. Mh. 1997, 2: 79-92.- FC&P 26-2, p. 75, ID=3764^Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Devonian; Geography: Germany, Hunsrueck^A new siliceous hexactinellid sponge with soft-part preservation possesses a vase-shaped calyx attached by a basal root tuft. However, the lack of microscleres allows only uncertain classification. Fossilization took place in two phases, first an incomplete pyritization of peripheral parts followed by silification of the remaining central area.^1";
- 421 s[418] = "YOCHELSON E.L., STURMER W., STANLEY G.D.jr (1983).-

Plectodiscus discoideus (Rauff): a redescription of a chondrophorine from the Early Devonian Hunsruck Slate, West Germany.- *Paläontologische Zeitschrift* 57: 39-68.- **FC&P 12-2**, p. 46, ID=6247^Topic(s):taxonomy; Hydrozoa, Chondrophorina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Devonian L; Geography: Germany, Hunsruck^Additional specimens of a "by-the-wind sailor"; (vevellid hydrozoan) from the Hunsruck Slate indicate that *Palaeonectris* Rauff is a subjective synonym of *Plectodiscus* Ruedemann. *Silurovelella* Fisher is also judged to be a synonym of *Plectodiscus*. The nature of the matrix and the degree of decay and flexing of the pneumatophore disc affect preservation of these fossils. The internal chitinous gas-filled float structure of *Plectodiscus discoideus* is often preserved as a concentrically laminated, oval disc. After death of the organism, it was separated from the soft tissues and before burial in the sediment, it may have been transported by the wind and surface currents. Some new details are added to the anatomy of *P. discoideus* (Rauff), and a new reconstruction is presented. [original summary]^1";

422 s[419] = "HERGARTEN B. (1985).- Die Conularien des Rheinischen Devons.- *Senckenbergiana lethaea* 66, 3/5: 269-297.- **FC&P 14-2**, p. 47, ID=0906^Topic(s):taxonomy; Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^The present paper is introduced by a survey of the stratigraphic distribution of about 90% of the actually known species of the Conulata as well as of the range of their genera. - In the Rhenish Devonian of W.Germany, these invertebrate fossils are extremely rare. All of the 18 species recorded till now belong to the family Conulariidae. With the exception of the four conulariid species of the Lower Devonian Hunsruck Shale, these taxa are revised respectively described as new. - The Lower Devonian Conularia subparallela G. Sandberger 1847 and the Middle Devonian species Conularia gerolsteinensis Archiac & Verneuil 1842 and Conularia dencknanni n.sp. belong to the subfamily Conulariinae. The Middle Devonian Paraconularia deflexicosta (G. Sandberger 1847) is placed among the Paraconulariinae. The Lower Devonian species Climacoconus imodevonicus n.sp. is attributed to the Ctenoconulariinae, with reservation also the genus Holoconularia n.g. with the type species Holoconularia hummeli (Kegel 1926), Holoconularia fimbriata (Walther 1903), and Holoconularia kiderleni n.sp. from the Lower Devonian and with Holoconularia eifliensis (Steininger 1853), Holoconularia richteri n.sp., Holoconularia geesensis n.sp., and Holoconularia? rospensis n.sp. from the Middle Devonian; Holoconularia ornata (Archiac & Verneuil 1842) is the only Upper Devonian species.^1";

423 s[420] = "HERGARTEN B. (1994).- Conularien des Hunsrueckschiefers (Unter-Devon) [Conulariids of the Hunsrueckschiefer (Lower Devonian)].- *Senckenbergiana lethaea* 74, 1/2: 273-290. [in German, with English summary].- **FC&P 23-2.1**, p. 63, ID=4422^Topic(s):taxonomy; Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Devonian L; Geography: Germany, Hunsruck^The Conularia species from the Lower Devonian Hunsrueckschiefer are reviewed based on new material. In addition to the four species already known from the Hunsrueck region, five further species are described as new, one also from the Hunsrueck (Conularia hunsrueckiana) and four from the "Hunsrueckschiefer"; of the Eifel region (C. mayenensis, C. bausbergensis, C. bartelsi and Sinusconularia blasii). The new genus Sinusconularia (Suborder Circonulariina Bischoff 1978) is described. The species from the typical Hunsrueck region, i.e. from the slate pits at Bundenbach and Gemuenden, are assigned to the Lower Emsian substage. However, according to Meyer (1986), for the species from the Eifel region, i.e. from the slate pits at Mayen and Kehrig, a Siegenian age is adopted. The evaluation of X-ray photographs is discussed with regard to the "Chordata theory"; held by Steul (1984).^1";

- 424 s[421] = "SCHRODER S., BRUHL D. (1995).- Eine Conularie (Cnidaria; Conulata) aus dem Mitteldevon der Dollendorfer Mulde (Eifel / Rheinisches Schiefergebirge).- Decheniana 148: 148-154. [in German, with English abstract].- FC&P 24-2, p. 90, ID=4593^Topic(s): ; Conulata Holoconularia; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^The rare conulariid species Holoconularia richteri Hergarten 1985 is described from the Upper Eifelian (Ahbachian) of the Dollendorfer Syncline / Eifel Hills (Rhenish Massif). Some stratigraphic aspects are discussed.^1";
- 425 s[422] = "WEYER D. (1981).- Glatziella Renz 1914 (Ammonoidea, Clymeniida) im Oberdevon von Thuringen.- Hall. Jb. Geowiss. 6: 1-12; Leipzig.- FC&P 10-2, p. 64, ID=6081^Topic(s): ; Ammonoids, Rugosa; Systematics: Mollusca Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Thuringia^[in addition to other fossils, the two Rugose corals Cyathaxonia (Cyathaxonia) sp. and Neaxon regulus (Richter 1848) from the top of the Famennian beds (middle wocklumeria stage) of the Geipel quarry in the town of Schleiz (Berga anticline, Thuringian Mountains) are described in this paper; the faunal community represents typical cephalopod limestone facies]^1";
- 426 s[423] = "FONTAINE H. (1977).- Decouverte du genre Iowaphyllum (Tetracoralliaire) dans un biostrome Eodevonien du Cotentin.- Geobios 10: 471-477.- FC&P 6-2, p. 15, ID=0115^Topic(s): new records; Rugosa, Iowaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: France, Armorique^First record of Iowaphyllum in France.^1";
- 427 s[424] = "SOTO F. (1975).- Metriophyllum album n.sp. (Coelenterata, Rugosa) del Devonico inferior de la Cordillera Cantabrica (NW de Espana).- Breviora geol. Asturica 19: 51-54; Oviedo.- FC&P 6-2, p. 15, ID=0122^Topic(s): new taxa; Rugosa, Metriophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Spain, Cantabrian Mts^Description of new species^1";
- 428 s[425] = "PONCET J. (1977).- Le biostrome eodevonien a Tetracoralliaires coloniaux de la Roquette (Manche): etude d'un paleomilieu.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 116-124.- FC&P 6-2, p. 17, ID=0144^Topic(s): reefs ecology; reefs ecology; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: France, Armorique^Hexagonaria is the main constituent but stromatoporoids form an important part. The stromatoporoids are not identified.^1";
- 429 s[426] = "BIRENHEIDE R. (1979).- Xystriphyllum- und Sociophyllum-Arten (Rugosa) aus dem Eifelium der Eifel.- Senckenbergiana lethaea 60: 189-221.- FC&P 9-1, p. 31, ID=0243^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Rhenish Mts^A reassigment of some cerioid Eifelian species to Xystriphyllum, including 1 new species and a new subspecies and an early Eifelian new subspecies of Sociophyllum from the Eifel.^1";
- 430 s[427] = "GARCIA S.R. (1978).- Corales rugosos del Devonico de la Sierra del Pedroso.- Estudios geol. 34: 331-350.- FC&P 9-1, p. 32, ID=0249^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Spain, Sierra Pedroso^A lower Devonian rugose coral fauna from southern Spain containing new species of Hexagonaria, Disphyllum, ?Synaptophyllum and Zelophyllum.^1";
- 431 s[428] = "COEN-AUBERT M. (1980).- Rugueux massifs cerioides du Givetien et du Frasnien de la Belgique.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 51: 1-53.- FC&P 9-1, p. 34, ID=0260^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv

- Fra; Geography: Ardennes^Sixteen species and two forms of the genera Hexagonaria Guerich G. 1896, Argustastrea Crickmay C.H. 1960, Xystriphyllum Hill D. 1939 and Donia Soshkina E.D. 1951 from the Givetian and the Frasnian of Belgium are described, figured and placed in their stratigraphic context. Four species are new: D. micheli. D. soshkinae. D. tenuis and D. vesiculosa.^1";
- 432 s[429] = "COEN-AUBERT M. (1980).- Representants Frasnien du genre Scruttonia Tcherepnina S. K. 1974, (Rugosa) en Belgique.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 51, 4: 1-15.- FC&P 9-1, p. 34, ID=0261^Topic(s): Rugosa, Scruttonia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^The genus Scruttonia Tcherepnina S.K. 1974, of which the diagnosis is completed, is represented in the Belgian Frasnian by four species and subspecies: S. bowerbanki (Edwards, H.M. et Haime J. 1851), S. boloniensis minor n. subsp., S. balconi n.sp. and S. sp. The genus is provisionally incorporated in the family Disphyllidae Hill D. 1939.^1";
- 433 s[430] = "WEYER D. (1978).- Neaxon bartzschii, eine neue Rugosa-Art aus der Wocklumeria-Stufe (Oberdevon) des Thuringischen Schiefergebirges.- Zeitschrift der geologischen Wissenschaften 6 (1978): 493-500.- FC&P 9-1, p. 37, ID=0273^Topic(s): new taxa; Rugosa, Neaxon; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Thuringia^Neaxon bartzschii n.sp. is described from the lower Wocklumeria-stage (Kalloclymenia subarmata zone) of the Bohlen section, south of Saalfeld. Relations of the genera Nicholsoniella Soshkina 1952, Catactotoechus Hill 1954, and Guerichiphyllum Rozkowska 1969 (subfamily Guerichiphyllinae) are discussed.^1";
- 434 s[431] = "ROZKOWSKA M. (1979).- Contribution to the Frasnian tetracorals from Poland.- Palaeontologia Polonica 40: 1-56.- FC&P 9-2, p. 39, ID=0303^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Poland^39 Frasnian rugosans belonging to 25 genera and 12 families from various parts of Poland are described, including the new genera Smithicyathus (Phillipsastraeinae), Trigonella, Debnikiella (Marisastrinae), Piceaphyllum (Characterophyllidae), Fedorowskicyathus (incertae sedis), Kowalaephyllum (Chonophyllidae) and Rachaniephyllum (?Cystiphyllidae). 22 new species are also described.^1";
- 435 s[432] = "LUTTE B.-P. (1984).- Rugose Korallen aus dem Mitteldevon (Givetium) der Sotener Mulde (Rheinisches Schiefergebirge, Nord-Eifel).- Muenstersche Forschungen zur Geologie und Palaeontologie.- FC&P 13-1, p. 33, ID=0443^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^Systematic research of rugose coral from the Givetian of the Sotener syncline (Rheinisches Schiefergebirge, Northern Eifel) lead to the identification of the following solitary species: Cyathophyllum sp., Characterophyllum longiseptatum n.sp., Characterophyllum sp., Aristophyllum sp., Grypophyllum dencknanni., Grypophyllum wedekindi, Acanthophyllum heterophyllum, Acanthophyllum. vermiculare, Acanthophyllum concavum, Acanthophyllum cf. ultimum, Stringophyllum acanthicum, Stringophyllum buechelense, Mesophyllum (Mesophyllum) vesiculosum, Mesophyllum (Cystiphyllodes) macrocystis macrocystis. Mesophyllum (Cystiphyllodes) secundum secundum, Masophyllum (Cystiphyllodes) secundum pseudoseptatum and Mesophyllum (Cystiphyllodes) secundum conistructum.The largest in number is the family of the Cystiphyllidae followed by the Ptenophyllidae. Distribution of Rugosa within the Givetian is rather uniform. Only few species, as far as envisaged, are restricted to particular beds making further investigations necessary concerning their stratigraphic position.^1";
- 436 s[433] = "SOTO F. (1981).- Synaptophyllum aus dem Unterdevon des

- Kantabrischen Gebirges (Nordspanien).- N. Jahrbuch Geol. Palaeont. Mh 2, 91-99.- FC&P 13-1, p. 39, ID=0463Topic(s): ; Rugosa, Synaptophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^^1";
- 437 s[434] = "WEYER D. (1982).- Neaxon cheilos n.sp. aus dem Unterfamenne von Schleiz im Thuringer Schiegeergebirge (Anthozoa, Rugosa; Oberdevon).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 5: 3-16.- FC&P 13-2, p. 38, ID=0541Topic(s): new taxa; Rugosa, Neaxon; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Thuringia^From cephalopod limestones dated as upper Cheiloceras-Stufe (lower marginifera zone) and quarried near Rodersdorf north-northeast of Schleiz (northwestern border of Berga anticline), the new species Neaxon cheilos is described, with discussions on stratigraphic distribution of the genus Neaxon Kullmann 1965, and on taxonomy of the subfamily Neaxoninae Hill 1981. The "third order" septa regularly distributed between all major and minor septa in high calicular regions of Neaxon regulus (R. Richter 1948) and Ufimia tricyclica (Schindewolf 1942) seem similar to hyposepta, but differ in their primary absence just as the most distal calicular margin. The new morphological term meiosepta is proposed for these structures appearing in a short distance below the upper calicular rim, functioning as active septa in a small zone of the highest calice, and disappearing by secondary incorporation into the thickening archaeothecal wall not far from the distal margin.^1";
- 438 s[435] = "BIRON J.P., COEN-AUBERT M., DREESEN R., DUCARME B., GROESSENS E., TOURNEUR F. (1983).- Le Trou de Versailles ou carriere a Roc de Rane.- Bulletin de la Societe belge de Geologie 92, 4: 317-336.- FC&P 13-2, p. 53, ID=0593Topic(s): stratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian U; Geography: Ardennes^L'exondation temporaire de la Carriere a Roc dit "Trou de Versailles" a Rance a permis d'y faire de nouvelles observations et de dater ce site a l'aide de Conodontes, Rugueux et Tabules. Le recif de marbre rouge proprement dit peut etre rapporte au sommet du Frasnien tandis que les calcaires noduleux a Brachiopodes qui le surmontent, appartiennent a la base du Famennien. [original summary]^1";
- 439 s[436] = "GALLE A. (1985).- On some Moravian Devonian Rugosa.- Vestnik Ustredniho ustavu geologickeho ., 4: 241-244.- FC&P 15-1.2, p. 25, ID=0864Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^^1";
- 440 s[437] = "SOTO F. (1984).- Rugose corals of the Lower-Middle and Middle-Upper Devonian boundary beds of the Cantabrian Mountains (NW Spain).- Palaeontographica Americana 54: 459-464 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 15-1.2, p. 28, ID=0883Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^Most rugose corals from the Devonian of the Cantabrian Mountains (NW Spain) can be dated in terms of conodont zones. * At present the base of the Polygnathus costatus partitus Zone is accepted as being the Lower-Middle Devonian boundary. In the Asturo-Leonese region of the Cantabrian Mountains the equivalent to that boundary could be the base of the Icriodus retrodepressus Zone. The rugose corals of the Moniello and Santa Lucia Formations will be analyzed in relation to this stratigraphic position. Recently, the Middle-Upper Devonian boundary has been interpreted as being the base of the Lower Polygnathus asymmetricus Zone, equivalent to the transition Ancyrodella binodosa-Ancyrodella rotundiloba. The association of rugose corals from the Candas and Portilla Formations are listed with respect to this

- transition which is well established in the Cantabrian Mountains.
[original summary]^1";
- 441 s[438] = "LUTTE B.-P. (1985).- Cyathophyllum (Cyathophyllum) arduum n.sp. (Rugosa) aus der Sotenicher Mulde (Rheinisches Schiefergebirge, Nordeifel).- Neues Jahrbuch für Geologie und Paläontologie, Monatshefte 1985, 9: 542-552.- FC&P 14-2, p. 34, ID=0912^Topic(s): new taxa; Rugosa, Cyathophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^Cyathophyllum (Cyathophyllum) arduum n.sp. is described from the Upper Givetian Kerpen-Formation of the Sotenich Syncline (Rhenish Massif, North-Eifel). The new species is discussed and compared to similar forms from the Eifel District and other Devonian localities.^1";
- 442 s[439] = "GALLE A. (1985).- Biostratigraphy and rugose corals of Moravian Devonian (Czechoslovakia).- Newsletter for Stratigraphy 14: 48-68.- FC&P 14-1, p. 46, ID=0963^Topic(s): biostratigraphy; stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^^1";
- 443 s[440] = "COEN-AUBERT M. (2004).- Two new species of Temnophyllids (Rugosa) from the Upper Givetian of Belgium.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, sciences de la Terre 74: 19-34.- FC&P 33-2, p. 14, ID=1109^Topic(s): new taxa; Rugosa, Temnophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Ardennes^Temnophyllum delmeri n.sp., and T. ramosum n.sp. are described in detail and come from the Upper Givetian of Belgium. On the south side of the Dinant Synclinorium, T. delmeri is associated with Sunophyllum beichuanense He, 1978 and Wapitiphyllum laxum (Gürich, 1896), at the top of the Mont d'Haurs Formation. It is also present in the Flohimont Member, the lower subdivision of the Fromelennes Formation. At the base of the overlaying Moulin Boreux Member, there is a level of limestones rich in stringocephalids, diverse groups of tabulate corals and in rugose corals represented by w. laxum, Temnophyllum ramosum, T. delmeri and locally Sunophyllum beichuanense. Nearly all these fossils disappear higher in the Moulin Boreux member. The same situation has been observed in the Philippeville Massif, on the north side of the Dinant Synclinorium and in the Vesdre Massif. As the base of the Flohimont Member lies at the top of the Lower Polygnathus varcus Zone and as the major part of this lithographic unit belongs to the P.ansatus Zone corresponding to the Middle P. varcus Zone, it is quite possible that the Taghanice event occurs in Belgium just above the level of limestones with the last stringocephalids.^1";
- 444 s[441] = "PLUSQUELLEC Y. (2005).- Hadrophyllum asturicum n.sp., Rugosa du Dévonien de la Chaîne Cantabrique (Espagne): seul représentant du genre hors l'Amérique du Nord.- Neues Jahrbuch für Geologie und Paläontologie, Monatshefte 2005, 1: 46-64.- FC&P 34, p. 34, ID=1125^Topic(s): new taxa; Rugosa, Hadrophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^The examination of the rugose corals assigned to Hadrophyllum orbigny (Middle Devonian of Asturias, NW Spain), shortly described and incompletely figured by Altevogt (1967), allows to confirm its generic assignment but a new species must be erected: H. asturicum. A critical review of the species referred to Hadrophyllum shows that the genus is only represented by two species, namely H. orbigny and H. asturicum. H. asturicum is the only representative of the genus in North Gondwana. Palaeobiogeographic relationships between eastern North America provinces of Laurussia and North Gondwana are attested by its occurrence.^1";
- 445 s[442] = "WEYER D. (2004).- Neue Rugosa-Funde aus dem Unter-Famenne von Deutschland (Anthozoa, Oberdevon).- Hessisches Jahrbuch Geologie 131: 203-223.- FC&P 33-2, p. 23, ID=1133^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:

- 446 s[443] = "Devonian Fam; Geography: Germany^^1";
 "MAY A. (2006).- Radiastrea (Anthozoa, Rugosa) from the Emsian and Eifelian (Devonian) of Aviados, northern Spain.- Bulletin of Geosciences 81, 3: 151-162.http://www.geology.cz/bulletin/contents/art2006.03.151.- FC&P 34, p. 33, ID=1236^Topic(s): ; Rugosa, Radiastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: Spain, Cantabrian Mts^This paper describes a colonial rugose coral from the upper Emsian or lower Eifelian of Aviados (Provincia León, northern Spain). This colony, which has been figured as Phillipsastrea torreana (Milne-Edwards & Haime 1851) by Almela & Revilla (1950), belongs in fact to Radiastrea arachne Stumm 1937. It is the first reported occurrence of the genus Radiastrea from Europe, and an example of close palaeobiogeographical relationships between the Cantabrian Mountains and North America during the Emsian. Cantabriastrea Schroeder & Soto 2003 is probably only a marginal case of Radiastrea Stumm 1937. The lectotype of Phillipsastrea torreana var. minuta Almela & Revilla 1950 from the upper Emsian to lower Eifelian or upper Givetian of Aviados (Provincia León, northern Spain) is designated and described in detail. It is a subspecies of Phillipsastrea torreana (Milne-Edwards & Haime 1851) with 10-12 major septa and a tabularium diameter of 1.9-2.1 mm.^1";
- 447 s[444] = "SCHRODER S. (2005).- Stratigraphie und Systematik rugoser Korallen aus dem hohen Givetium und tiefen Frasnium des Rheinischen Schiefergebirges (Devon; Sauerland / Bergisches Land).- Zitteliana B25: 39-116.- FC&P 34, p. 37, ID=1241^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Germany, Rhenish Mts^Recent investigations in the eastern part of the Rheinisches Schiefergebirge indicate the existence of stratigraphically significant rugose coral assemblages which can in part also be used for interregional stratigraphic correlations (Belgium, France, Poland), as they display always a typical faunal succession. Accordingly, six coral associations at the genus level are established, which can be used for biostratigraphic correlation of coral bearing sequences. The composition of these faunas allow assignment of ages to reef complexes where conodonts or shelly faunas are virtually absent. Although some "index species" are useful to refine these correlations, it is not possible to establish true "coral-biozones" based on current data. [first part of an extensive abstract; taxonomic description covers 35 species, including 2 new species and one new subspecies: Hunanophrentis abnormis n.sp., Wapitiphyllum scaphense n.sp. and Phillipsastrea hennahi perforata n. ssp.]^1";
- 448 s[445] = "WEYER D. (2005).- Antilacca, ein neues Rugosa-Genus aus dem mitteleuropäischen Unterdevon.- Abhandlungen und Berichte für Naturkunde 28: 5-21.- FC&P 34, p. 41, ID=1245^Topic(s): new taxa; Rugosa, Antilacca; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Europe, Central^The new genus Antilacca and its type species Antilacca arnosti are described from the Upper Emsian of Czechia (Suchomasty Limestone from the Barrandian area) and Germany (olistolithic Herzynian Limestones from the Harz Mts., Greifenstein Limestone of Upper Emsian to basal Eifelian from the Rhenish Mts.). By its unusual prolonged antiseptum, the taxon enters a phylogenetic lineage Laccophyllum/Hamarophyllum > Antilacca > Columnaxon (subfamily Columnaxoninae, family Cyathaxoniidae), representing the first trend to produce a solely antiseptal columella.^1";
- 449 s[446] = "WRZOLEK T. (2005).- Devonian rugose corals of the Phillipsastrea hennahii species group.- Acta Geologica Polonica 55, 2: 163-185.- FC&P 34, p. 42, ID=1247^Topic(s): taxonomy; Rugosa, Phillipsastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Poland, Holy Cross^Massive phillipsastreid tetracorals similar to

- Phillipsastrea hennahii, defined as a Ph. hennahii species group, are characterized by reduced intercorallite walls (thamnasterioid or subthamnasterioid habit), by variable but generally good development of horseshoe dissepiments at the tabularium/dissepimentarium boundary, and by strongly deflected peripheral platforms at corallite margins. Seven species of the Ph. hennahii species group, mostly from the Givetian of southern Euramerica, Iberia and northern Gondwana, are reviewed. Two species, the Middle Givetian Phillipsastrea sobolewi (Rózkowska 1956) and the Late Givetian Phillipsastrea jachowiczi, a new species described herein, both from the Holy Cross Mountains (Poland) are described and illustrated. Also described from that area is Phillipsastrea falsa Coen-Aubert 1987 from the Upper Frasnian.¹¹;
- 450 s[447] = "COEN-AUBERT M. (2003).- Description of a few rugose corals from the Givetian Terres d'Haures Formation in Belgium.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 73: 11-27.- FC#038;P 32-1, p. 22, ID=1383Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: ArdenneDisphyllum mcleani n.sp., Temnophyllum wellinense n.sp. and Pseudozaphrentis zamkowsae (Wrzolek, 1993) are described in detail and come from the Givetian Terres d'Haures Formation, on the south side of the Dinant Synclinorium. This subdivision belongs to the top of the Polygnathus heminasatus Zone and to the Lower P. varcus Zone. Temnophyllum wellinense is present at the base of the lithostratigraphic unit together with Argustastrea quadridgemina (Goldfuss, 1826) refigured herein. Disphyllum mcleani and Pseudozaphrentis zamkowsae have only been observed very sparsely, respectively in the middle and upper parts of the Terres d'Haures Formation. At its top occur already a few species characteristic of the lower part of the overlaying Mont d'Haures Formation. The area located between Beauraing and Resteigne to the east of Givet is compared to that more eastern of Hotton where the Terres d'Haures Formation is thicker and richer in coral beds.¹¹;
- 451 s[448] = "ROHART J.-C. (2002).- Coraux rugueux du membre des Pâtures, Formation de Beaulieu (Frasnien de Ferques, Boulonnais).- Annales de la Societe geologique du Nord 9 (2eme serie): 111-128.- FC#038;P 32-2, p. 59, ID=1388Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: France, BoulonnaisA new and temporary accessible Upper Devonian outcrop in the Ferques area (Boulonnais, North of France), has allowed one to observe and sample the c term of the Pâtures Member of the Beaulieu Formation. The following species were collected and are briefly figured or described: Metripophyllum bouchardi Milne-Edwards & Haime, 1850, Catactotoechus ? variabilis Rohart, 1988, Disphyllum gradutum Tsien, 1970, Themnophyllum cf. majus Walther, 1928, Sinodisphyllum kielciense (Rozkowska, 1980), Macgeea gallica gallica Lang & Smith, 1935, Macgeea sp., Thamnophyllum kozlowskii (Rozkowska, 1953). The age is Upper Devonian, Frasnian, lower Part of the Palmatolepis punctata Zone.¹¹;
- 452 s[449] = "SCHRODER S., SOTO F. (2003).- Lower Devonian (Emsian) rugose corals from the Cantabrian Mountains, northern Spain.- Acta Palaeontologica Polonica 48, 4: 547-558.- FC#038;P 32-2, p. 60, ID=1389Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Spain, Cantabrian MtsTwo species of Lower Devonian rugose corals are described from the Cantabrian Mountains of Spain: Cantabriastrea cantabrica gen. et sp.nov. and Tabulophyllum bonarense sp.nov. The development of root- or buffer-like attachment structures ('rhizoid processes') in T. bonarense indicates adaptation to the soft substrate and supports corallite stabilisation. Because of their strongly everted calices and a corresponding arrangement of trabeculae, the colonies of the genus Cantabriastrea are assigned

- tentatively to the Paradisphyllinae, constituting the first record of the subfamily in western Europe. Some specimens give information on colony-formation of this taxon, which is induced by strong lateral budding (nonparricidal increase) of a remarkable large and long-lasting protocorallite. [original abstract]^1";
- 453 s[450] = "COEN-AUBERT M. (2000).- Stratigraphy and additional rugose corals from the Givetian Mont d'Haurs Formation in the Ardennes.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 70: 5-23.- FC&P 29-1, p. ???, ID=1436^Topic(s): stratigraphy, new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Ardennes^1";
- 454 s[451] = "SCHRODER S., LUTTE B.-P. (1999).- Zur taxonomischen Stellung von *Fasciphyllum varium* Schlueter 1889 (Rugosa / Mittel-Devon der Eifel).- Senckenbergiana lethaea 79, 1: 119-129. [in memoriam Dr. Wolfgang Struve].- FC&P 29-1, p. 58, ID=1452^Topic(s): systematics; rugosa, Fasciphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Eifel^The Middle Devonian rugose coral species *Battersbyia varia* (Schlüter 1889) is revised. Specimens recently regarded as conspecific belong to an undescribed species of *Xystriphyllum*, which is closely related to *Xystriphyllum implicatum* (Tsien 1969). This species should most probably be split into two subspecies (or morphotypes?) because of very different development of lonsdaleoid dissepiments and completeness of septa. ^1";
- 455 s[452] = "COEN-AUBERT M. (2000).- Annotations to the Devonian Correlation Table, B142dm00-B142ds00: Stratigraphic distribution of the Middle Devonian and Frasnian rugose corals from Belgium.- Senckenbergiana lethaea 80: 743-745.- FC&P 30-2, p. 15, ID=1557^Topic(s): stratigraphy, correlation table; stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif - Fra; Geography: Ardennes^This stratigraphic compilation for the Middle Devonian and the Frasnian is based on numerous rugose corals collected by the author in situ during geological surveys made bed by bed in various localities from the south and north sides of the Dinant Synclinorium as well as from the Philippeville and Vesdre Massifs. The framework of these investigations is provided by the recent revision of the lithostratigraphic units supervised by the Belgian Commission on Devonian Stratigraphy.^1";
- 456 s[453] = "GLINSKI A. (2001).- *Tryplasma* (Anthozoa, Rugosa) im Mittel-Devon der Eifel (Rheinisches Schiefergebirge, Deutschland).- Senckenbergiana lethaea 81, 1: 71-89.- FC&P 30-2, p. 15, ID=1558^Topic(s): ; Rugosa, *Tryplasma*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^The genus *Tryplasma* Lonsdale 1845 with the species *Tryplasma rohrensis* n.sp. (family Tryplasmataceae Etheridge 1907) has been recorded from the middle and western European Middle Devonian for the first time. *Tryplasma* is widely distributed in the lowermost part of the coral-rich Niederehe Subformation (Eifelian, Ahrdorf Formation) of the Eifel Mountains. From investigation of the trabecular microstructure of the new species *Tryplasma rohrensis* in view of its taxonomic value and related terminology, the hitherto preferred idea of *rhabdacanthus* sensu Hill (1936) cannot be fully accepted and is instead contrasted with the concept of *Primärseptum*; of some earlier authors. Microscopic analysis revealed identical acanthine characteristics in a species of the tabulate genus *Syringocystis* Deng 1966, thus suggesting a basic revision and reinterpretation of its systematic position. *Syringocystis* can clearly be compared with *Tryplasma* and so possibly classified as a rugose coral. The horizon with *Tryplasma* constitutes a sharp stratigraphical marker. Its horizontal distribution supports the isochronic correlation of the Niederehe reefal facies in the individual Eifel synclines and, in addition, confirms the traditional dating of

- the stratigraphic boundary layers of the Ahrdorf and Junkerberg formations. There is no age relationship between the Antoniusbusch Reef near Rohr and the Bouderath Reef (Hollerberg) in the eastern Blankenheim Syncline, which belongs to the Nohn Formation. Regional analysis of Tryplasma occurrences indicates many biostratigraphical parallels between the Eifel region and the Russian Devonian provinces in Europe and Asia as well as Middle Devonian areas in China and Australia and points to certain paleogeographic connections.¹¹;
- 457 s[454] = "SCHRODER S. (2001).- Wenig bekannte rugose Korallen aus dem Mittel- und Oberdevon der Aachener Mulde (Rheinisches Schiefergebirge).- *Geologica et Palaeontologica* 35: 63-79.- **FC&P 30-2**, p. 18, ID=1564**Topic(s): **Rugosa; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Devonian M U; **Geography: **Germany, Aachen syncline¹¹Some taxa of insufficiently known rugose corals are described from the Upper Givetian of Friesenrath and the Frasnian-Famennian boundary-beds near Werth in the Aachen Syncline: *Tabulophyllum* aff. *cylindricum* Walther 1928, *Temnophyllum blacourti* (Rohart 1988), *Spinophyllum* cf. *spongiosum* (Schlüter 1889), *Macgeea recta* (Walther 1928), *Hexagonaria?* sp. W, *Frechastraea pentagona minima* (Rózkowska 1953) and *Frechastraea* cf. *carinata* Scrutton 1968. Rugose corals are generally rare within this stratigraphical interval and thus are important records for the Aachen Syncline. In addition, clear faunistic relationships in regard to faunas known from France (Ferques) and Belgium are recognizable.¹¹;
- 458 s[455] = "SCHRODER S., SALERNO C. (2001).- Korallenfauna und Fazies givetischer Kalksteinabfolgen (Cürten-/Dreimühlen-Formation) der Dollendorfer Mulde (Devon, Rheinisches Schiefergebirge / Eifel).- *Senckenbergiana lethaea* 81, 1: 111-133.- **FC&P 30-2**, p. 18, ID=1565**Topic(s): **facies, shallow-marine; shallow marine facies; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Devonian Giv; **Geography: **Germany, Eifel¹¹The descriptive terms **"Leperditien-Kalke"**; and **"Klotzige Bank-Kalke"**; were introduced by Kräusel (1953) during the reinvestigation of the Dollendorfer Mulde and describe two lower Givetian limestone intervals, each of about 15 to 20 m thickness. As none of those limestones yield biostratigraphically relevant macrofaunas, the age of both deposits can be estimated only approximately, considering the position of both between the well correlated Cürten and Rodert Formations. Examination of the sections revealed four facies types, characteristic for a shallow marine, peritidal setting. The limestones are composed mainly of calcisphere ostracode wackestones or peloidal calcisphere-ostracod-packstones. Together with amphiporoid-floatstones they indicate lagoonal and restricted environmental conditions. Intercalated amphiporoid rudstones suggest temporarily more agitated water conditions. Remarkable thrombolithic bindstones occur with a partly stromatocoid fabric yielding cortoids and Algae of the genus *Issinella* Reitlinger 1954 and *Jansaelia* Mamet & Roux 1975. Deposition of several stromatoporoid coral rudstone layers indicates a greater water depth with more open marine influence. Eleven taxa of rugose corals can be recognized. Most of those are related to small trochoid zaphrentids or charactophyllids, which were able to survive in the restricted conditions of a lagoonal environment. Common species are *Glossophyllum* sp. cf. *schoupei*, *Grypophyllum* sp. and *Sinodisphyllum* sp. *Pseudozaphrentis intermissa* n.sp. Schröder is described as a new species.¹¹;
- 459 s[456] = "BERKOWSKI B. (2001).- Famennian colonial Rugosa from southern Poland: recovery and extinction.- *Bulletin of the Tohoku University Museum* 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 285-290.- **FC&P 31-2**, p. 38, ID=1672**Topic(s): **extinctions F/F; Rugosa; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Devonian Fam; **Geography: **Poland S¹¹After the Frasnian-Famennian extinction the colonial Rugosa disappeared almost entirely from the fossil record. New data

- indicate that during the Late Famennian radiation colonial Rugosa evolved rapidly within isolated areas and became an important component of coral assemblages of the southern Poland. The assemblages consist of surviving taxa (*Smithiphyllum* aff. *imperfectum* and 4 Famennian species of *Scruttonia*), homeomorphic taxa (2 species of *Pseudoendophyllum*) and one new Famennian genus (*Heterostrotion*). The pattern of extinction and recovery of colonial Rugosa seems to have followed the following rule: survivors from the F-F crisis went extinct after the Famennian radiation (the D-C extinction), and the homeomorphic species, as well as new taxa, survived subsequent D-C extinction.¹";
- 460 s[457] = "BERKOWSKI B. (2001).- Astogeny of amural colonial Rugosa from the Famennian of the Sudetes - a palaeoenvironmental study.- *Acta Geologica Polonica* 51, 2: 109-120.- FC&P 31-2, p. 39, ID=1673^Topic(s): blastogeny, ecology; Rugosa astogeny; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Poland, Sudetes^The astogeny of three species of the amural rugosan genus *Scruttonia* coming from the Famennian so-called main limestone cropping out in Dzikowiec (the Middle Sudetes) is described. The colonies studied reveal cyclomorphic variation usually regarded as seasonal in nature. The character and shape of the colony as well as the character of the internal skeletal elements has been investigated to determine the colony-sediment interactions. The character of those interactions and the taphonomy of the colonies helped to make a determination of the colony growth rate and the sedimentation rate of the beds where colonial corals occur.¹";
- 461 s[458] = "WEYER D. (2002).- *Guerichiphyllum Rozkowska* 1969 (Anthozoa, Rugosa) aus dem Ober-Famennium (Wocklumeria-Stufe) von Saalfeld in Thüringen.- *Abhandlungen und Berichte für Naturkunde* 25: 15-24.- FC&P 32-1, p. 24, ID=1681^Topic(s): ; Rugosa, *Guerichiphyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Thuringia^*Guerichiphyllum?* *mirabile* n.sp. is described from the Wocklumeria sphaeroides subzone of the psychrospheric aphotic cephalopod facies. The new taxon, based on only one specimen with extremely changing morphology during ontogeny, is compound with *Guerichiphyllum kowalense* Rozkowska, 1969 (Holy Cross Mountains, Poland), and with *Hebukophyllum xinjiangense* Liao & Cai, 1987 (Sinkiang, NW China).¹";
- 462 s[459] = "ROHART J.-C., SEMENOFF-TIAN-CHANSKY P. (1981).- Description des types de *Hexagonaria davidsoni* (Milne-Edwards & Haime) et de "*Pseudoacervularia*" profunda (Michelin), *Tetracoralliaires* du Devonien du Boulonnais.- *Bulletin du Museum national d'histoire naturelle*, 4e ser., 3, sect. C, n° 1, pp 3-29.- FC&P 10-1, p. 23, ID=1749^Topic(s): type material; Rugosa, *Hexagonaria davidsoni*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: France, Boulonnais^The type specimens of *Acervularia davidsoni* Milne-Edwards et Haime and of *Cyathophyllum profundum* Michelin, of which thin sections have been cut, are redescribed and figured. The first species is an *Hexagonaria* from the Ferques formation (Frasnian) of the Ferques region (Pas-de-Calais, France). The second is provisionally assigned to the genus *Pseudoacervularia* Schluter. The type specimen, the only one known, is of Givetian or Frasnian age from the same region.¹";
- 463 s[460] = "WRZOLEK T. (1981).- Rugose coral *Cyathophyllum diffusum* sp.n. from the Frasnian deposits of the Holy Cross Mts.- *Acta Geologica Polonica* 31, 3-4: 169-174.- FC&P 11-2, p. 31, ID=1756^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^The rugose coral *Cyathophyllum diffusum* sp.n. from the Upper Frasnian marly limestones of the Holy Cross Mts., Central Poland, is described. The new species has got dispersed trabeculae in the peripheral parts of the septa. Distally convex blisters, i.e. the intraseptal dissepiments, connect the dispersed trabeculae of a septum. Another type of intraseptal dissepiments is

- demonstrated in the species *lowaphyllum mutabile* Tsien 1977, from the Frasnian limestones of the same region; in this species the intraseptal dissepiments disrupt the continuity of the trabeculae and are the particular type of lonsdaleoid dissepiments¹";
- 464 s[461] = "GALLE A. (1981).- Rugose corals of the slopes of Bohemian Massif in the regions South.- Biostratigrafie Paleozoika na jihovýchodni Morave 2: 59-66.- FC&P 11-2, p. 26, ID=1829^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Czech Republic, Moravia^Givetian and Frasnian rugose corals are recorded in boreholes between Brno and Hodonin.¹";
- 465 s[462] = "KRAMER T. (1982).- Cerioide Rugosa aus dem Devon der Bergisch Gladbach - Paffrather Mulde (Rheinisches Schiefergebirge).- N. Jb. Geol. Palaeont. Mh. 1982, 1: 648-666.- FC&P 12-1, p. 31, ID=1898^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M U; Geography: Germany, Rhenish Mts^Eine Bestandsaufnahme der im Mittel- und Oberdevonprofil der Bergisch Gladbach-Paffrather Mulde vorkommenden cerioiden, rugosen Blockkorallen erforderte eine Revision einiger in die Gattung *Hexagonaria* Guerich 1896 bzw. *Disphyllum* de Fromentel 1861 gestellten Arten. Viele dieser Arten lassen sich weder auf *Hexagonaria* Guerich noch auf *Disphyllum* de Fromentel beziehen. Deshalb war die Einfuehrung einer neuen Gattung (*Pseudohexagonaria* n.g.) erforderlich. Eine streng an der Typus-Art *H. hexagona* (Goldfuss 1826) orientierte Definition ergab, dass *Hexagonaria* Guerich im europaischen Devon auf die Frasne-Stufe (Oberdevon) beschaenkt ist. Im Arbeitsgebiet kommt nur die Typus-Art *H. hexagona* (Goldfuss) vor, und zwar in den Refrather Schichten. [A revision of some species attributed to *Hexagonaria* Guerich 1896 respectively *Disphyllum* de Fromentel 1861 shows that many of them must be referred to a new genus (*Pseudohexagonaria* n.g.). With a definition strictly related to the type-species (*H. hexagona* (Goldfuss 1826), *Hexagonaria* Guerich is restricted in Europe to the Frasnian (= Adorf-Stufe; U. Devonian). Only the type-species *H. hexagona* (Goldfuss) occurs in the Devonian sequence investigated].¹";
- 466 s[463] = "WEYER D. (1982).- Thecaxon (Anthozoa, Rugosa) im Oberdevon von Steinach (Thueringer Schiefergebirge).- Hallesches Jb. Geowiss. 7: 111-116.- FC&P 12-1, p. 34, ID=1906^Topic(s): ; Rugosa, Thecaxon; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Thuringia^Thecaxon *rozkowskiae* Weyer 1978, is a typical coral of the *Cheiloceras*-stage (Lower Famennian) along the entire Southeast flank of the Schwarzburg anticline (Saxothuringicum) and it is also traceable in the Upper Devonian area of Steinach as well as in the Saalfeld Bohlen profile.¹";
- 467 s[464] = "COEN-AUBERT M. (1982).- Massive and solitary rugose corals from the upper part of the Givetian and the Frasnian of Belgium.- Papers on the Frasnian Givetian boundary [Geological Survey of Belgium]: 65-69.- FC&P 12-1, p. 38, ID=1911^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Ardennes¹";
- 468 s[465] = "COEN-AUBERT M. (1982).- Rugueux solitaires du Frasnien de la Belgique.- Bulletin de l'Institut royal des sciences naturelles de Belgique, 54, 6, 1-65.- FC&P 12-1, p. 38, ID=1912^Topic(s): solitary, taxonomy; Rugosa, solitary; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes¹";
- 469 s[466] = "TSYGANKO V.S. (1981).- Devonskie rugozy severa Urala.- Nauka, Leningrad: 120 pp., 58 pls.- FC&P 12-1, p. 39, ID=1918^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Urals^The work concerns the Rugosa - group of fossil [corals] important for stratigraphy of the Devonian of western slopes of Polar Urals and of Pay-Khoy. Described are 94 rugosan species of 57 genera, classified

into 29 families; 2 families, 9 genera and 23 species are new and are based on the author's material. Analyzed are stratigraphic and geographic distribution of corals, and their ecology. Zonation pattern is established with assemblages characteristic of: * Ovinparm horizon of the Lochkovian; * Pragian and Zlichovian; * Koyven and Bia horizons of the Eifelian; * Afoniya and Cheslav horizons of the Givetian; * Lower, Middle and Upper substages of the Frasnian. [translated from the original Russian summary]^1";

470 s[467] = "ROHART J.-C. (1987).- Rugueux givéliens et frasnien de Ferques, Boulonnais - France.- Biostatigraphie du Paléozoïque 7 [BRICE D. et al. (eds)]: 231-296.- FC&P 16-1, p. 20, ID=1935^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: France, Boulonnais^À partir des récoltes banc par banc, 39 espèces parmi les plus communes sont décrites et figurées dont 9 nouvelles et 4 laissées en nomenclature ouverte.'étude historique montre que 2 seulement avaient déjà été citées dans le Boulonnais et que la plupart des 47 noms anciens attribués aux rugueux boulonnais jusqu'ici (tableau 1) doivent être abandonnés. La repartition stratigraphique est résumée dans le tableau 2. La série stratigraphique qui a livré des rugueux s'étend de la Zone à ensensis supérieure (Givélien) à la Zone supérieure à asymmetricus (Frasnien). Les Disphyllidés dominent tant en nombre d'espèces qu'en nombre d'individus. La plupart des formes possèdent une extension stratigraphique limitée comparable à celle qu'elles ont dans des régions voisines. Au Givélien, quelques espèces sont communes avec le Massif Schisteux Rhéan; au Frasnien, c'est avec l'Ardenne et la Pologne que l'on remarque les plus grandes affinités. Mais la valeur de ces observations est limitée par la connaissance incomplète que l'on a des faunes coralliennes européennes spécialement au Givélien et en Allemagne. La succession des faunes de rugueux, mise en évidence par Galle (1985), en Moravie, se retrouve en gros; dans le Boulonnais au niveau générique mais les espèces typiques sont différentes. La partie systématique décrit les 39 espèces suivantes placées dans 22 genres en portant, chaque fois que cela est possible, une attention particulière à la variation et à la structure fine; Lythophyllum secundum secundum (Goldfuss 1826), L. secundum conistructum (Quenstedt 1879), L. secundum pseudoseptatum (Schulz 1883), Mesophyllum cristatum (Schlueter 1882), Metrioplexus richteri Glinski 1963, M. sp. cf. carinatus Rozkowska 1969, Catactotoechus variabilis n.sp., Tabulophyllum smithi Tsien 1976, T. sylvaticum n.sp., T. vorticis n.sp., Acanthophyllum concavum (Walther 1928), Ellesmerelasma ? sp. cf. diluvianum (Wedekind 1925), Stringophyllum isactis (Frech 1886), Gaofengophyllum cf. longiseptatum (Bulvank 1958), Columnaria ? sp. cf. junckerbergiana Glinski 1955, Disphyllum rugosum (Wedekind 1922), D. pashiense (Soshkina 1939), D. lazutkini (Ivaniya 1953), D. gradatum Tsien 1970, D. grabau Tsien 1970, Pseudohexagonaria amanshauseri (Glinski 1955), P. glinskii (Tsien 1977), Disphyllia wangi (Tsien 1977), D. hamoriensis (Tsien 1977), D. periclada (Kraemer 1982), D. magnei n.sp., Aristophyllum lemaitreae n.sp., Hexagonaria marmini (Milne-Edwards et Haime 1851), H. mirabilis Moenke 1954, Hexagonaria mae Tsien 1977, H. mireillae n.sp., Cystohexagonaria defecta n.sp., Temnophyllum longiseptatum (Lurette 1984), Truncicarinulum blacourti n.sp., Thamnophyllum caespitosum (Goldfuss 1826), T. kozlowskii (Rozkowska 1953), Peneckiella fascicularis (Soshkina 1939), Cyathophyllum briceae n.sp. et spinophyllum arduum (Lurette 1985). 2 genres inconnus en Europe jusqu'ici sont cités: Ellesmerelasma ? et Gaofengophyllum. Cystohexagonaria nov. gen. est établi.^1";

471 s[468] = "WRZOLEK T. (1987).- Rozkowskaella, a new name for Devonian tetracoral Trigonella Rozkowska, 1980.- Acta Palaeontologica Polonica 31, 3-4: 277. [imprint 1985].- FC&P 16-2, p. 22, ID=1940^Topic(s): nomenclature; Rugosa, Rozkowskaella;

- Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^Rozkowska (1980) established the genus Trigonella for a Frasnian tetracoral from the Swietokrzyskie Mts. (= Holy Cross Mts., Poland), choosing as the type species T. sandaliformis Rozkowska 1980. The name was subsequently used by Hill (1981: F740). Professor Jerzy Fedorowski has drawn my attention to the fact that the name Trigonella has been preoccupied for a modern bivalve by da Costa 1778 (fide Moore 1969: N595). Therefore, I propose the new name Rozkowskaella, in honour of late Maria Rozkowska, an eminent Polish student of Rugosa. The type species and its type specimen remain the same, as it was indicated by Rozkowska (1980: 24, fig. 4, pl. 2: 6 a-c) [full text].^1";
- 472 s[469] = "BIRENHEIDE R. (1986).- Neue rugose Korallen aus den W-deutschen Ober-Devon.- Senckenbergiana lethaea 67: 1-31.- FC&P 16-1, p. 57, ID=1946^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian U; Geography: Germany W^^1";
- 473 s[470] = "GALLE A. (1987).- Rugose corals from the Mokra Cement Works quarry east of Brno (Famennian, Palmatolepis crepida Zone).- Vest. Vstr. Ust. geol. 62, 1: 35-40.- FC&P 16-1, p. 57, ID=1949^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Czech Republic, Moravia^^1";
- 474 s[471] = "BIRENHEIDE R. (1987).- Erster Nachweis der rugosen Korallengattung Moravophyllum aus dem Ober-Eifelium der Eifel.- Senckenbergiana lethaea 67, 5/6: 459-466 [in German, with English summary].- FC&P 16-2, p. 16, ID=2034^Topic(s): new records; Rugosa, Moravophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Rhenish Mts^From the Upper Eifelian of the Dollendorf syncline (Eifel hills, W Germany) the solitary rugose coral Moravophyllum oliveri n.sp. is described and figured. By this the occurrence of the genus Moravophyllum Kettnerova 1932 is recorded for the first time from Middle Devonian strata of W Europe; up to now Moravophyllum has been described only from so-called Givetian of Moravia (CSSR) and N America.^1";
- 475 s[472] = "COEN-AUBERT M. (1987).- Nouvelles sous-especes de Phillipsastrea hennahi (Lonsdale W. 1840) dans le Frasnien superieur de la Belgique.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 56: 45-55.- FC&P 16-2, p. 16, ID=2036^Topic(s): new taxa; Rugosa, Phillipsastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^Phillipsastrea hennahi falsa n. subsp. is described from nodular limestones of late Frasnian age in the Philippeville and Vise Massifs. P. hennahi ranciae n. subsp. is described from two bioherms (&red marble& reefs) of the uppermost Frasnian at Rance. The two new subspecies are associated with Frechastraea pentagona minima (Rozkowska M. 1953).^1";
- 476 s[473] = "COEN-AUBERT M. (1987).- Description de deux especes de Wapitiphyllum McLean R. A. et Pedder A. E. H. 1984 recoltées dans le Frasnien de Huccorgne, au bord nord du Bassin de Namur.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 56: 57-65.- FC&P 16-2, p. 16, ID=2037^Topic(s): ; Rugosa, wapitiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^In the middle part of the Frasnian at Huccorgne, on the northern border of the Namur synclorium, the genus Wapitiphyllum McLean R. A. et Pedder A. E. H. 1984 is represented by two species unknown up to now elsewhere in Belgium. The genus is used as a replacement name for Donia Soshkina E. D. 1951 homonymous of Donia Oudemans A. C. 1939.^1";
- 477 s[474] = "LUTTE B.-P. (1987).- Glossophyllum-Arten aus dem Mittel-Devon der Eifel (Rugosa; Rheinisches Schiefergebirge).- Senckenbergiana lethaea 67, 5/6: 433-457 [in German, with English summary].-

- FC&P 16-2, p. 19, ID=2043^Topic(s): ; Rugosa, Glossophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^The present paper deals with the description of four species of Glossophyllum wedekind 1924 from the Middle Devonian of the Rhenish Massif (Eifel District). One of these, the Lower Givetian Glossophyllum soetenicum (Schlueter 1885), is revised and a lectotype is chosen. The Middle Givetian Glossophyllum ceratites (Goldfuss 1826) is also documented and Glossophyllum sp. A and Glossophyllum sp. B are described for the first time from the Middle Givetian Kerpen Formation of the Soetenich Syncline (N Eifel).^1";
- 478 s[475] = "LUTTE B.-P., OEKENTORP K1. (1988).- Rugose Korallen aus der Curten-Formation (Givetium) der Sotenicher Mulde (Rheinisches Schiefergebirge, Nord-Eifel).- N. Jb. Palaeont. Abh. 176, 2: 213-243 [in German, with English summary].- FC&P 17-1, p. 23, ID=2129^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^Description of Cyathophyllum (Cyathophyllum) dianthus, Disphyllum caespitosum, D. geinitzi, D. sp. A, D. sp. B, Argutastrea quadrigemina, A. sp. A, Thamnophyllum cf. caespitosum, Temnophyllum latum, Mesophyllum (Cystiphyllodes) sp. V, M. (Cy.) secundum pseudoseptatum, M. (Cy.) secundum conistructum, M. (Cy.) antilimbatum, Stringophyllum acanthicum, S. buchelense. This association - typical for the lower Givetian of the northern Eifel district - is discussed and compared with faunas from other Devonian districts.^1";
- 479 s[476] = "LUTTE B.-P., OEKENTORP K1. (1988).- Die stratigraphische Verteilung der solitaren Rugosa im Givetium (Mittel-Devon) der Eifel (Rheinisches Schiefergebirge).- Newsletter for Stratigraphy 20, 1: 29-42 [in German, with English summary].- FC&P 17-2, p. 29, ID=2185^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^In the present paper the distribution of the solitary rugose corals in the Givetian of the Eifel District (Rhenish Slate Mountains) is shown and all known taxa are discussed. Rugose corals had also been tested for stratigraphical use within the Givetian and for correlation with other Middle-Devonian areas.^1";
- 480 s[477] = "BOULVAIN F., COEN-AUBERT M., TOURNEUR F. (1988).- Sedimentologie et coraux du bioherme de marbre rouge frasnien ("F2j") de Tapoumont (Massif de Philippeville).- Annales de la Societe geologique de Belgique 110: 225-240.- FC&P 18-1, p. 13, ID=2203^Topic(s): reefs sedimentology; reefs, Anthozoa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^1";
- 481 s[478] = "OLIVER W.A.jr, SORAU F. J.E. (1988).- Heliophyllum Hall and Charisphyllum n.gen. (Devonian rugose corals) of the Cantabrian Mountains (NW Spain).- Trabajos de Geologia 17: 3-17.- FC&P 18-1, p. 41, ID=2274^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Spain, Cantabrian Mts^Specimens of two species of Heliophyllum (H. chengi n.sp. and H. sp. cf. H. halli E. and H.) and a third species (Charisphyllum altevogti n.gen., n.sp., family? Charactophyllidae) with some heliophylloid characters are described from Middle Devonian strata on the NW coast of Asturia, Spain (Cantabrian coast, near Gijon). Heliophyllum seems to have been restricted to the Eastern American Realm during the Emsian but became widespread during Middle Devonian time. The genus may have included two morphologic groups characterized by attenuate and dilated septa respectively.^1";
- 482 s[479] = "WEYER D. (1989).- Neaxon muensteri, eine neue Koralle aus dem europaeischen Ober-Famenne.- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 14: 3-16.- FC&P 18-1, p. 41, ID=2275^Topic(s): new taxa; Rugosa, Neaxon; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography:

- Europe, Central^The new species *Neaxon muensteri* is described from micritic cephalopod limestones of both Clymenia-Stufe and Wocklumeria-Stufe. Records are from German Democratic Republic (Buschteich section, Thuringia), from Austria (Weihermuehle section near Graz), and from Poland (Dzikowiec / Ebersdorf section, Lower Silesia). It is the fourth representative of the ahermatypic genus within Upper Famennian aphotic deep water facies.^1";
- 483 s[480] = "COEN-AUBERT M., PLUSQUELLEC Y. (2007).- Nouvelles especes du genre *Phillipsastrea* d'Orbigny, 1849 (Rugosa) dans le Givetien superieur de la Rade de Brest (Massif Armoricain, France).- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 77: 63-75.- FC&P 35, p. 50, ID=2333^Topic(s): new taxa; Rugosa, *Phillipsastrea*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: France, Armorique^Two new species of rugose corals, namely *Phillipsastrea kergarvanensis* n.sp. and *P. morzadeci* n.sp., are described in detail and have been collected at Kergarvan in Plougastel-Daoulas lying in the Rade de Brest, at the western border of the Median Synclinorium, Armorican Massif, France. They come from the lower to the middle part of the Kergarvan Formation which belongs to the Upper Givetian, in the Schmidtognathus hermanni-Polygnathus cristatus conodont Zone. This discovery completes the palaeobiogeographic distribution of the genus *Phillipsastrea* d'Orbigny, 1849 that occurs in the Upper Givetian as an ubiquitous taxon, though well established at the North Gondwana and South Laurussia margins.^1";
- 484 s[481] = "GALLE A. (2007).- *Spinophyllum wedekind*, 1922 (Anthozoa, Rugosa) in the Lower Givetian (Devonian) of Bohemian Massif.- Bulletin of Geosciences 82, 2: 133-144.- FC&P 35, p. 53, ID=2337^Topic(s): Rugosa, *Spinophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Czech Republic, Bohemian Massif^The rugose coral genus *Spinophyllum wedekind*, 1922 occurs in Moravia (*S. conicum* Kettnerová, 1932 and *S. ondra* sp.nov.). Its most peculiar character is coarse septal trabeculae displaying double bend of charactophyllids. In this, it resembles *Charisphyllum oliver* & Sorauf, 1988, synonymized with *Spinophyllum*. *Spinophyllum* sp. cf. *conicum* Kettnerová, 1932 known from Koneprusy Acanthopyge Limestone of Prague Basin has its slender septal trabeculae arranged in half-fan or asymmetrical fan and do not belong to *Spinophyllum*. The fine structures of rugose corals are repeating at the same taxa in various preservational environments. It seems to prove that these fine structures are at least based on the structures which originated through the life of corals. The mentioned fine structures were considered important diagnostic feature in the present paper.^1";
- 485 s[482] = "MAY A. (2007).- Reply to the critical review of Francisco Soto on the paper by A. May "*Radiastraea* (Anthozoa, Rugosa) from the Emsian and Eifelian (Devonian) of Aviaados, Northern Spain".- Bulletin of Geosciences 82: 293-296.- FC&P 35, p. 54, ID=2340^Topic(s): Rugosa, *Radiastraea*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: Spain, Cantabrian Mts^^1";
- 486 s[483] = "SOTO F. (2007).- Critical review of the article published by Andreas May (2006): "*Radiastraea* (Anthozoa, Rugosa) from the Emsian and Eifelian (Devonian) of Aviaados, Northern Spain".- Bulletin of Geosciences 82: 291-292.- FC&P 35, p. 59, ID=2353^Topic(s): polemical paper; Rugosa, *Radiastraea*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: Spain, Cantabrian Mts^^1";
- 487 s[484] = "SOTO F., SCHRODER S. (2007).- Lower Devonian rugose corals faunas from the Cantabrian Mountains (NW Spain): phases of development and response to sea-level fluctuations.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 199-213.- FC&P 35, p. 59, ID=2354^Topic(s): biozonation, eustacy; Rugosa; Systematics: Cnidaria; Rugosa;

- Stratigraphy: Devonian L; Geography: Spain, Cantabrian Mts^1";
- 488 s[485] = "SUDKAMP W.H. (2007).- An atypical fauna in the Lower Devonian Hunsrück Slate of Germany.- Paläontologische Zeitschrift 81: 181-204.- FC&P 35, p. 59, ID=2355^Topic(s): ; Rugosa, Volgerophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Germany, Rhenish Mts^[paper in English with German abstract; contains description of the new genus Volgerophyllum]^1";
- 489 s[486] = "COEN-AUBERT M. (1989).- Representants des genres Sociophyllum Birenheide 1962 et Beugniesastraea n.gen. a la base du Calcaire de Givet de Pondrome et de Resteigne (bord sud du Bassin de Dinant, Belgique).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 68: 5-31.- FC&P 18-2, p. 13, ID=2458^Topic(s): ; Rugosa, Sociophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Ardennes^Spongophyllum kunthi Schlueter 1880, type species of the genus Beugniesastraea n.gen. has been sampled at the base of the Givet Limestone from Resteigne, with B. parvistella (Schlueter 1882). In this locality and at Pondrome, Sociophyllum elongatum (Schlueter 1881), S. torosum (Schlueter 1881) and S. birenheidei n.sp. occur in the same level. Four of these taxa characterize the Loogh Formation, at the base of the Givetian from the Eifel Hills in Germany. The Couvinian species Beugniesastraea varia (Schlueter 1889) is also described.^1";
- 490 s[487] = "BIRENHEIDE R. (1988).- Middle / Upper Devonian boundary coral stratigraphy in the Rhenish Mountains of W Germany.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillian N. J., Embry A. F. & Glass D. J. (eds): Devonian of the world], III: 141-145.- FC&P 18-2, p. 29, ID=2467^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv/Fra; Geography: Germany, Rhenish Mts^Since investigations of Frech (1885, 1886), Paeckelmann (1913) and Walther (1928), only sporadic work has been done on the coral faunas of the Middle / Upper Devonian boundary beds of the Rhenish Mountains. Recent studies based on new material mainly collected by the author yielded the following results: Whereas rugose corals of the upper Givetian time-equivalent Kerpen, Buechel and Schwelm Formations are relatively abundant and well known also at comparable stratigraphic levels all over the world, they become rare in uppermost Givetian and lowermost Frasnian beds. Such units are represented in W. Germany by the wallersheim Formation (Eifel hills), the "Grenzschiefer" (Walheim, near Aachen), the "Plattenkalk" (Upper Bergisch Land), and the "Flinz" and Dorp Limestones (Lower Bergisch Land, Sauerland). These transitional units with thickness of more than one hundred metres at some localities contain rugose corals which proved to be Middle / Upper Devonian mixed faunas; moreover there is some difference between the coral faunas of the lower and upper parts of the transitional successions. In the lower parts corals of the Middle Devonian genera Acanthophyllum, Grypophyllum and Battersbyia (or Fasciphyllum) are still present, whereas stringophyllids are entirely lacking. Temnophyllum and allied forms as well as different "caespitosans" also occur, but seem to be of little stratigraphic value for a boundary discrimination. In the Lower "Plattenkalk" we also meet the last (?) representatives of Disphyllia and the first specimens of probably wapitiphyllum. At other outcrops which apparently represent the middle part of the transitional succession, a more or less mixed fauna is present; the previously mentioned genera are still recorded, but now more Upper Devonian elements appear for the first time, with rare specimens of Tabulophyllum sensu stricto (broad tabularium, no fossula) and of Pexiphyllum. Finally, in outcrops of the upper parts of the transitional beds the first representatives of the massive coral species Hexagonaria hexagona (= sedgwicki of Paeckelmann),

- Phillipsastrea hennahi and Frechastraea sanctacrucensis occur, accompanied by small as well as large specimens of Pexiphyllum. These upper parts often contain brachiopods and sometimes also trilobites of Upper Devonian character. But we also found in them the very last representatives (one specimen respectively) of the Middle Devonian genera Acanthophyllum (probably n.sp.) and Cystiphyllodes.¹¹;
- 491 s[488] = "LUTTE B.-P., GALLE A. (1989).- Erster Nachweis der Gattung Amplexocarinia (Rugosa) im Eifelium der Nord-Eifel (Rheinisches Schiefergebirge).- Paläontologische Zeitschrift 63, 3-4: 165-176.- FC&P 18-2, p. 33, ID=2478^Topic(s): new records; Rugosa, Amplexocarinia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^The rugose coral genus Amplexocarinia Soshkina 1928 is recorded for the first time from the Freilingen Formation (Upper Eifelian) of the Soetenich syncline (North Eifel, Rheinisches Schiefergebirge). A new species, Amplexocarinia freilingensis, is described, figured and compared to Amplexocarinia sp. from Eifelian/Givetian boundary beds of Moravia (Czechoslovakia) and to similar forms from different Devonian strata. Some remarks concerning the stratigraphy of the Freilingen Formation are given.¹¹;
- 492 s[489] = "WRZOLEK T. (1989).- Tetracoral zonation of the stromatoporoid-coral limestones, southwestern Holy Cross Mts, Poland.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillan N. J. et al. (eds): Devonian of the World], 3: 413-423.- FC&P 19-1.1, p. 32, ID=2608^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Poland, Holy Cross^^1";
- 493 s[490] = "BIRENHEIDE R., LUTTE B.-P. (1990).- Rugose Korallen aus dem Mittel-Givetium (Mittel-Devon) des Rheinischen Schiefergebirges.- Senckenbergiana lethaea 70, 1/3: 1-28. [in German, with English summary].- FC&P 19-1.1, p. 46, ID=2652^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^From different localities of the Middle Givetian (Middle Devonian) of the Rheinische Schiefergebirge the following species of rugose corals are described: Spinophyllum spongiosum (Schlueter 1889), Mictophyllum schlueteri n.sp., Temnophyllum cf. ornatum Walther 1928, Disphyllum sp., Grypophyllum denckmanni Wedekind 1922, Grypophyllum postprimum n.sp. (with two subspecies), Acanthophyllum sp. of the group vermiculare / concavum, Mesophyllum (Mesophyllum) vesiculosum cf. vesiculosum (Goldfuss 1826) and Mesophyllum (Cystiphyllodes) secundum secundum (Goldfuss 1826). A lectotype is designated for Spinophyllum spongiosum, and the morphological variability of this species is demonstrated by means of thin section figures. The occurrence of the genus Mictophyllum Lang & Smith 1939 in W. Germany is recorded for the first time.¹¹;
- 494 s[491] = "COEN-AUBERT M. (1990).- Description de quelques Rugueux coloniaux du Couvinien superieur de Wellin (bord sud du Bassin de Dinant, Belgique).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 59: 15-35.- FC&P 19-2.1, p. 9, ID=2727^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Ardennes^The X Formation is intercalated at the top of the Couvinian from Wellin, between the Jemelle and Hanonet Formations and consists of crinoidal limestones rich in stromatoporoids and corals including many colonial rugose corals. Xystriphyllum pachytecum (Glinski 1955), Cyathophyllum multicarinatum n.sp., Sociophyllum semiseptatum (Schlueter 1881). S. rolfwernerii Birenheide 1979 and the solitary coral Stringophyllum wadilinum n.sp. are described herein. The definition of the genus Cyathophyllum Goldfuss 1826 is emended and this taxon is now restricted to the colonial forms.¹¹;
- 495 s[492] = "BIRENHEIDE R. (1990).- Untersuchungen an rugosen Korallen aus dem Bereich der Mittel-Devon/Ober-Devon-Grenze des Rheinischen Schiefergebirges.- Senckenbergiana lethaea 70, 4/6: 259-295.-

FC&P 19-2.1, p. 28, ID=2745^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv/Fra; Geography: Germany, Rhenish Mts^Since the investigations of Frech (1885, 1886), Paeckelmann (1913) and C. Walther (1928, 1929), only sporadic work has been done on the coral faunas of the Middle/Upper Devonian boundary beds of the Rheinische Schiefergebirge. Recent studies, mainly based on new material, have yielded the following results. Whereas rugose corals of the Middle Givetian, roughly time-equivalent Kerpen, Buechel and Schwelm Formations are relatively abundant and well-known, also from comparable stratigraphic levels nearly all over the world, they become rare in uppermost Givetian and lowermost Frasnian beds. Such units are represented in W Germany by the Wallersheim Formation (Eifel hills, Pruem Syncline), the "Grenzschiefer" beds (Walheim, near Aachen), the Plattenkalk and Hornstein levels (Bergisches Land), as well as the Flinz and Dorp Limestones (N Bergisches Land and Sauerland). These transitional units, which are more than one hundred metres thick at some localities, contain rugose corals which proved to be Middle/Upper Devonian mixed faunas; moreover, there is some difference between the coral faunas of the lower, middle, and upper parts of the transitional successions. In the lower parts, corals of the Middle Devonian genera Acanthophyllum, Grypophyllum, and Battersbyia (or Fasciphyllum) are still present, whereas Stringophyllum is entirely lacking. Temnophyllum and allied forms, as well as different Disphyllum (Disphyllum) colonies of the caespitosum species group (with a tendency to Temnophyllum-like septal structures) also occur, but they seem to be of little stratigraphic value for a boundary discrimination. In the Lower Plattenkalk of the Paffrath Syncline the last (?) representatives of Disphyllia and the first (?) specimens of the genus Wapitiphyllum occur. At other outcrops which apparently represent the middle part of the transitional succession there is a more or less mixed fauna: the genera cited above are still recorded, but some characteristic Upper Devonian faunal elements appear for the first time with rare specimens of Tabulophyllum s. str. (with broad tabularium and without fossula), and of Pexiphyllum. Finally, in outcrops of the upper parts of the transitional beds, the first representatives of the massive coral species Hexagonaria hexagona and the (sub)genera Phillipsastrea, Frechastraea (Scruttonia) and Haplothecia (Kuangxiastraea) occur, accompanied by both small and large specimens of Pexiphyllum, and at the level of the "Grenzschiefer" beds of Walheim even a representative of the Chinese subgenus Disphyllum (Pseudodisphyllum) is recorded. These upper parts often contain brachiopods and sometimes also trilobites of distinctly Upper Devonian character, however, the very last representatives (one specimen respectively) of the Middle Devonian genera Acanthophyllum (probably a new species) and Cystiphyllodes also occur.^1";

496 s[493] = "COEN-AUBERT M., LUTTE B.-P. (1990).- Massive rugose corals from the Middle Devonian of the North Eifel Hills (Rheinisches Schiefergebirge, west Germany).- Geologica et Palaeontologica 24: 17-39.- FC&P 19-2.1, p. 30, ID=2746^Topic(s): ; Rugosa, Pseudohexagonaria; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Eifel^The definition of the genus Pseudohexagonaria Kraemer 1982 is emended on the basis of the revision of its type species P. philomena (Glinski 1955). In addition, P. brevisseptata (Glinski 1955) is described from the Rohr Member of the Upper Eifelian Junkerberg Formation; P. amanshauseri (GLINSKI, 1955) and P. parallaxa (GLINSKI, 1955) are placed in synonymy with P. brevisseptata. For comparison, two species of the genus Argutastrea Crickmay 1960, A. quadrigemina (Goldfuss 1826) and A. tenuiseptata n.sp., are investigated from the Lower Givetian Rodert Formation and the Middle Givetian Kerpen Formation.^1";

497 s[494] = "LUTTE B.-P. (1990).- Horn- und kegelformige rugose Korallen

- aus dem Mittel-Devon der Eifel.- Senckenbergiana lethaea 70, 4/6: 297-395. [in German, with English summary].- FC&P 19-2.1, p. 31, ID=2748Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Eifel^Twenty taxa of cornute and conical rugose corals are described from Middle Devonian deposits of the Eifel district, mainly from the Givetian of the Soetenich Syncline (north Eifel, Rhenish Massif). The corals belong to the families Cyathaxoniidae, Cystiphyllidae, Hapsiphyllidae, Ptenophyllidae and Cyathophyllidae, and the following species are new: Cyathophyllum (Cyathophyllum) trochiforme, Soetenia struvei, Mictrophyllum duesterbergense, Glossophyllum varioseptatum, Glossophyllum schoupeei, Glossophyllum dachsbergense and Schlueteriphyllum parvum. A lectotype is designated for Adradosia incurva (Schlueter 1884). The stratigraphic distribution of the described species is discussed and the evolution of the family Cyathophyllidae is reviewed.^1";
- 498 s[495] = "COEN-AUBERT M. (1990).- Deuxieme note sur les Rugueux coloniaux de l'Eifelien superieur et de la base du Givetien a wellin (bord sud du Bassin de Dinant, Belgique).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 60: 5-28.- FC&P 20-1.1, p. 13, ID=2786Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif / Giv; Geography: Ardennes^The following species are described herein: Neomphyma delicata n.sp. and Lyrielsma mutabilis (Tsyganko 1977) from the Upper Eifelian; Thamnophyllum schoupeei Scrutton 1968 from the top of the Eifelian; Centristela fasciculata Tsyganko 1967, Beugniesastraea conili n.sp., Columnaria intermedia n.sp., Neomphyma delicata and Lyrielsma sp. A from the base of the Givetian. Moreover, the correlations between the sections of wellin and Resteigne emphasize the diachronism present at the base of the Givet Limestone.^1";
- 499 s[496] = "MAY A. (1989).- Die rugose Koloniekoralle Argutastrea aus dem Massenkalk (Devon) des Honnetals (Rechtsrheinisches Schiefergebirge).- Dortmunder Beitr. Landeskd, naturwiss. Mitt. 24: 101-108. [in German, with English summary].- FC&P 20-1.1, p. 57, ID=2827Topic(s): ; Rugosa, Argutastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^The Asbeck quarry in the Honne valley south of Oberrodinghausen (Western Sauerland; Eastern Rhenish Schiefergebirge) shows a more than 500 m mighty fossiliferous lagoonal Massenkalk (limestone) of Givetian (Middle Devonian) age. In the lower part of the sequence a corallum of the compound rugose coral Argutastrea (Pseudohexagonaria) brevisapta (Glinski 1955) has been found. It is the first proof of this species in the Givetian of the Rhenish Schiefergebirge.^1";
- 500 s[497] = "WEYER D. (1991).- Pseudopetraia Soshkina 1951 (Anthozoa, Rugosa) aus dem Unterdevon des Thuringischen Schiefergebirges.- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 15: 9-24.- FC&P 20-2, p. 49, ID=2914Topic(s): ; Rugosa, Pseudopetraia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Germany, Thuringia^^1";
- 501 s[498] = "WEYER D. (1991).- Rugosa (Anthozoa) aus dem Unter-Famenne von Rubeland (Harz).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 15: 25-43.- FC&P 20-2, p. 49, ID=2915Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Harz^^1";
- 502 s[499] = "COEN-AUBERT M., WRZOLEK T. (1991).- Redescription of the rugose coral Macgeea (Rozkowskaella) sandaliformis (Rozkowska 1980) from the Upper Frasnian of the Holy Cross Mountains (Poland).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 61: 5-19.- FC&P 20-2, p. 49, ID=2919Topic(s): ; Rugosa, Macgeea; Systematics:

- Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^The discovery of horseshoe dissepiments at the base of some coralla of *Trigonella sandaliformis* Rozkowska 1980, type species of *Rozkowskaella wrzolek* 1987 from the Upper Frasnian of Poland, leads to consider this taxon as subgenus of *Macgeea* Webster 1889. Moreover, *Debnikiella rozkowska* 1980, whose type species is *D. formosa* Rozkowska 1980 also from the Upper Frasnian of Poland, can probably be placed in synonymy with *Rozkowskaella*. For comparison, a few topotypes of *Pachyphyllium solitarium* Hall & Whitfield 1873, type species of the genus *Macgeea* are described.^1";
- 503 s[500] = "FUCHS A. (1991).- Bemerkungen zur conodontenstratigraphischen Position einiger devonischer rugoser Korallen des Elbingeroder Riffkomplexes (Harz).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 15: 3-8.- FC&P 20-2, p. 51, ID=2922^Topic(s): biostratigraphy; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Germany, Harz^The conodont-stratigraphic position of some Devonian rugose corals of the Elbingerode Reef Complex has been obtained. *Marisastrum hercynicum*, *Haplothecia schlotheimi* and *Medusaephyllum ibergense* have been observed in the Lower asymmetric Zone. It is only possible to give an Upper Devonian age (Frasnian) for *Frechastrea carinata* and *Frechastrea frechi*. ^1";
- 504 s[501] = "COEN-AUBERT M. (1995).- Espèces du genre *Peneckiella* (Soshkina, 1939) dans le Frasnien de la Belgique.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 65: 35-49.- FC&P 25-1, p. 3, ID=2984^Topic(s): ; Rugosa, *Peneckiella*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^Four species of *Peneckiella* Soshkina, 1939 are recorded in the middle part of the Frasnian. In the Philippeville Massif, *P. isylica* (Bulvanker, 1958) and *P. fascicularis* (Soshkina, 1939) have been collected in the lower part of the Philippeville Formation. The latter species also occurs on the south side of the Dinant Synclinorium: at the base of the Bieumont Member in the Focant borehole and in the Lion Member of North Quarry at Frasnes-les-Couvin. *P. duponti* n.sp. is abundant in the intercalations of red marble located at the base of this exposure whereas *P. szulczewskii* Rozkowska, 1979 has been found at the base of the Boussu-en-Fagne Member. Several of these species are associated with *Hexagonaria mirabilis* Moenke, 1954, *Scruttonia balconi* Coen-Aubert, 1980 and *S. focantiensis* (Tseen, 1978) senior of *S. boloniensis* minor Coen-Aubert, 1980.^1";
- 505 s[502] = "SCHRODER S. (1995).- Rugose Korallen aus der Freilingen-Formation der Dollendorfer Mulde.- *Senckenbergiana letaea* 75, 1/2: 33-75.- FC&P 25-1, p. 34, ID=3016^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^A rugose coral fauna from the Upper Eifelian (Freilingen Formation) of the Dollendorf Syncline (Eifel Hills/Rheinisches Schiefergebirge) has been investigated. All corals originated from an abandoned outcrop located in the Ahr Valley, NE Dollendorf Syncline. The determination of the coral species resulted in a relatively high number of different species which usually characterize Eifelian strata of the Eifel but were only rarely known from the Freilingen Formation. A remarkable discovery was a new species of *Heliophyllum*, herein described as *Heliophyllum (Heliophyllum) holleri* n.sp., a close relative of which is *Heliophyllum (Moravophyllum) sp.* Because of this relationship the genus *Heliophyllum* has been subdivided now into the two subgenera *Heliophyllum (Heliophyllum)* and *Heliophyllum (Moravophyllum)*. [first fragment of extensive summary]^1";
- 506 s[503] = "COEN-AUBERT M. (1996).- Rugueux Frasnien du sondage de Focant.- *Annales de la Société géologique de Belgique* 117, 1: 57-67.- FC&P 25-2, p. 13, ID=3073^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:

- Devonian Fra; Geography: Ardennes, Focant Bh^The study of rugose corals allows to date a few coral levels from the Frasnian of the Focant borehole which has reached the depth of 3208m, on the south side of the Dinant Synclinorium. These fossils occur mainly in the Grands Breux Formation, in the middle part of the stage. *Scruttonia focantiensis* (Tsien, 1978), *Hexagonaria mirabilis* Moenke 1954, *Macgeea brevissepta* (Pickett, 1967)) and *Peneckiella fascicularis* (Soshkina, 1939) are the principal species of the Bieumont Member whereas *P. szulczewskii* Rozkowska, 1979 has been found in a faulted zone of the Boussu-en-Fagne Member. Interesting facies variations appear also in the Bieumont Member which has been intersected several times.^1";
- 507 s[504] = "SCHRODER S., LUTTE B.-P., OEKENTORP K. (1996).- *Enallophrentis* (*Rugosa*, *Sipbonophrentidae*) aus dem Ober-Eifelium / Mittel-Devon der Dollendorfer Mulde (Rheinisches Schiefergebirge / Eifel).- *Geologica et Palaeontologica* 30: 15-31.- FC&P 25-2, p. 49, ID=3137^Topic(s): ; *Rugosa*, *Enallophrentis*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^The *Siphonophrentidae* Merriam 1974 are recorded with a new species of the genus *Enallophrentis* from the Devonian of the Eifel / Rhenish Mountains. *Siphonophrentids* are group of formerly endemic genera of the Eastern Americas Realm [EAR], and their distribution in the Eifel can be proved for the first time. *Enallophrentis rhenana* n.sp. was collected in the Freilingen Formation (Middle Devonian, Upper Eifelian) of the Dollendorf Syncline (Eifel) and is regarded as an example for faunal migration from the EAR into the Eifel which can be recognized especially in the Upper Eifelian. As the stratigraphic distribution of this new species is confined to the Freilingen Formation, it is useful for biostratigraphic correlation at least in the Northern Eifel.^1";
- 508 s[505] = "COEN-AUBERT M. (1992).- *Rugueux coloniaux mesodevoniens du Fondry des Chiens a Nismes* (Ardenne, Belgique).- *Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre* 62: 5-21.- FC&P 21-1.1, p. 10, ID=3193^Topic(s): taxonomy, ecology; *Rugosa*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Ardennes^The stromatoporoid reef limestone that outcrops in the Fondry des Chiens at Nismes, reaches a thickness of 70 metres and is assigned to the base of the Givetian, by conodonts. It contains rare colonies of *Neomphyma dalcqa* n.sp. and *Fasciphyllum katranicum* (Gorianov 1968). *F. conglomeratum* (Schlueter 1881), type species of *Fasciphyllum* Schlueter 1885 has been collected from the Upper Eifelian and Lower Givetian of wellin. The relations between the genera *Fasciphyllum* and *Battersbyia* Milne-Edwards & Haime 1851 are also investigated.^1";
- 509 s[506] = "BIRENHEIDE R., SOTO F. (1992).- *Rugose Einzel und Phaceloid-Korallen aus dem Ober-Givetium (Mittel-Devon) des Kantabrischen Gebirges, NW-Spanien*.- *Palaeontographica* A221, 4-6: 95-123.- FC&P 21-1.1, p. 42, ID=3213^Topic(s): ; *Rugosa*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Spain, Cantabrian Mts^From four outcrops of the Portilla Fm. and one outcrop of the Candas Fm. in the W Cantabrian Mountains 17 species and subspecies of solitary and phaceloid rugose corals are described. They belong to 15 different genera. The stratigraphical classification of four of the localities in question as Upper Givetian is confirmed by means of the identified coral faunas, and this age is also probable for the fifth locality. The rugose coral genera *Brevisseptosia* n.gen. and *Sinaxis* n.gen. are erected in this paper, moreover the following 13 new species and subspecies are described and figured: *Schindewolfia plena* n.sp., *Neaxon variabilis* n.sp., *Catactotoechus bonarensis* n.sp., *Metrionaxon transitorius* n.sp., *Famennelasma antiquum* n.sp., *Brevisseptosia pulchra* n.gen. et n.sp., *Sinaxis bulbosa* n.gen. et n.sp., *Cyathophyllum* (C.) *postarduum* n.sp., *Thamnophyllum caespitosum leonense* n.ssp., *Acanthophyllum confusum*

- n.sp., Stringophyllum buchelense cantabricum n.ssp., Stringophyllum crassimargjnatum n.sp. and Soliptera fontainei n.sp. The number of genera and species of the normally as ahermatypic classified small solitary corals without dissepimentarium is unusually great with respect to the reef facies of the Portilla Formation. A part of them even occurs together with compact flat colonies of back reef corals of the subfamily Phillipsastreinae. Moreover at other localities such small corallites also occur together with aggregates of cylindrical corals of the "reef meadows" or even together with large solitary corals. So we have to assume that the "Portilla environment" of the investigated localities was characterized by a very narrow-spaced irregular morphological pattern of its sea bottom.¹;
- 510 s[507] = "COEN-AUBERT M. (1992).- La carriere du Cimetiere a Boussu-en-Fagne.- Annales de la Societe geologique de Belgique 115, 1: 23-24.- FC#038;P 21-2, p. 7, ID=3292^Topic(s): geology; geology; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Ardennes^^1";
- 511 s[508] = "GRIGO M., LUTTE B.-P., OEKENTORP Kf. (1992).- Korallen (Rugosa) aus dem Unterdevon des nordlichen Westerwaldes (Rheinisches Schiefergebirge).- N. Jb. Geol. Palaeont. Mh. 1992, 12: 735-749.- FC#038;P 22-1, p. 32, ID=3386^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Germany, Rhenish Mts^^1";
- 512 s[509] = "LUTTE B.-P. (1993).- Rugose Korallen aus dem Grenzbereich Eifelium / Givetium in der Nord-Eifel.- Courier Forschungsinstitut Senckenberg 164: 103-108. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC#038;P 22-2, p. 12, ID=3443^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif / Giv; Geography: Germany, Eifel^The traditional Eifelian / Givetian boundary is defined by the first occurrence of the brachiopod genus Stringocephalus (boundary sensu Beyrich 1837; Struve 1961). In the Eifel Hills this boundary is located between the Upper Eifelian Ahbach and the Lower Givetian Loogh Formation. In the light of actual discussions of new definitions by means of conodonts, the distribution of rugose corals has been investigated within this stratigraphic range. In the northern Eifel Hills the Upper Eifelian is not characterised by a typical association of rugose corals. Many of the well known genera and species show a long stratigraphic range and some of them are still common in the Lower Givetian. Only a few taxa become extinct at the top of the Ahbach Formation. In the Lower Givetian the composition of the coral association changed, caused by the appearance of new taxa. The association is now dominated by small cornute corals (e.g., Schlueteriphyllum looghiense, Sch. parvum, Soetenia struvei, Aristophyllum terechovi) as well as Glossophyllum soeticum. From the point of coral development the traditional Eifelian/Givetian boundary represents a crisis in the northern Eifel Hills. The boundary is not based on the extinction of many species, but is reflected by the appearance of the Schlueteriphyllum - Glossophyllum - Association in the Lower Givetian.¹;
- 513 s[510] = "WRZOLEK T. (1993).- Variability in the Devonian tetracoral Phillipsastrea lacunosa (Gurich).- Courier Forschungsinstitut Senckenberg 164: 293-300. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC#038;P 22-2, p. 20, ID=3464^Topic(s): variability; Rugosa, Phillipsastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^Described and illustrated are over 40 colonies of Phillipsastrea lacunosa from the Upper Frasnian smithi Zone of the Holy Cross Mountains, Poland. The corals are phaceloid to pseudocerioid, with thick internal septothecae surrounding tabularia; the latter are without septa. 3 subspecies are distinguished within the material studied: Ph. lacunosa lacunosa (Guerich), predominantly phaceloid, with

- gently concave tabulae; *Ph. lacunosa smithi* (Rozkowska), typically pseudoceroid, with larger corallites; *Ph. lacunosa mariae* subsp. n., morphologically intermediate between the former subspecies, with tabulae commonly flat. Distinction of subspecies rather than species is justified by presence of forms intermediate between these three morphotypes. ^1";
- 514 s[511] = "COEN-AUBERT M., LUTTE B.-P. (1993).- Revision der rugosen Koloniekoralle *Iowaphyllum rhenanum* (Schlueter 1880) aus dem Oberdevon des Rheinischen Schiefergebirges (Deutschland).- *Paläontologische Zeitschrift* 67, 1-2: 45-61.- FC&P 22-2, p. 24, ID=3475^Topic(s): revision; Rugosa, Iowaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Germany, Rhenish Mts^The massive rugose coral *Iowaphyllum rhenanum* (Schlueter 1880) is described from the Upper Devonian (Frasnian) of Breinigerberg, in the area of Stolberg near Aachen, Germany. The holotype is compared to the material from the Les Valisettes Formation in the Philippeville Massif and from the Upper Frasnian shales of the Vesdre Massif, the latter is in the continuation of the Aachen Syncline in Belgium. All the Belgian material belongs to the Upper Palmatolepis gigas Zone and is associated with rugose corals such as *Frechastrea pentagona pentagona* (Goldfuss 1826) and *F. pentagona minima* (Rozkowska 1953). ^1";
- 515 s[512] = "WRZOLEK T. (1993).- Rugose corals from the Devonian Kowala Formation of the Holy Cross Mountains.- *Acta Palaeontologica Polonica* 37, 2-4: 217-254.- FC&P 23-2.1, p. 39, ID=3488^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Poland, Holy Cross^Rugose corals of the Givetian to Lower Frasnian Kowala limestone Formation in the environs of Checiny, SW Holy Cross Mts and in its age equivalents in the Silesian-Cracow region of Southern Poland represent five distinct assemblages of restricted time-and-space distribution. Within the Stringocephalus Beds the high diversity Pseudohexagonaria(?) laxa assemblage indicates open-shelf conditions whereas low diversity *Temnophyllum occidentale* assemblage represents restricted conditions. The transgressive Jazwica Mbr. locally contains diversified and cosmopolitan *Acanthophyllum* sp. n. fauna. Following temporally coral assemblages, i.e. *Disphyllum* (lower Sitkówka and Checiny Beds) and *Macgeea-Thamnophyllum* (Kadzielnia Mbr, upper Sitkówka Beds) are mostly biostromes of branching corals of low taxonomical diversity typical for relatively restricted setting, rather unfavorable for rugosans. Exceptional are two *Hexagonaria* horizons with common massive colonies. *Diffusolasma* gen. nov., *Sociophyllum severiacum* sp. nov., *Temnophyllum zamkowa* sp. nov. and *Hexagonaria hexagona kowalae* subsp. nov. are proposed as the new taxa. ^1";
- 516 s[513] = "GALLE A. (1993).- Middle Devonian Rugosa from Horni Benesov (Moravia, Czech Republic).- *Journal of Czech Geological Society* 38, 1-2: 59-70.- FC&P 22-2, p. 80, ID=3504^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Czech Republic, Moravia^Eight species of the rugose corals are described from the Eifelian and probably lowermost Givetian of Horni Benesov. One of them, *Thamnophyllum germanicum moravicum*, is considered new. Stratigraphical distribution of Rugosa as well as their distribution within known microfacies is given. ^1";
- 517 s[514] = "SCHRODER S. (1996).- Revision der rugosen Koralle *Macgeea bathycalyx* (Frech 1886) (Mitteldevon, Rheinisches Schiefergebirge).- *Senckenbergiana lethaea* 76, 1/2: 53-63.- FC&P 26-1, p. 63, ID=3632^Topic(s): revision; Rugosa, *Macgeea bathycalyx*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Eifel^The solitary rugose coral *Macgeea bathycalyx* (Frech 1886) from the Middle Devonian (upper Eifelian and lower Givetian) of the Eifel is revised and a neotype is designated. Whereas the corallites from the Eifel belong to the nominotypical

- subspecies, the populations from the Middle Devonian of Poland (Skaly) are included in the subspecies *Macgeea bathycalyx josephi* Rozkowska 1956.¹¹;
- 518 s[515] = "SCHRODER S. (1997).- Upper Eifelian (Middle Devonian) rugose corals of the Eifel Hills (Germany) and their relation to North American and Eastern European taxa.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 271-279.- FC&P 26-2, p. 31, ID=3719^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^Studies of Upper Eifelian (Freilingen Formation) rugose coral faunas of the Dollendorf and Blankenheim Syncline (Eifel Hills, Germany) led to the discovery of some rare and untypical coral species which are either unknown or otherwise have seldom been reported from this region up to now. They resemble typical genera of the Eastern American Realm [EAR] or have their closest relatives in Eastern Europe. A description of *Guerichophyllum* ? sp., *Enallophrentis* n.sp. A, *Heliophyllum* (*Heliophyllum*) *halleri* Schroeder and *Heliophyllum* (*Moravophyllum*) *oliveri* (Birenheide) is given and their taxonomic relation to other known genera and species within the Eifel is discussed.¹¹;
- 519 s[516] = "COEN-AUBERT M. (1997).- Rugueux solitaires pres de la limite Eifelien-Givetien a Pondrome (Belgique).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 67: 5-24.- FC&P 26-2, p. 66, ID=3745^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif / Giv; Geography: Ardennes^Acanthophyllum heterophyllum (Milne-Edwards & Haime 1851), *A. vermiculare* (Goldfuss 1826) and *Aristophyllum luetti* n.sp. are described in detail and have been mainly collected at Pondrome, Wellin and Resteigne where important facies variations appear near the Eifelian-Givetian boundary. *Acanthophyllum heterophyllum* occasionally occurs at the top of the Jemelle Formation, in the Hanonet and X Formations and also at the base of the Trois-Fontaines Formation. *A. vermiculare* is mostly characteristic of the Hanonet Formation, but is still present at the base of the Trois-Fontaines Formation. *Aristophyllum luetti* n.sp. is usually restricted to the upper part of the Hanonet Formation. Thin sections of the holotype of *Acanthophyllum heterophyllum*, type species of the genus *Acanthophyllum* Dybowski 1873, are figured for the first time.¹¹;
- 520 s[517] = "SCHRODER S. (1997).- Die Rugosen-Fauna des Eilenbergium der Dollendorfer Mulde (Mittel-Devon / Ober-Eifelium; Rheinisches Schiefergebirge / Eifel).- Geologica et Palaeontologica 31: 1-36.- FC&P 26-2, p. 67, ID=3746^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^As a further contribution to the knowledge on the Upper Eifelian coral fauna of the Dollendorf Syncline the rugose corals of the Eilenbergian (Freilingen Formation) are investigated. The fauna comprises 20 different species; three of them are new: *Spinophyllum incompositum* n.sp., *Chostophyllum dollendorfense* n.sp. and *Grypophyllum duplex* n.sp. The insufficiently known and often misinterpreted species *Kunthia crateriformis* is revised. In spite of the fact that corals are generally very rare in the brachiopod-dominated facies of the Eilenberg Member, the fauna shows a remarkable high diversity and is characterized mainly by small trochoid coral species. Next to some well known genera of the Middle Devonian of the Eifel some species restricted to Upper Eifelian strata and also species known as ahermatypical have been found. Additionally, two genera typical for the eastern North American faunal realm were recorded. The distributional patterns of some species are discussed, especially in regard to the so called "Gliniski-Linie" which marks a border for faunal exchange between the North- and South-Eifel in the Dollendorf Syncline.¹¹;
- 521 s[518] = "COEN-AUBERT M. (1998).- Thamnophyllides et Acanthophyllides pres de la limite Eifelien-Givetien a Wellin et Pondrome (Belgique).-

- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 68: 5-24.- **FC**;P 27-1, p. 68, ID=3810^**Topic(s):** Rugosa, Thamnophyllum; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Eif & Giv; **Geography:** Ardennes^Acanthophyllum tortum (Tsien 1969), Thamnophyllum germanicum Scrutton 1968, T. occlusum (Tsien 1969) and T. tsieni n.sp. are described in detail and have been mainly collected at Pondrome, Wellin and Resteigne. The type specimens from several of these species as well as the holotype of Acanthophyllum vermiculare (Goldfuss 1826) are refigured herein. Thamnophyllum germanicum has been found at the top of the Jemelle Formation. T. tsieni and T. occlusum also occur at the top of this lithostratigraphic unit, but are particularly abundant in the Hanonet Formation; moreover, T. occlusum is still present at the base of the Trois-Fontaines Formation. Acanthophyllum tortum is characteristic of the Hanonet Formation, but has also been observed in the X Formation and at the base of the Trois-Fontaines Formation. Finally, the new geological surveys near Wellin confirm the lateral changeover from the base of the Trois-Fontaines Formation to the Hanonet Formation.^1";
- 522 s[519] = "SCHRODER S. (1997).- Zur Kenntnis der Gattung Wapitiphyllum McLean & Pedder 1984 aus dem Devon der Bergisch Gladbach-Paffrather Mulde (Rheinisches Schiefergebirge & Bergisches Land).- Sonderveröffentlichungen, Geologisches Institut der Universität zu Köln 114 (Festschrift Eugen K. Kempf): 409-425.- **FC**;P 27-1, p. 75, ID=3884^**Topic(s):** Rugosa, Wapitiphyllum; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Giv Fra; **Geography:** Germany, Rhenish Mts^Two different species of the rugose coral genus Wapitiphyllum McLean & Pedder 1984 are described from the Upper Givetian (Untere Plattenkalk Formation) and the Middle Frasnian (Refrath Formation) of the Bergisch Gladbach-Paffrath Syncline. Wapitiphyllum n.sp. aff. Wapitiphyllum irregularis Kong 1978 is a typical member of the genus but Wapitiphyllum ? sp. indicates a close relationship to the Middle Devonian Argutastraea species-group.^1";
- 523 s[520] = "SCHRODER S. (1997).- Rugose Korallen aus dem & Boudersath-Riff & (Eifelium & Ahrdorf-Formation) der Blankenheimer Mulde & Eifel.- Coral Research Bulletin 05: 211-220.- **FC**;P 27-1, p. 76, ID=3885^**Topic(s):** Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Eif; **Geography:** Germany, Eifel^The rugose corals from the Boudersath-reef and the Holler-Berg in the Frohngau-Engelgau part of the Blankenheim Syncline have been investigated. The poor rugose coral-fauna is characterized by a relatively low number of species: Acanthophyllum heterophyllum, Stringophyllum cf. acanthicum, Sociophyllum elongatum, Mesophyllum (Mesophyllum) pseudoorthoceras, Mesophyllum (M.) cf. cylindricum. Therefore a comparison with other localities of & real & Niederehe-reefs of the Ahrdorfian is impossible. With the occurrence of Sociophyllum elongatum the stratigraphic range of this species in the Eifel Hills will be considerably extended.^1";
- 524 s[521] = "BERKOWSKI B. (1996).- Strunian corals - examples from Poland (in Polish with English summary).- Geologos 1: 69-78.- **FC**;P 27-2, p. 12, ID=3888^**Topic(s):** Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Fam; **Geography:** Poland^The Strunian, due to its facial character, has no significant chronostratigraphical or geochronological value. This term, however, is widely used by coral researchers because it denotes its own, characteristic coral fauna. During the crisis at the Frasnian & Fammenian boundary, a variable and rich coral fauna became strongly depleted. It was not until after the crisis, that in the zones rhomboidea and marginifera, first evolutionary impulse occurred, and after a transgression in the expansa chron, a strong development of two & eco & -groups of corals took place: (1) corals of basin facies

(fauna of the *Cyathaxonia* type), (2) corals of shallow shelf facies, the so called *Strunian corals*; (fauna of the *Canino-Clisiophyllum* type). Corals of colonial type described lately as *Calyxcorallia* Fedorowski, 1991, in particular, should also be recognized as *Strunian* corals. In Poland, three areas exist of coral occurrence in the Late Fammenian, i.e.: the Swietokrzyskie Gory Mts, the Sudetes and the Krakow region. Preliminary investigation of coral faunas of these areas allows distinguishing of two regions: 1. Swietokrzyskie Gory Mts region, where coral fauna typical of basin facies occurs; however, in the southern part of this region (Kowala locality) *Strunian* fauna of the *Canino-Clisiophyllum* type is also present. The fauna can be traced along the belt of outcrops from the Ardennes, through the Thuringen to the Swietokrzyskie Gory Mts. 2. The region of the Sudetes and the Krakow region, where an exceptional fauna of colonial corals occurs, which is typical of shallow shelf zone; its counterparts are known from China only.¹;

- 525 s[522] = "LUTTE B.-P., SCHRODER St. (1998).- Anmerkungen zur Devon-Stratigraphietabelle, B141dm97: Rugosa; Eifel.- Senckenbergiana lethaea 77, 1/2: 273-275.- FC#038;P 27-2, p. 52, ID=3912^Topic(s): stratigraphic table; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Germany, Eifel^^1";
- 526 s[523] = "COEN-AUBERT M. (1999).- Description de quelques Rugueux coloniaux de la Formation givetienne du Mont d'Haurs en Ardenne - Description of a few colonial rugose corals from the Givetian Mont d'Haurs Formation in the Ardenne.- Bulletin de l'Institut royal des sciences naturelles de Belgique, 69: 27-46.- FC#038;P 28-1, p. 32, ID=3963^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Ardennes^The Mont d'Haurs Formation, which belongs to the Lower Polygnathus varcus Zone, reaches a thickness of about 180 metres between Beauraing and Han-sur-Lesse, on the south side of the Dinant Synclinorium. *Argutastrea tenuiseptata* Coen-Aubert & Luetze, 1990, *Sociophyllum isactis* (Frech, 1886) and *S. wedekindi* n.sp. are characteristic of its lower part whereas *Sunophyllum beichuanense* He, 1978, *Argutastrea wangi* (Tsien 1978) and *wapitiphyllum laxum* (Guerich 1896) occur in its upper part. Moreover, the latter species is still present at the base of the overlying Fromelennes Formation. *Sociophyllum isactis*, *S. wedekindi* and *Sunophyllum beichuanense* are described in detail. A neotype is proposed for *wapitiphyllum laxum*, the neotype of *Sociophyllum isactis* is revised and refigured.¹;
- 527 s[524] = "PEDDER A.E.H., FEIST R. (1998).- Lower Devonian (Emsian) Rugosa of the Izarne Formation, Montagne Noire, France.- Journal of Paleontology 72, 6: 967-991.- FC#038;P 28-1, p. 34, ID=3966^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: France, Montagne Noire^An account of the systematics, biostratigraphy, ecological setting and the biogeographic implications of rugose corals from olistoliths of the Cabrieres area is given. Corals of the lower member of the Izarne Formation are dated by conodonts as gronbergi Zone age, and include *Lythophyllum* sp. indet., *Calceola sandalina* (Linne), *Tryplasma* sp. A, *Breviphrentis roharti* Pedder new species, *B. exigua* Pedder new species, and *Aqishaphyllum* sp. A. Corals from the middle member of the formation include *Frechocystis pertinax* Pedder new genus and species, *Calceola* sp. undet, *Rhizophyllum* sp. aff. *R. ukalundense* Flill and Jell, *Tryplasma enorme* Pedder new species, *Tryplasma* sp. A, *Breviphrentis* sp. A, *Platysmatophyllum halleri* Pedder new genus and species, *Pseudochonophyllum sentum* Pedder new species, and *Izarneophyllum barroisi* (Frech) new genus. No age significant conodont has been recovered from the middle member. However, scutellid trilobites, which, together with other trilobites, evidently used the underside of Izarne corals for shelter during molting, provide

correlation with conodont sequences in the nappe domain to the north and southwest of Cabrieres. From this line of evidence, the middle Izarne coral fauna is deduced to be nothoperbonus Zone in age. The association of a variety of benthic trilobites, all with large eyes, provides evidence of a photic zone environment for the middle Izarne corals. Rugose corals from the Izarne Formation belong to the Old World Realm and have nothing in common with similar age Rugosa of the Eastern Americas Realm. This implies that the dissolution of the boundary between these realms, which occurred in the Middle Devonian, did not begin before latest Emsian time.^1";

528 s[525] = "SCHRODER S. (1998).- Rugose Korallen und Stratigraphie des oberen Eifelium und unteren Givetium der Dollendorfer Mulde/Eifel. (Mittel-Devon; Rheinisches Schiefergebirge).- Courier Forschungsinstitut Senckenberg 208: 135 pp.- FC&P 28-1, p. 35, ID=3968^Topic(s): biostratigraphy; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif Giv; Geography: Germany, Eifel^The distribution of several fossil groups from the Middle Devonian of the Eifel region suggest that it may be subdivided into three "faunal regions" (North-, West-and South-Eifel). These regions are widely accepted in the literature, and the boundary between the N and S Eifel regions, which has become known as the "Glinski sche Linie", traverses the Dollendorfer Mulde in an E-W direction. Due to its central position in the Eifeler Kalkmuldenzone, the Dollendorfer Mulde is important in the recognition of Devonian faunas within the Eifel. Several taxa of brachiopods and corals are known as characteristic faunal elements of the northern Eifel and their southward distribution seems to end exactly at the "Glinski'sche Linie". However, the geology of the Dollendorfer Mulde is not adequately known, and consequently a detailed taxonomic-systematic study of its fossil content has not been undertaken. As a result detailed comparison with other Eifel synclines is currently impossible. [first part of extensive summary].^1";

529 s[526] = "COEN-AUBERT M. (1994).- Stratigraphie et systematique des Rugueux de la partie moyenne du Frasnien de Frasnies-les-Couvin (Belgique).- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 64: 21-56.- FC&P 23-1.1, p. 3, ID=4044^Topic(s): stratigraphy, taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^Ten species belonging to the genera Hexagonaria Guerich 1896, Aristophyllum Bulvanker, Spassky & Kravtsov 1975, Phillipsastrea d'Orbigny 1849, Frechastraea Scrutton 1968, Scruttonia Tcherepnina 1974, Peneckiella Soshkina 1939 and Trapezophyllum Etheridge 1899 including T. roharti n.sp. are described and figured. This material comes mainly from the Boussu-en-Fagne Member and the Neuville Formation exposed at Frasnies, Boussu-en-Fagne and Nismes. The geological surveys emphasize interesting lateral facies variations close to the second and third levels of Frasnian bioherms. The correlations with the Philippeville Massif are also considered. The investigated fauna shows strong affinities with that from the Boulonnais in France and the Holy Cross Mountains in Poland.^1";

530 s[527] = "BIRENHEIDE R. (1993).- Mitteldevonische Korallen aus dem "Sulz-Uberleitungs-Stollen" im Bergischen Land.- Geol. Jb. Hessen 121: 5-9.- FC&P 23-1.1, p. 62, ID=4134^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Bergisches Land^In the "Suelz-Conducting-Tunnel", to the Great Dhuenn Barrage, sheet Kuerten in the Bergisches Land area, a small coral fauna could be found. Its preservation allows determinations of the respective species with the result, that the geological age of the section part between Station 1400 and 805 is Lower Givetian.^1";

531 s[528] = "GALLE A. (1994).- Rugose corals of the Acanthopyge Limestone

- of Koneprusy (Middle Devonian, Barrandian, Czech Republic).- Vestnik Ceskeho geologickeho ustavu 69, 1: 41-58.- FC&P 23-1.1, p. 64, ID=4138^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Czech Republic, Barrandian^The Eifelian Acanthopyge Limestone with the well documented conodont zones Po. costatus partitus up to Po. hemiansatus of the Barrandian Koneprusy area yielded diverse rugosan faunas. Seventeen species belonging to eleven genera were recorded. The assemblage differs from corals of the same age found in Moravia, nevertheless, most of the taxa of both regions can be compared with corals from the German Rhenish Slate Mountains. Bohemian Eifelian Rugosa show striking similarities to Givetian faunas of other regions.^1";
- 532 s[529] = "SOTO F. (1986).- Consideraciones sobre la Posicion Sistemica del genero Angustiphyllum Altevogt (Coelenterata, Rugosa) del Devonico medio de la Cordillera Cantabrica (NO de Espana).- Revista Espanola de Paleontologia 01: 63-72.- FC&P 23-1.1, p. 64, ID=4140^Topic(s): systematics; Rugosa, Angustiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Spain, Cantabrian Mts^The genus Angustiphyllum Altevogt, of a marked provincialism, is represented in the Middle Devonian (Eifelian) of the Cantabrian Mountains by species, whose most striking feature is its outer wedge shaped aspect. The only species, A. cuneiforme Atevogt, shows apart from this morphology other typical characteristics of the genus, such as an axial ridge, formed by synapticalae arranged perpendicularly to the cardinal-counter plane and septa consisting of fibrolamellar mirostructure. In this work the systematic value of both characteristics is analyzed and on that basis the diagnosis of the genus Angustiphyllum is enlarged. Its systematic position, concerning family and subfamily, is discussed as well. Likewise, the geographical distribution of the genus in the Cantabrian Mountains is extended so that it constitutes a useful guide-level on a regional scale. The finding of similar specimes of Angustiphyllum, but lacking the axial ridge in the calice, makes it possible to propose a new genus and species, but for the moment we prefer to keep them in open nomenclature because of the small number of specimens collected.^1";
- 533 s[530] = "WRZOLEK T., WACH P. (1993).- Tetracoral genus Spinophyllum in the Devonian of the Holy Cross Mts, Poland.- Prace Nauk. Uniw. Slaskiego, Geologia 12/13: 47-63.- FC&P 23-2.1, p. 41, ID=4236^Topic(s): ; Rugosa, Spinophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Poland, Holy Cross^Described and illustrated are the Holy Cross Devonian tetracorals with radial septal arrangement and carinate septa. They are assigned to the genus Spinophyllum wedekind 1922, synonymous with Truncicarinulum Yu et Kuang 1982 and Charisphyllum Oliver et Sorauf 1988. Of the three described species two, S. longiseptatum (Lurette) and S. aiense aiense (Soshkina), occur in the Upper Givetian (equivalents of Temnophyllum occidentale Zone); the third species, S. aiense liujingense (Yu et Kuang), is from the Frasnian Zones Macgeea-Thamnophyllum up to Phillipsastrea smithi.^1";
- 534 s[531] = "GALLE A. (1995).- The Breviphrentis-dominated coral faunule from the Middle Devonian of Moravia, Czech Republic.- Vestnik Ceskeho geologickeho ustavu 70, 2: 59-70.- FC&P 24-2, p. 82, ID=4568^Topic(s): ; Rugosa, Breviphrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Czech Republic, Moravia^The interval of Eifelian / Lower Givetian, found in boreholes of the region of Konice and in the mine Benkov (central Moravia), yielded the following species of rugose corals: Breviphrentis joae sp.nov., Acanthophyllum vermiculare, Calceola sandalina, Cystiphyllodes sp., Cystiphyllodes? sp., and Digonophyllidae gen. et sp. indet. The presence of Breviphrentis is of particular interest and biogeographical significance because of its North American origin.^1";

- 535 s[532] = "SCHRODER S. (1995).- Die Korallenfauna des Kirchen-Berges (Freilingen-Formation) in der Blankenheimer Mulde (Rheinisches Schiefergebirge / Eifel).- Muenstersche Forschungen zur Geologie und Palaeontologie 77: 373-421. [in German, with English abstract].- FC&P 24-2, p. 84, ID=4574^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^A rugose coral-fauna from the Kirchen-Berg (Freilingen-Formation) in the Blankenheim syncline has yielded the following taxa: Guerichiphyllum? sp., Enallophrentis n.sp., Cyathophyllum (Cyathophyllum) strigosum n.sp., Glossophyllum sp., Heliophyllum (Heliophyllum) halleri Schroeder, Heliophyllum (Moravophyllum) cf. oliveri (Birenheide), Bethanyphyllum ? sp., Thamnophyllum sp. A, Xystriphyllum varians varians (Schlueter), Dohmophyllum helianthoides (Goldfuss), Acanthophyllum heterophyllum (Milne-Edwards & Haime), Acanthophyllum vermiculare (Goldfuss), Stringophyllum cf. acanthicum (Frech), Mesophyllum (Mesophyllum) lissingenense lissingenense (Schlueter), M. (Cystiphyllodes) secundum secundum (Goldfuss), M (Cy.) secundum conistructum (Quenstedt), M. (Cy.) secundum pseudoseptatum (Schulz). The coral-fauna is dominated by typical Upper Eifelian taxa; like the very common Acanthophyllum- and Cystiphyllodes-species. Moreover, a strong "bohemian-american" influence can be recognized. Migrations from the North American faunal region (EAR = Eastern Americas Realm) are visible in the occurrence of Heliophyllum, Bethanyphyllum and a new Enallophrentis-species. Enallophrentis or specimens of the family Siphonophrentidae in general have never been collected in the Rheinisches Schiefergebirge so far. On the other hand, the coral fauna is influenced by eastern european taxa like Heliophyllum (Moravophyllum) and a questionable Guerichiphyllum species. Cyathophyllum (Cyathophyllum) strigosum is described as new. Within the stratigraphical distribution of the Cyathophyllids C. (C.) strigosum intercedes between the Lower Eifelian and Givetian taxa of Cyathophyllum.^1";
- 536 s[533] = "WEYER D. (1995).- Thecaxon Weyer 1978 (Anthozoa, Rugosa) im Unter-Famenne des Rheinischen Schiefergebirges.- Abhandlungen und Berichte für Naturkunde 18: 137-141.- FC&P 24-2, p. 86, ID=4579^Topic(s): ; Rugosa, Thecaxon; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Germany, Rhenish Mts^The ahermatypic coral Thecaxon rozkowskae Weyer 1978, previously known from but 4 localities in the Thuringian Mountains, is recorded from cephalopod limestones of upper Cheiloceras-stage (rhomboidea to Lower marginifera conodont zones) in the Enkeberg section near Madfeld (eastern Sauerland).^1";
- 537 s[534] = "BIRENHEIDE R. (1971).- Untersuchungen an Microcyclus clypeatus (Goldfuss) (Rugosa; Mitteldevon).- Senckenbergiana lethaea 52: 501-527.- FC&P 1-2, p. 12, ID=4633^Topic(s): ; Rugosa, Microcyclus; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Eifel^An Hand zahlreicher Neufunde wird die Knopf koralle Microcyclus clypeatus (Goldfuss 1826) aus dem Mitteldevon der Eifel neu untersucht. Die grosse Variationsbreite einiger Merkmale wird statistisch belegt und deren Abhaengigkeit von oekologisch bedingten Einflussen diskutiert. Querschliffe direkt oberhalb der Epithek von M. clypeatus lassen unmittelbar seine Ontogenie erkennen, die derjenigen der Typus-Art M. discus Meek & worthen 1868 gleicht und derjenigen der Gattung Hadrophyllum sehr aehnlich ist.^1";
- 538 s[535] = "CHENG Y.-M. (1971).- A restudy of the Devonian Coral Diplochone striata Frech.- Proc. of the Geol. Soc. of China 1: 189-191.- FC&P 1-2, p. 13, ID=4636^Topic(s): revision; Rugosa, Diplochone; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^The specimens of Diplochone striata Frech 1886, are examined and one transverse and longitudinal sections were prepared. All the five

- specimens displayed the septal grooves and septal ridges. The cardinal and alar septa can be clearly discriminated. No evidence of septal spines, septal cones or repeated rejuvenation of calyx is observed. The affinity to the family Cystiphyllidae E. & H. 1850, is questioned.^1";
- 539 s[536] = "OLIVER W.A.jr, GALLE A. (1971).-'Calceola" (= Rhizophyllum) and "Billingsastraea" (= Iowaphyllum) in Bohemia.- Vest. Ustr. ust. geol. 46: 209-216.- FC&P 1-2, p. 16, ID=4658^Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Czech Republic, Barrandian^Calceola sandalina described by Prantl (1937) belongs to the genus Rhizophyllum Lindstroem. Billingsastraea bohémica and B. branikensis Prantl, 1951, are included in one species of Iowaphyllum Stumm. The two species come from the Kaplicka coral horizon of the Zlichov Limestone (Zlichovian - Emsian) in the southern part of Prague. The revision of these species is presented and other occurrences of Rhizophyllum and Iowaphyllum in Bohemia are mentioned. The genera Calceola and Billingsastraea are not known to occur in Bohemia.^1";
- 540 s[537] = "OLIVER W.A.jr, GALLE A. (1971).- Rugose corals from the Upper Koneprusy Limestone (Lower Devonian) in Bohemia.- Sbor. geol. ved. NR: 35-106.- FC&P 1-2, p. 17, ID=4659^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Czech Republic, Bohemian Massif^Rugose corals from Barrandian "bande f2" are redescribed and discussed. Thirteen species are recognized from the Upper Koneprusy Limestone including the type species of Chlamydothyllum Pocta, Pselophyllum Pocta and Pseudochonophyllum Soshkina. In addition one species is assigned to the Suchomasty Limestone and three to the Acanthopyge Limestone. Type specimens of two "f2" species probably originated in the Silurian and "f2" representatives of two additional species have not been found. Most of the 54 "species" described by Pocta (1902) are placed in synonymy with one of the recognized species. The Upper Koneprusy Limestone primarily consists of rubble from the erosion of a reef facies and the rugose fauna is dominated by solitary corals with thick septothecae that show signs of extensive rolling. Corals with thin walls and septa are more common in the Suchomasty and Acanthopyge Limestones.^1";
- 541 s[538] = "TSIEN H.-H. (1970).- Espèces du genre Disphyllum (Rugosa) dans le Dévonien moyen et le Frasnien de la Belgique.- Annales de la Société géologique de Belgique 93: 159-182.- FC&P 4-1, p. 39, ID=4665^Topic(s): Rugosa, Disphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif - Fra; Geography: Ardennes^15 species of Disphyllum are described from the Middle and Upper Devonian (Frasnian) of Belgium. Of these 4 are new: D. hilli, D. crassiseptatum, D. grabau and D. gradatum; 3 uncertain. The variations of the external and internal characters of the same species in the different facies are analysed. It has been found that the external and internal characters of the corals such as shape, form of the calyx, septa and dissepiments were strongly influenced by environmental conditions. The biostratigraphical value of the more important species is also briefly given.^1";
- 542 s[539] = "ROZKOWSKA M., FEDOROWSKI J. (1972).- Genus Disphyllum de Fromentel (Rugosa) in the Devonian of Poland and its distribution.- Acta Palaeontologica Polonica 17, 3: 265-335.- FC&P 1-2, p. 25, ID=4705^Topic(s): distribution; Rugosa, Disphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Poland^11 species and subspecies of the genus Disphyllum de Fromentel are described from the Devonian of Poland, two of them, D. wirbelauense bonae and D. w. regulare, are new. The geological structure of the Disphyllum-bearing localities from the Holy Cross Mts and Sudetes is discussed. The profiles of deep boreholes from Silesian-Cracow anticlinorium and Pomerania are presented. The

- coral's blastogeny and intraspecific variability are characterized. The septal index and pattern of internal structure are regarded as taxonomical criteria for specific identifications. It was noted that the microstructure is characterized by coarse monacanth distributed horizontally or in the form of half-fans. Distribution of Disphyllum in Poland and in the world, the moment of its appearance and its biostratigraphical value are discussed.¹¹";
- 543 s[540] = "TSYGANKO V.S. (1971).- New Middle Devonian Tetracorals from northern Urals and Paj-Khoi.- Zapiski Leningradskogo ordenov Lenina i trudovogo Krasnogo Znameni Gornogo Instituta im. G.V. Plekhanova 59, 2, Paleontology (1971): 33-47.- FC#038;P 2-1, p. 23, ID=4739Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Russia, Urals, Pay-Khoy¹¹";
- 544 s[541] = "GALLE A., WEYER D. (1973).- Bitraia gen. nov. (Anthozoa Rugosa) aus dem Mitteldevon der CSSR.- Palaeont. Abh. 1973, A4: 707-722.- FC#038;P 2-2, p. 16, ID=4797Topic(s): new taxa; Rugosa, Bitraia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Czech Republic, BarrandianBitraia bohemica gen. & sp.nov. is described from the Upper Eifelian Acanthopyge limestone of Bohemia. The new genus is a member of the subfamily Petraiinae de Koninck, 1872, closely related to Petraia Muenster, 1839.¹¹";
- 545 s[542] = "MARIN P., PLUSQUELLEC Y. (1973).- Sur les Combophyllum (Tétracoralliaires) du Dévonien de Montalban (Province de Teruel, Espagne).- Annales de la Societe geologique du Nord 93: 39-54.- FC#038;P 3-1, p. 26, ID=4884Topic(s): ; Rugosa, Combophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, TeruelLe riche gisement fossilifère de Cabrero (Dévonien de Montalban, Province de Teruel, Espagne) a livré notamment des Brachiopodes, dont Paraspirifer cultrijugatus et des Tétracoralliaires, dont Combophyllum cf. leonense Milne-Edwards & Haime, 1851 et Combophyllum ibericum nov. sp. Chez cette dernière espèce sont mis en évidence un cycle de septes de troisième ordre et l'englobement distal des septes mineurs par les septes majeurs.¹¹";
- 546 s[543] = "WEYER D. (1975).- Einige Rugose Korallen aus der Erbslochgrauwacke (Unterdevon) des Unterharzes.- Zeitschrift der geologischen Wissenschaften 1975, 1: 45-65.- FC#038;P 3-2, p. 43, ID=4966Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Germany, HarzDescription dans le Grau wacke d'Erbsloch d'Enterolasma sp., de Barrandeophyllum sp., d'Oligophyllum kullmanni sp.nov. Proposition de la nouvelle sous-famille des Baryphyllinae chez les Plerophyllumidae avec les nouveaux genres: Baryphyllum et Barylasma n.gen.¹¹";
- 547 s[544] = "BIRENHEIDE R. (1974).- Papiliophyllum lissingenense n.sp. (Rugosa) aus dem Lissinger Schurfgraben (Emsium; Eifel).- Senckenbergiana lethaea 55, 1/5: 251-257.- FC#038;P 4-1, p. 29, ID=5093Topic(s): new taxa; Rugosa, Papiliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Germany, EifelA new rugose coral species, Papiliophyllum lissingenense n. sp from the Lissingen exploration trench (Eifel, Gerolstein syncline; 1972), is described and figured. Hitherto species of Papiliophyllum have been known only from the lower Devonian (Onondaga Formation) of Nevada (USA). A new systematic delimitation of the Halliidae Chapman 1893 is proposed. This necessitates the introduction of the new subfamily Siphonophrentinae.¹¹";
- 548 s[545] = "TSIEN H.-H. (1974).- Espèces du genre Stringophyllum (Rugosa) dans le Dévonien moyen de la Belgique.- Annales de la Societe geologique de Belgique 97: 257-271.- FC#038;P 4-1, p. 40, ID=5143Topic(s): new taxa; Rugosa, Stringophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M;

- Geography: Ardennes^Treize espèces, dont deux nouvelles du genre Stringophyllum wedekind R., 1922 font l'objet d'une étude. Leurs caractères, leur distribution stratigraphique et leur milieu écologique sont attentivement examinés. En Belgique, ce genre apparaît depuis le Couvinien inférieur et est très fréquent dans les calcaires Co2a, Co3, Gilβ et Gi2β; mais il n'existe pas dans le Dévonien supérieur.^1";
- 549 s [546] = "WEYER D. (1973).- Famennelasma gen. nov. (Anthozoa Rugosa) aus der Cephalopoden Fazies des mitteleuropaeischen Oberdevons.- Palaeontol. Abh. A, 4, 4: 683-694.- FC&P 4-1, p. 40, ID=5150^Topic(s): pelagic facies; Rugosa, Famennelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Europe, Central^^1";
- 550 s [547] = "BRICE D., ROHART J.-C. (1975).- Les Phillipsastraeidae (Rugosa) du Dévonien de Ferques (Boulonnais, France). Première note. Le genre Macgeea Webster 1898. Nouvelles observations.- Annales de la Societe geologique du Nord 94, 1: 47-62.- FC&P 4-2, p. 56, ID=5257^Topic(s): ; Rugosa, Macgeea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: France, Boulonnais^Après un bref historique du genre Macgeea Webster 1889, et une formulation de ses caractères, description de 5 espèces ou sousespèces reconnues dans le Frasnien moyen de Ferques: M. gallica Lang et Smith 1935 s.s., M. gallica gigantea subsp.nov., M. dubia (de Blainville, 1850). Remarques sur Cyathophyllum bouchardi Milne Edwards et Haime, 1851.^1";
- 551 s [548] = "SCRUTTON C.T. (1975).- Preliminary observations on the distribution of Devonian rugose coral faunas in south-west England.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 131-140.- FC&P 5-2, p. 7, ID=5412^Topic(s): distribution, biozotation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Britain SW^Comments on the composition, palaeoecology and faunal affinities of the English Devonian rugose coral faunas.^1";
- 552 s [549] = "TSYGANKO V.S. (1975).- Stratigraphical distribution and facial determination of Devonian tetracorals from north Urals and Pai-Khoi.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 140-148.- FC&P 5-2, p. 8, ID=5420^Topic(s): biostratigraphy, facies; stratigraphy, facies; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Urals, Pay-Khoy^Species lists and the compositions of facies faunas from Devonian sections in the northern Urals and Pai-Khoi.^1";
- 553 s [550] = "GALLE A. (1976).- Rugose coral Petraiella in the Famennian (Upper Devonian) of Bohemia.- Vest. Ustr. ust. geol. 51, 4: 279-280.- FC&P 5-1, p. 14, ID=5470^Topic(s): ; Rugosa, Petraiella; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Czech Republic, Bohemian Massif^^1";
- 554 s [551] = "TSIEN H.-H. (1977).- The sequence and distribution of Frasnian rugose coral faunas in Belgium.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 203-220.- FC&P 6-1, p. 21, ID=5506^Topic(s): biozotation; Rugosa, zonation; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^[Rugose coral zonation in the Belgian Frasnian]^1";
- 555 s [552] = "BIRENHEIDE R., SOTO F. (1977).- Rugose corals with wall-free apex from the Lower Devonian of the Cantabrian Mountains, Spain.- Senckenbergiana lethaea 58, 1/3: 1-23.- FC&P 7-1, p. 6, ID=5535^Topic(s): wall-free apex; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Spain, Cantabrian Mts^Two new genera of solitary rugose corals possessing an apex lacking the wall are described from the Lower Emsian / Upper Emsian boundary of the Complejo de La Vid of the localities Adrados and Colle in the Cantabrian Mountains, Spain. The first genus,

- Gymnaxon n.g., with the species *Gymnaxon weyeri* n.sp., belongs to the family Cyathaxoniidae Milne-Edwards & Haime 1850, subfamily Petronellinae Birenheide 1965. The second genus, *Adradosia* n.g., with the species *Adradosia barroisi* n.sp., belongs to the family Hapsiphyllidae Grabau 1928, subfamily Adradosiinae n.subfam. For the first time new localities of *Petronella truncata* (Barrois 1882) are recorded. * The absence of the wall on the apex of all these corals is interpreted as resulting from a special mode of reproduction (probably asexual) apparently developed under the ahermatypic quiet water conditions of their environment. * The subfamily Petronellinae of the family Cyathaxoniidae embraces at present 3 genera lacking the wall on the apex: *Duncanella* Nicholson 1874, *Petronella* Birenheide 1965 and *Gymnaxon* n.g. In the subfamily Adradosiina of the family Hapsiphyllidae, the only genus *Adradosia* n.g. shows this peculiarity. [original abstract]^1";
- 556 s[553] = "TSIEN H.-H. (1977).- Rugosa massifs du Devonien de la Belgique.- Mem. Inst. Geol. Univ. Louvain 29: 197-229.- FC&P 7-1, p. 5, ID=5559^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Ardenne^1";
- 557 s[554] = "COEN-AUBERT M. (1976).- Distribution stratigraphique des rugueux massifs du Givetien et du Frasnien de la Belgique.- Annales de la Societe geologique du Nord 97: 49-56.- FC&P 7-2, p. 20, ID=5626^Topic(s): massive, distribution; Rugosa massive; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Ardenne^[general account of the sequence of appearance of massive rugose corals in the Belgian Givetian and Frasnian]^1";
- 558 s[555] = "TSIEN H.-H. (1976).- Especies du genre Tabulophyllum (Rugosa) dans le Devonien moyen et le Frasnien de la Belgique.- Annales de la Societe geologique de Belgique 99: 263-282.- FC&P 7-2, p. 21, ID=5640^Topic(s): ; Rugosa, Tabulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif - Fra; Geography: Ardenne^[brief descriptions and stratigraphical ranges of species of Tabulophyllum including the new species T. smithi, T. implicatum and T. conspectum]^1";
- 559 s[556] = "LASS G. (1978).- Taxionomische Bestimmung einer mitteldevonischen rugosen Korallenfauna des Bergischen Landes.- Muenster Univ. (?) unpublished Diploma Thesis: 61 pp., 7 figs, 9 pls.- FC&P 8-1, p. 16, ID=5679^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Bergisches Land^An Upper Eifelian rugose coral fauna is determined from Hagen (Bergisches Land, w-Germany) and briefly characterized. Most species belong to the Ptenophyllidae and Cystiphyllidae. There are few representatives of the Stringophyllidae. The species are: *Grypophyllum denckmanni* Wedekind 1922, *G. gracile* Wedekind 1922, *Acanthophyllum* (A.) *heterophyllum* Edwards & Haime 1851, *A. (Neostrophophyllum) concavum* Wedekind 1922, *Mesophyllum* (*Cystiphyllodes*) *secundum pseudoseptatum* Schulz 1831, *M. (C.) antilimbatum* Quenstedt 1879, *M. (Mesophyllum) vesiculosum annulifer* Schluter 1885, *M. (M.) cristatum* Schluter 1882, *Stringophyllum normale* Wedekind 1922, *Neospongophyllum buchense* Wedekind 1922.^1";
- 560 s[557] = "TSYGANKO V.S. (1978).- Novyi rod devonskikh rugoz. [new Devonian rugosan genus; in Russian].- Biostratigrafiya Fanerozoja severo-vostoka evropeyskoy chasti SSSR: 10-13; Syktyvkar.- FC&P 8-2, p. 33, ID=5699^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Zlich; Geography: Russia, Urals^[*Septiphyllum* n.g. (type species *Pseudodigonophyllum notabilis* Tsyganko); see Tsyganko 1970: p. 4, pl. 2: 1; Middle Devonian, Zlichovian, small Shezhin river of western slopes of Northern Urals]^1";
- 561 s[558] = "SHURYGINA M.V. (1978).- Rugozy pogranychkh sloev nizhnego i srednego devona Urala. [Rugosa of the Lower / Middle Devonian

- boundary beds of the Urals; in Russian].- Granica nizhnego i srednego devona na Urale i eyo paleontologicheskoe obosnovaniye: 60-71; Sverdlovsk, Izd. Uralskogo nauchnogo centra AN SSSR.- FC&P 8-2, p. 33, ID=5701^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L/M; Geography: Russia, Urals^1";
- 562 s[559] = "SOTO F. (1978).- Crassicyclus n.gen. (Coelenterata, Rugosa) del Devonico de la Cordillera Cantabrica (NW de Espana).- Trabajos de Geologia, Univ. de Oviedo 10: 425-433.- FC&P 9-1, p. 22, ID=5783^Topic(s): new taxa; Rugosa, Crassicyclus; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^1";
- 563 s[560] = "SOTO F. (1978).- El genero Combophyllum Milne-Edwards & Haime (Coelenterata, Rugosa) en el Devonico de la Cordillera Cantabrica (NW de Espana).- Estudios geol. 34: 483-496.- FC&P 9-1, p. 22, ID=5784^Topic(s): ; Rugosa, Combophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^1";
- 564 s[561] = "WEYER D. (1977).- Revision des Genus Schindewolfia Weissermel 1943 (Anthozoa, Rugosa; Unterdevon, Harz).- Zeitschrift der geologischen Wissenschaften 5: 305-319.- FC&P 9-1, p. 33, ID=5790^Topic(s): revision; Rugosa, Schindewolfia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Germany, Harz^The original material of the type species Schindewolfia lauterbergensis (Weissermel 1941) are redescribed. Schindewolfia is very similar to Barrandeophyllum Pocta 1902 (sensu auct.).^1";
- 565 s[562] = "IVANOVSKIY A.B., SHURYGINA M.V. (1980).- Reviziya devonskikh rugoz Urala. [revision of Devonian corals of the Urals; in Russian].- Trudy Paleont. Inst. 186; 64 pp.- FC&P 9-1, p. 39, ID=5795^Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Urals^[revision of Devonian rugose corals of the Urals, described by Markov (1921, 1926), Bulvanker (1934) and Soshkina (1936, 1939, 1949, 1951); revised genera: Astrictophyllum, Briantelasma, Dendrostella, Diallythophyllum, Digonophyllum, Disphyllum, Embolophyllum, "Favistella", Frechastraea, Grypophyllum, Haplothecia, Heliophyllum, Hexagonaria, Keriophylloides, Loyolophyllum, Lyrielasma, Macgeea, Mansuyphyllum, Marisastrum, Mesophyllum, Microplasma, Nalivkinella, Neocolumnaria, Neomphyma, Neostriophyllum, Phillipsastrea, Pseudamplexus, Pseudopetraia, Rhizophyllum, Spongophyllum, Striophyllum, Syringaxon, Tabulophyllum, Thannophyllum, Trapezophyllum, Tryplasma, Utaratuia, Xystriphyllum, Zonophyllum]^1";
- 566 s[563] = "COEN-AUBERT M. (1980).- Les coraux des recifs de Marbre Rouge "F2j".- Bulletin de la Societe belge de Geologie 89, 2: 67-69.- FC&P 9-2, p. 10, ID=5849^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^This paper synthesizes succinctly some recent observations about the stratigraphic distribution of the "Phillipsastrea" in the upper part of the Belgian Frasnian. [original abstract]^1";
- 567 s[564] = "SOTO F. (1979).- Rugose corals.- Geol. et Palaeontol. 13 [M. Arbizu et al. (eds): Biostratigraphical study of the Moniello Formation (Cantabrian Mountains, Asturias, NW Spain)]: 113-114.- FC&P 10-1, p. 46, ID=5978^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: Spain, Cantabrian Mts^[description of seven species of rugose corals of Upper Emsian - Lower Eifelian age]^1";
- 568 s[565] = "TSIEN H.-H. (1981).- Ecology, evolution, distribution and population of Hexagonaria in Western Europe.- Acta Palaeontologica Polonica 25, 3-4: 633-644.- FC&P 10-1, p. 46, ID=5980^Topic(s): ecology, distribution; Rugosa, Hexagonaria;

- Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Europe W^[analyses the record of species distribution in time and space of Hexagonaria during the Devonian in western Europe]^1";
- 569 s[566] = "RODRIGUEZ S., SOTO F. (1979).- Nuevos datos sobre los corales del Devonico de la Sierra del Pedroso. [new data on Devonian corals of Sierra del Pedroso; in Spanish, with English summary].- Estud. geol. 35: 345-354; Madrid.- FC&P 10-2, p. 63, ID=6078^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Spain, Pedroso Mts^Five species of Devonian Rugosa from the Pedroso Mountains are described in this paper. Two of these are described from Spain for the first time; one of them was found before only in North America. The locality is dated as being Givetian, where this has been dated before as being Emsian. The age of the Pedroso Mountains Limestone is discussed. [original summary; the species mentioned are: Tabulophyllum traverense Winchell (1866), Acanthophyllum (A.) sp., Diplochone sp., Disphyllum pedrosensis Rodriguez 1978; Tabulophyllum traverense has been found beyond North America for the first time; the latter species, together with Temnophyllum richardsoni, is recorded for the first time from Spain]^1";
- 570 s[567] = "WEYER D. (1980).- Bathyale Rugosa (Anthozoa) aus pelagischem Oberems (Unterdevon) im Thueringischen Schiefergebirge. [in German, with English summary].- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 3: 23-73.- FC&P 10-2, p. 64, ID=6080^Topic(s): pelagic facies; Rugosa, bathyal; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Germany, Thuringia^Rare and poorly known corals of Lower Devonian in Thuringia (saxothuringian zone of mid-European Variscan Mountains) are reviewed in faunal lists, based on critical compilation of published data. There occur two autochthonous communities of hercynian facies type, in the tentaculitid nodular limestone horizon of Pragian or Siegenian age, and in the level C of upper tentaculitid shale horizon of Upper Emsian or Dalejan age (Nowakia richteri zone). A third allochthonous fauna is present in level B of the upper tentaculitid shale horizon (Upper Emsian, Dalejan, Nowakia cancellata zone) and yields a mixture of both rhenish and hercynian facies fossils. * Rugosa of the bathyal upper fauna, found in pelagic shales of the Nowakia richteri zone, belong at the least to twelve species, mostly indeterminable at the moment due to bad preservation (casts). Morphology and taxonomy of the two more abundant species, Paliaxon zimmermanni (Weissermel 1941) and Bojocyclus bohemicus Prantl 1939, are revised. The new genus Paliaxon (Metriophyllidae) descends from Neaxon Kullmann 1965, by development of pali similar to scleractinian ones, which are discussed as to terminology at variance with the primary meaning of the term palus proposed by Edwards (1857) for Caryophyllia cyathus (Ellis & Solander 1786). Bojocyclus Prantl 1939, and its ancestor Rhabdocyclus Lang & Smith 1939, are classified as Tryplasmataidae = Palaeocyclidae within a suborder Pholidophyllina wedekind 1927, with normal Rugosan septal apparatus, excluded from Cystiphyllina with missing minor septa at counter septum. [original summary]^1";
- 571 s[568] = "LUTTE B.-P. (1983).- Aristophyllum terechovi (Rugosa) aus der Sotener Mulde (Rheinisches Schiefergebirge, Nord-Eifel).- N. Jb. Geol. Palaont. Mh. 1983, 7: 400-405.- FC&P 12-2, p. 29, ID=6207^Topic(s): ; Rugosa, Aristophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^Mit Aristophyllum terechovi Bulvanker, Spasskiy & Kravtsov wird die Gattung Aristophyllum Bulvanker, Spasskiy & Kravtsov in der Nord-Eifel nachgewiesen. Es ist das erste Vorkommen dieser bisher nur aus oberdevonischen Ablagerungen der UdSSR und Polens bekannten Gattung in W.-Deutschland. A. terechovi stammt aus den mittel devonischen Curten-Schichten (Givetium) der

Sotenicher Mulde (Nord-Eifel). Ein kurzer Vergleich mit *Breviphyllum* Stumm wird gezogen und auf die Problematik dieser Gattung hingewiesen. [original abstract]^1";

- 572 s[569] = "BERKOWSKI B., BELKA Z. (2008).- Seasonal growth bands in Famennian rugose coral *Scruttonia kunthi* and their environmental significance.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 265, 1-2: 87-92.- FC&P 36, p. 51, ID=6432^Topic(s): ecology, growth bands; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Poland, Sudetes^Large colonies of rugose coral *Scruttonia kunthi* occurring in the upper Famennian of Sudetes (southern Poland) reveal distinct growth banding in their skeletons. They were investigated for internal structural characteristics and stable isotopic composition. The skeletal tissue consists of alternating light and dark bands which differ in thickness, density and morphology of structural elements, and in occurrence of corallite contraction and rejuvenescence. Darker parts with densely arranged thick skeletal elements are thin in comparison to lighter parts. In addition, they include frequently offsets and contraction of corallites. A couplet of dense and less dense bands is interpreted to represent most probably an annual cycle. The calculated growth rate for *Scruttonia kunthi* varied from 6 mm/yr to 12 mm/yr. Growth-band formation was influenced environmentally. Oxygen isotopic data provide an evidence that high-density bands were formed in the season of higher environmental stress, with relatively warmer temperatures and higher sedimentation rates. Carbon isotopic signatures are very uniform, and thus enigmatic. They indicate that at least growth rate of the skeleton and seawater temperature had no influence on the coral $\delta^{13}C$.^1";
- 573 s[570] = "COEN-AUBERT M. (2009).- Fasciculate rugose corals across the Early-Middle Frasnian boundary in Belgium.- *Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre* 79: 55-86.- FC&P 36, p. 52, ID=6436^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^Disphyllum hilli Tsien 1970, D. grabau Tsien 1970, D. rugosum (Wedekind 1922). D. preslense n.sp. and Peneckiella discreta n.sp. are described in detail and have been mostly collected in beds rich in fasciculate rugose corals, occurring in various areas of Belgium. The material investigated comes mainly from the *Palmatolepis transitans* and *P. punctata* conodont Zones, at the transition between the Early and the Middle Frasnian. The rugose corals identified herein allow also interesting regional correlations. *Disphyllum hilli*, *D. grabau* and *Macgeea rozkowskiae* Coen-Aubert 1982 are abundant at the base of the Moulin Liens Formation on the south side of the Dinant Synclinorium and at the base of the Lustin Formation on the north side of the same structural unit. *Disphyllum preslense* and *D. rugosum* are widely distributed in the middle part of the Bovesse Formation on the north side of the Namur Synclinorium, in the middle of the reefal limestones from the lower part of the Lustin Formation and in the middle part of the Pont de la Folle Formation which characterizes the northwestern part of the Dinant Synclinorium. *Peneckiella discreta* serves locally as basement for the small mounds observed at the top of the Moulin Liens Formation. *Hexagonaria mirabilis* Moenke 1954 and *Tabulophyllum mcconnelli* (Whiteaves 1898) are frequently associated at the base of the overlying Grands Breux Formation, at the top of the Pont de la Folle Formation, at the top of the reefal limestones from the Lustin Formation and at the base of the Huccorgne Formation capping the Bovesse Formation.^1";
- 574 s[571] = "CHENG YINGMIN (1969).- Mitteldevonische rugose Korallenfaunen aus Asturien (Nordspanien).- Münster University (Germany, Westphalia), Unver. Diss.: 176 pp., 17 figs, 18 pls.- FC&P 14-2, p. 52, ID=6720^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Spain, Asturias^[for catalogue of Cheng's specimens see Marks &

- Kuster, 1985]^1";
- 575 s[572] = "MARKS S., KUSTER P. (1985).- Katalog des in der Forschungsstelle für Korallenpaläozoologie, Münster, aufbewahrten Belegmaterials zur Dissertation von Cheng Y. M. 1969: Mitteldevonische rugose Korallenfaunen aus Asturien (Nordspanien).- FC&P 14, 2: 52-59.- FC&P 14-2, p. 52, ID=6721^Topic(s): catalogue of fossils; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Spain, Asturias^[listed are the specimens illustrated in unpublished Thesis of Cheng; new species names proposed by Cheng, eg Charactophyllum hispanicum Cheng 1969, are invalid]^1";
- 576 s[573] = "LUTTE B.-P. (1987).- Untersuchungen über horn- und kegelförmige Rugosa aus dem Mittel-Devon der Eifel.- FC&P 16, 1: 47. [short note] - FC&P 16-1, p. 47, ID=6762^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^[preliminary paleontological note, with taxonomic and nomenclatorial remarks]^1";
- 577 s[574] = "MAY A. (1991).- Voucher specimen to A. May (1990): Die rugose Koloniekoralle Argutastrea aus dem Massenkalk (Devon) des Hönnetals (Rechtsrheinisches Schiefergebirge).- FC&P 20, 1.1: 103.- FC&P 20-1.1, p. 103, ID=6800^Topic(s): taxonomy; Rugosa Argutastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^[the specimen comes from the Massenkalk of Asbeck quarry; this single colony of Argutastrea (Pseudohexagonaria) brevissepta (Glinski 1955) makes a first record of the species in the Givetian]^1";
- 578 s[575] = "WENNING W. (1997).- Cyathophyllum (Cyathophyllum) hypocrateriforme Goldfuss 1826; Synonym von Cyathophyllum (C.) dianthus Goldfuss 1826 oder eigenständige Art der Gattung Cyathophyllum (Rugosa, Mitteldevon der Eifel)?.- FC&P 26, 2: 51-53. [short note] - FC&P 26-2, p. 51, ID=6881^Topic(s): nomenclature; Rugosa Cyathophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^[…] verbleiben für die Artzugehörigkeit des Neufundes drei Möglichkeiten: (1) es handelt sich um eine Cyathophyllum-Art, die eher an den (eifelischen) Formenkreis von C. (C.) planum tabulatum anzuschließen ist, jedoch mit dem Unterschied, daß die Kelche steil/schräg anstatt flach/horizontal ausgebildet sind; (2) um eine innerhalb der Variationsbreite von C. (C.) dianthus sensu Birenheide liegende Extremform ohne Marginalknospungen, die ökologisch zu begründen ist; (3) um eine eigenständige Cyathophyllum-Art, die sich anhand konstanter Merkmale der Knospungsart und Kelchmorphologie von den beiden erstgenannten Taxa abtrennen läßt und als C. (C.) hypocrateriforme zu bezeichnen ist. In diesem Falle wäre das Taxon erneut in den Artrang zu erheben. [original conclusions]^1";
- 579 s[576] = "SCHRODER S. (2002).- Rugose Korallen aus dem hohen Givetium und tiefen Frasnium (Devon) des Messinghäuser Sattels (Rheinisches Schiefergebirge).- Coral Research Bulletin 7: 175-189. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 34, ID=7103^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv/Fra; Geography: Germany, Rhenish Mts^The rugose coral fauna of the Devonian Burg-Berg section (Upper-Givetian/Frasnian) near Madfeld/east Sauerland is described. The faunal composition is characterized by Upper Givetian taxa and a few long ranging Devonian species. In the lower part of the section (Upper Givetian) the fauna is composed only of solitary species whereas colonial taxa are dominating in the upper part (Frasnian). The following taxa are described: "cyathopaedium" sp., Spinophyllum spongiosum (Schlüter 1889), Macgeea sp., Hexagonaria cf. hexagona (Goldfuss 1826), Grypophyllum postprimum postprimum Birenheide & Lütte 1990, Dohmophyllum? sp., Acanthophyllum sp. ex gr. Vermiculare / concavum, Sociophyllum cf. semisseptatum (Schlüter

- 1881), *Mesophyllum* (*Mesophyllum*) *vesiculosum annulifer* (Schlüter 1885). [original summary]^1";
- 580 s[577] = "COEN M., COEN-AUBERT M. (1976).- Conodonts et Coraux de la partie supérieure du Frasnien dans la tranchée du chemin de fer de Neuville (Massif de Philippeville, Belgique).- Bulletin de l'Institut royal des sciences naturelles de Belgique, 50, 8: 1-7.- FC&P 5-2, p. 5, ID=5395^Topic(s): stratigraphy; Conodonta, Rugosa; Systematics: Cnidaria Chordata; Rugosa Conodonta; Stratigraphy: Devonian Fra; Geography: Ardenne^[an account of the conodonts and corals, principally phillipsastraeids and Iowaphyllum, found in the Upper Frasnian section exposed in the railway cutting at Neuville]^1";
- 581 s[578] = "KOWALSKI H. (1983).- Die Pantoffelkoralle *Calceola sandalina*.- Die Eifel 78: 24-27.- FC&P 19-2.1, p. 25, ID=2740^Topic(s): Rugosa, Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Germany^Diese ebenso anmutige wie eigenartig gestaltete Koralle gehoert zu den am langsten bekannten Versteinerungen aus dem Eifel-Devon. Es mag die ungewoehnliche Form gewesen sein, die schon frueh die Aufmerksamkeit der Gelehrten auf diese "versteinerte, einem Pantoffel aehnliche zwoschaalige Muschel" lenkte. [initial fragment of a paper]^1";
- 582 s[579] = "STOLARSKI J. (1993).- Ontogenetic development and functional morphology in the early growth-stages of *Calceola sandalina* (Linnaeus 1771).- Courier Forschungsinstitut Senckenberg 164: 169-177. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 1].- FC&P 22-2, p. 15, ID=3451^Topic(s): ontogeny, functions; Rugosa, Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Poland, Holy Cross^At the earliest ontogenetical stages, *Calceola sandalina* has corallum in the form of hemispheric cup provided with peculiar tube-like outgrowths and attachment scar to the substrate; it lacks septa and external growth lines on the wall. At the next stage operculum appears with a pair of submedially situated, relatively large hinge lists. Succesively, large central septum and two lateral septa appear. Attachment scars of desmocytes arranged in double or single rows are present in the calice and inner side of the operculum. Phylogenetic relationships of operculate corals with the Cambrian Cothonion are discussed.^1";
- 583 s[580] = "WRIGHT A.J., COEN-AUBERT M., BULTYNCK P., van VIERSEN A.R. (2010).- New data on occurrences of the Devonian rugose coral *Calceola* in Belgium.- Memoirs of the Association of Australasian Palaeontologists 39: 121-129. ISSN 810-8889.- FC&P 36, p. 72, ID=6473^Topic(s): new records; Rugosa Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Ardenne^Opercula and corallites of *Calceola sandalina* from the late Eifelian and early Givetian (Middle Devonian) Hanonet Formation of Belgium are illustrated. The few previous illustrations of calceoloid corals from the Devonian of Belgium did not include opercula showing the genetically diagnostic morphological features, so for the first time the presence of the genus and species in Belgium is confirmed. One important corallite shows the alar septum and insertion of septa on the external surface of the counter face adjacent to the alar septum. [original abstract]^1";
- 584 s[581] = "GALLE A., FICNER F. (2004).- Middle Devonian *Calceola sandalina* (Linnaeus, 1771) (Anthozoa, Rugosa) from Moravia (Czech Republic): aspects of functional morphology, gerontic growth patterns, and epibionts.- Geodiversitas 26, 1: 17-31.- FC&P 33-1, p. 53, ID=7208^Topic(s): functional morphology; Rugosa Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Czech Republic, Moravia^Middle Devonian (lower Givetian) *Calceola sandalina* (Linnaeus, 1771) from Celechovice Limestone, Moravia, Czech Republic, displays sharply differing

ontogenetic stages. width of ventral side and size / volume of calice steadily increases in juvenile and adult stages but decreases in some specimens in final stages of life; we consider these reductive late stages to be gerontic characters. "Ventral" side of juvenile specimens is flat and straight while in adults this side becomes convex. We suggest that opening of operculum and shifting part of polyp body mass forward would shift centre of gravity so that calicinal part of adult coral could rock down to sea-bottom. Closing operculum would elevate calice above bottom. Rocking movements could help to free coral from sediment. Operculum positioning could move coral and keep it in optimum feeding position. Single specimens show predation injury: almost half of the "ventral" side is missing between counter septum and corallite angle but has healed within calice. [original abstract]^1";

585 s[582] = "SCHRODER S. (2001).- Zwei wenig bekannte Arten von rugosen Kolonie-Korallen der Columnariinae Nicholson 1879 (Anthozoa, Rugosa) aus der Sammlung Schlüter (Mittel-Devon, Rheinisches Schiefergebirge).- Paläontologische Zeitschrift 74, 4: 469-477.- FC&P 30-2, p. 18, ID=1537^Topic(s): taxonomy, nomenclature; Rugosa, Columnariinae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^Two insufficiently known Middle Devonian columnariid-species of the collection of C. SCHLÜTER are redescribed and figured for the first time. Columnaria devonica Schlueter 1889 is regarded as conspecific with C. sulcata Goldfuss and Spongophyllum tabulosum Schlueter 1889 has to be treated as valid name for the younger synonym Columnaria cacotrophia Glinski 1955.^1";

586 s[583] = "WEYER D. (1975).- Combophyllidae (Anthozoa, Rugosa) im Mitteldevon des Thüringer Schiefergebirges.- Freiburger Forschung. C 504: 7-31.- FC&P 4-2, p. 63, ID=5301^Topic(s): ; Rugosa, Combophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Germany, Thuringia^Morphology and systematics of the genera Combophyllum M. Edw. & H. 1850, and Parmasessor Ludwig 1869, and of the polyphyletic family Hadrophyllidae Nicholson 1889, are revised. Combophyllidae (Devonian), Cumminsiinae (Carboniferous), and Gymnophyllidae (Upper Carboniferous) are new family rank taxa. Combophyllum sp. aff. leonense M. Edw. & Haime 1851, and Parmasessor cf. ovatus Ludwig 1869, have been determined from basal Eifelian beds in the western Thuringian Mountains. A redefinition based on typical examples is given for the Rugosan and scleractinian morphological terms epitheca and archaeotheca. The presence of true eutheca and epitheca is recorded from some few Rugose corals. The typical wall structure of nearly all solitary Rugosa is an archaeotheca.^1";

587 s[584] = "BIRENHEIDE R., SOTO F. (1981).-'cystimorphe" rugose Korallen aus dem Devon des Kantabrischen Gebirges, N-Spanien.- Senckenbergiana Lethaea 62, 2/6: 251-273.- FC&P 11-1, p. 46, ID=1757^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: Spain, Cantabrian Mts^Cystimorph rugose corals of Upper Emsian - ?Lower Eifelian age (La Vid Fm., Raneces Fm., Sta. Lucia Fm., Moniello Fm.) and of Givetian age (Lower Portilla Fm., Lower Candas Fm.) from the Cantabrian Mountains s.l. are described for the first time. They belong to the genera and subgenera Edaphophyllum Simpson 1900, Mesophyllum (Mesophyllum) Schlueter 1889, Mesophyllum (Cystiphyllodes) Chapman 1893 and Cayugaea Lambe 1901. The following species and subspecies are new: Mesophyllum (Cystiphyllodes) monielloense n.sp., M. (C.) secundum ascendens n.ssp., M. (C.) macrocystis leonense n.ssp. and Cayugaea hispanica n.sp. Our material of these new taxa is with one exception probably exclusively of Upper Emsian age. It shows closer relations to N. American cystimorphs than to contemporary corals of the Rhenish Mountains. On the other hand the Givetian cystimorphs from the Lower Portilla and Lower Candas

- Formations can easily be identified with already described taxa from the Eifel synclines. Of the species of the subgenus *Mesophyllum* (*Mesophyllum*) Schlueter 1889 only one – of Givetian age – has been recorded from the Devonian of N. Spain, in spite of the worldwide distribution of some of them. As they are normally very abundant, mainly in Eifelian beds, it is probable that in the listed N. Spanish localities sediments of Eifelian age are not at all, or only very poorly, represented.¹";
- 588 s[585] = "COEN-AUBERT M. (2002).- *Temnophyllids and Spinophyllids (Rugosa) from the Givetian Mont d'Haurs Formation in Belgium.*- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 72: 5-24.- FC&P 31-1, p. 60, ID=1624Topic(s): ; Rugosa, Disphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: ArdennesTemnophyllum majus Walther, 1929, T. imperfectum n.sp., Spinophyllum spongiosum (Schlüter, 1889) and S. blacourti (Rohart, 1988) are described in detail and come mainly from the lower part of the Givetian Mont d'Haurs Formation, on the south side of the Dinant synclinorium. The type specimens of S. spongiosum, Temnophyllum majus, T. latum Walther, 1929 and T. clavatum Walther, 1929 as well as the holotype of Spinophyllum altevogti (Oliver & Sorauf, 1988) are refigured herein. As a whole, the fauna from the Mont d'Haurs Formation, which belongs to the Lower Polygnathus varcus Zone, is widely distributed in various areas of Europe and Asia and shows strong affinities with the Givetian rugose corals from Germany and the Boulonnais in France.¹;
- 589 s[586] = "SOTO F. (1975).- Nota previa sobre los Hadrofilidos (Rugosos) del Devonico de la Cordillera Cantabrica.- Cantabrica. Brev. geol. Asturica 19: 27-32.- FC&P 6-2, p. 15, ID=0121Topic(s): ; Rugosa, Hadrophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian MtsHadrophyllid corals from the Spanish Devonian.¹;
- 590 s[587] = "SOTO F. (1983).- Hadrophyllinae (Coelenterata, Rugosa) del Devonico inferior de la Cordillera Cantabrica (NO de Espana).- Trabajos de Geologia, Universidad de Oviedo 13: 97-112.- FC&P 13-2, p. 35, ID=0538Topic(s): ; Rugosa, Hadrophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Spain, Cantabrian MtsLower Devonian Rugose corals of the subfamily Hadrophyllinae found in La Vid Formation (Cantabrian Mountains, NW Spain) are described for the first time. The species described here belong to the genera Hadrophyllum Milne-Edwards & Haime and Microcyclus Meek & Worthen. Three of these species (Hadrophyllum romani, H. neritae and Microcyclus truyolsi) are new and two of them (Hadrophyllum bifidum Bassler and Microcyclus thedfordensis Bassler) were only known previously from N. America. The occurrence of Microcyclus in La Vid Formation is the first occurrence of this genus in strata as old as Lower Devonian (Emsian) age.¹;
- 591 s[588] = "SOTO F. (1977).- Sur la distribution des Hadrophyllidae dans le Devonien de la Peninsule Iberique.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 108-111.- FC&P 6-1, p. 21, ID=5504Topic(s): distribution; Rugosa, Hadrophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Iberian Peninsula[geographic and stratigraphic distribution of Hadrophyllum, Combophyllum and Microcyclus in the Iberian peninsula]¹;
- 592 s[589] = "COEN M., COEN-AUBERT M., CORNET P. (1976).- Distribution et extension stratigraphique des recifs a "Phillipsastrea" dans le Frasnien de l'Ardennes.- Annales de la Societe geologique du Nord 9 (2eme serie): .- FC&P 6-2, p. 15, ID=0113Topic(s): reefs Rugosa; Rugosa, reefs; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: ArdennesDescription of three stratigraphically significant coral

- associations in the Upper Frasnian of the Ardennes.^1";
- 593 s[590] = "ROHART J.-C. (1981).- *Phillipsastraeidae* (Rugosa) du Devonien de Ferques (Boulonnais, France).- *Annales de la Societe geologique du Nord* 101: 105-115.- FC&P 11-2, p. 30, ID=1844^Topic(s): Stratigraphy: Devonian Fra; Geography: France, Boulonnais^The species is described from a sample of the type locality. The variation, fine structure and increase are studied. The sample was only collected from the Ferques Formation, member of the Parisienne. The age is Middle Frasnian, upper *Polygnathus asymmetricus* zone. The features which distinguish *Scruttonia* and *Phillipsastrea* are given; some supplements on the type locality and the fine structure of *S. bowerbanki*, the type species of *Scruttonia*.^1";
- 594 s[591] = "POTY E., CHEVALIER E. (2007).- Late Frasnian phillipsastreid biostromes in Belgium.- *Geological Society of London, Special Publications* 275: 143-161.- FC&P 35, p. 100, ID=2427^Topic(s): reefs; biostromes, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Ardennes^In the Belgian Namur-Dinant Basin the boundary between the Lustin Formation and the Aisemont Formation (in the Lower rhenana conodont Biozone) corresponds to a fall followed by a rise in sea level, leading to the first recorded late Frasnian coral crisis. The Aisemont Formation records a transgressive-regressive cycle. Prior to the crisis most of the colonial rugose corals were members of the Family *Disphyllidae*, but these were largely replaced by corals belonging to the *Phillipsastraeidae*. Among these *Frechastraea* colonized all environments of the basin and was the main constructor of a biostromal reef in its northern-most proximal area, in the fair-weather wave zone. Corals did not encrust each other and therefore were not firmly attached, but they hug tightly the substrate (a dead coral colony) and rest closely on it to resist to the turbulence of waves. During the Silurian and Devonian, up until the late Frasnian crisis, shallow-water reefs in turbulent water were usually built by encrusting stromatoporoids, whereas rugose corals were restricted to waters of lower energy. Indeed, they were unable to encrust substrates, unlike stromatoporoids and post-Palaeozoic scleractinians, and to live in turbulent habitats. In Belgium argillaceous sedimentation prevented the development of stromatoporoids and provided an opportunity for the corals to colonize empty niches and to construct biostromes in relatively high-energy environments. At the same time *Alveolites* and stromatoporoids were dominant in a mid-proximal environment below the fair-weather wave base, but within the storm wave zone, where they also constructed biostromes. [original abstract]^1";
- 595 s[592] = "ERRENST C. (1993).- Koloniebildende *Phillipsastreidae* und *Hexagonariinae* aus dem Givetium des Messinghaeuser Sattels und vom Suedrand des Briloner Massenkalkes (nordostliches Sauerland).- *Geol. Palaeont. westf.* 26: 7-45.- FC&P 23-1.1, p. 62, ID=4135^Topic(s): Rugosa, Phillipsastreidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv/Fra; Geography: Germany, Rhenish Mts^The majority of the compound rugose corals described in this paper derives from debris flow sediments of the Messinghausen Anticline, which is situated in the southeast of the Devonian Brilon Massive Limestone Complex. The succession of Middle and Upper Devonian conodont zones was pointed out for this area by Stritzke (1980, 1986, 1989 and 1990). *Rugosa* taken from sections can be dated by this means. *Thamnophyllum simplex* n.sp. is an abundant element within Middle Givetian initial faunas (Middle *varcus* Zone), settling on volcanic sea-mountains and ridges. The occurrence of *Phillipsastrea*, represented by the type species *P. hennahi* (Lonsdale 1840), is confirmed for the Upper Givetian (Upper *varcus* Zone up to the lower part of the Lowermost *asymmetricus* Zone). This contradicts to the general opinion, that the first appearance of *Phillipsastrea* marks out the beginning of the Upper Devonian in Central

- Europe. The use of this genus as an index fossil resulted in wrong datings of strata, which led to misinterpretations of sedimentary and palaeogeographical developments even in the latest publications concerning regional geological circumstances. Samples of the very similar *Scruttonia sanctacrucensis* (Rozkowska 1953) also have been taken from Upper Givetian strata. In addition *Kuangxiastrea julli* Pedder 1986 has been found in Givetian deposits (lower part of the Lowermost asymmetricus Zone) as well. For this reason the species neither can be regarded as a Frasnian index fossil in Europe, what had been presumed in literature. The new data do not only take effect on the interpretation of reef development within the northeastern Rhenish Slate Mountains. Former conceptions concerning rugosan stratigraphy of the Middle-Upper Devonian transition and derived palaeobiogeographical models for the Devonian of Europe will have to be revised.¹¹;
- 596 s[593] = "COEN-AUBERT M. (1974).- Représentants des genres *Phillipsastrea* d'Orbigny, A., 1849, *Billingsastraea* Grabau, A.W., 1917 et *Iowaphyllum* Stumm, E.C., 1949 du Frasnien du Massif de la Vesdre et de la bordure orientale du Bassin de Dinant.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 49: 1-38.- **FC**;P 4-1, p. 30, ID=5095**Topic(s):** Rugosa, *Phillipsastrea*; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Fra; **Geography:** Ardennes**Treize espèces et sous-espèces des genres *Phillipsastrea* d'Orbigny, A., 1849, *Billingsastraea* Grabau, A.W., 1917 et *Iowaphyllum* Stumm, E.C., 1949, provenant principalement du Frasnien de l'Est de la Belgique, sont décrites, figurées et précisées dans leur contexte stratigraphique. Une nouvelle sous-espèce, *Phillipsastrea ananas veserensis*, est introduite.¹¹;**
- 597 s[594] = "GLINSKI A. (1999).- Plerophyllina (Anthozoa, Rugosa) im Mitteldevon der Eifel (Rheinisches Schiefergebirge, Deutschland).- Senckenbergiana lethaea 79, 1: 105-117. [in memoriam Dr. Wolfgang Struve].- **FC**;P 29-1, p. 55, ID=1441**Topic(s):** Rugosa, Plerophyllina; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian M; **Geography:** Germany, Rhenish Mts**Two new genera of the suborder Plerophyllina Soshkina 1960, hitherto unknown in the German Middle Devonian, are described and figured. The first one, *Gerolasma* n.g. (type species *G. geesensis* n.sp.) is phaceloid with a *Tetralasma* trend and comes from the Upper Eifelian of the Gerolstein Syncline. The second genus, *Pentaxon* n.g. (type species *P. struvei* n.sp.), solitary and showing a complex axial structure, has been collected in the Lower Givetian of the Hillesheim Syncline. The new genera represent different families, *Polycoeliidae* de Fromentel 1861 and *Pentaphyllidae* Schindewolf 1942 respectively. Stratigraphy and facies environment of the cited localities are discussed. [original summary]¹¹;**
- 598 s[595] = "SOTO F. (1982).- Plerophyllidae y Pentaphyllidae (Coelenterata, Rugosa) del Devonico de la Cordillera Cantabrica (NO de España).- Trabajos de Geología, Universidad de Oviedo 12: 49-61.- **FC**;P 13-1, p. 36, ID=0451**Topic(s):** distribution, facies; Rugosa, *Polycoeliidae*; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian; **Geography:** Spain, Cantabrian Mts**A compilation of all species of the Plerophyllidae and Pentaphyllidae (Coelenterata, Rugosa) known from the Devonian rocks of the Cantabrian Mountains is presented. This investigation is based on former research work as well as on own investigations, and includes the taxa already known as well as new species. The facies relations of these forms, which belong to the *Cyathaxonia*-fauna, and their paleobiogeographical implications are discussed.¹¹;**
- 599 s[596] = "BIRENHEIDE R. (1972).- Ptenophyllidae (Rugosa) aus dem w-deutschen Mittel-devon.- Senckenbergiana lethaea 53, 5: 405-437.- **FC**;P 2-1, p. 15, ID=4713**Topic(s):** Rugosa, Ptenophyllidae; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian M; **Geography:** Germany, Eifel, Sauerland**Several**

- species of *Grypophyllum* from the Middle Devonian of the Eifel and Sauerland areas are described, one of which is new: *Gr. mirabile*. The ancestors of *Grypophyllum* were *Dohmophyllum*-like and not *Acanthophyllum*-like corals. Corals figured by Wedekind (1925) as *Pseudoptenophyllum* sp. are placed into a new species: *Dohmophyllum wedekindi*. Stratigraphical range, localities, and relationships of the W. German *Ptenophyllidae* are discussed and illustrated.¹";
- 600 s[597] = "SCHRODER S. (2001).- On some western European Siphonophrentidae.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 254-264.- FC&P 30-2, p. 18, ID=1563^Topic(s): ; Rugosa, Siphonophrentidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Europe W^The Siphonophrentidae Merriam 1974 is a family of rugose corals endemic to the Eastern Americas Realm (EAR) during the Lower Devonian. Beginning in the Middle Devonian the siphonophrentids migrated eastward into the Old World Realm (OWR). This migration was controlled by sea level fluctuations (phases of transgressive events). Thus, siphonophrentids are useful for paleogeographic reconstructions and in identification of migration routes during the Devonian. Taxa known from western Europe are reviewed relative to their taxonomic status and stratigraphic and geographic distribution. Some records from Germany and Spain are discussed in detail and figured for the first time.¹";
- 601 s[598] = "COEN-AUBERT M. (1996).- Siphonophrentides et Cyathophyllides pres de la limite Eifelien-Givetien a Resteigne (Ardenne, Belgique).- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 66: 19-36.- FC&P 25-1, p. 32, ID=3011^Topic(s): ; Rugosa, Siphonophrentidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif / Giv; Geography: Ardennes^Breviphrentis martiniae n.sp. and *Rhytidolasma dahlemense* (Haller 1936) have been collected near the base of the Hanonet Formation at Resteigne; this level still belongs to the Eifelien and the discovery of these two taxa implies a North American influence which also characterizes other parts of western and Central Europe. *Keriophyllum maillieuxi* (Tsien 1969) has been observed at the top of the Hanonet Formation and at the base of the overlying Trois-Fontaines Formation in Resteigne, Nismes and Glageon; these layers belong to the base of the Givetian. From a taxonomic point of view, *Keriophyllum yakowlewi* Haller 1936 is placed in synonymy with *Rhytidolasma dahlemense* whereas the definitions of the genus *Keriophyllum wedekindi* 1923 and of the species *K. maillieuxi* are emended. Several type specimens of the genera *Rhytidolasma* Pedder 1989 and *Keriophyllum wedekindi* 1923 are also refigured.¹";
- 602 s[599] = "WRZOLEK T. (2002).- Siphonophrentidae (Rugosa) in the Devonian of Poland.- Coral Research Bulletin 7: 229-240. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 30-2, p. 22, ID=7085^Topic(s): ; Rugosa Siphonophrentidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Poland, Holy Cross^Four species of the family Siphonophrentidae Merriam 1974 are described from the Holy Cross Mts, Poland. The two species, *Enallophrentis corniformis* (Gürich 1896), and *Enallophrentis polonica* (Sobolev 1904) are revised, although their type material is missing; the two species described as new are *Siphonophrentis laskowae* sp.n. and *Siphonophrentis georgii* sp.n. The corals studied were possibly of the Eastern Americas origin, introduced into the Old World biogeographic Realm. During the Givetian they inhabited the fore-reef setting of the Holy Cross area. Both Eifelien and Frasnian records of Siphonophrentidae in Poland are taxonomically dubious. [original abstract]¹";
- 603 s[600] = "TSYGANKO V.S. (1996).- Novaya devonskaya Stauriida (Rugosa).- SyktyvkarSKIY Paleontologicheskiy Sbornik 1: 22-28. (Trudy Instituta Geologii Komi nauchnogo tsentra 89).- FC&P 30-2, p. 21,

- ID=1570^Topic(s): new taxa; Rugosa, Stauriidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Urals?^^1";
- 604 s[601] = "SOTO F. (1979).- Considerations paleobiogeographiques sur les Streptelasmatina (Coelenterata, Rugosa) solitaires du Devonien des Monts Cantabriques (NW de l'Espagne).- Geobios 12, 3: 399-409.- FC&P 9-1, p. 23, ID=5785^Topic(s): biogeography; Rugosa, Streptelasmatina; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^^1";
- 605 s[602] = "MAY A. (1993).- Korallen aus dem höheren Eifelium und unteren Givetium (Devon) des nordwestlichen Sauerlandes (Rheinisches Schiefergebirge). Teil II: Rugose Korallen, Chaetetiden und spezielle Themen.- Palaeontographica A228, 1-3: 1-103.- FC&P 22-2, p. 81, ID=3507^Topic(s): ; Rugosa, Chaetetida; Systematics: Cnidaria; Rugosa Chaetetida; Stratigraphy: Devonian Eif/Giv; Geography: Germany, Rhenish Mts^From the Middle Eifelian to the Lower Givetian strata of the northwestern Sauerland (map sheet 4612 Iserlohn, 4711 Luedenscheid and 4713 Plettenberg) 19 rugose corals and 2 chaetetid species are described. The material has been collected mostly in the coral limestone of the Gruenewiese-Member (uppermost Eifelian) of the Ihmert-Formation and the Bredenbruch-Member (lower Lower Givetian) of the Unterhonsel-Formation. The compound coral *Smithiphyllum kloeckneri* n.sp. is new. *Glossophyllum occidentale* (Hill & Jell 1971), *Glossophyllum ? aff. excavatum* (Hill 1942), and *Sociophyllum longiseptatum* Bulvanker 1958 have been found for the first time in Central or Western Europe. 4 other Rugosa species and 1 Chaetetida species are described from the Eastern Rhenish Massif for the first time as well. The skeletons of reef-builders are frequently affected by diagenetic processes - most important are alterations of the microstructure and thickenings of skeletal elements. Some reef-builders contain habitats of "worm"-commensals and some other borings. The coral limestone of the Gruenewiese-Member and the Bredenbruch-Member are mostly biostromes, built in a normal marine environment of the euphotic zone between storm wave base and normal wave base. Palaeobiographical investigations show, that the "Rhenohercynian Basin" was only a marginal sea, into that from the east faunas of the asiatic part of the "old world Realm" immigrate.^1";
- 606 s[603] = "BERKOWSKI B. (2002).- Famennian Rugosa and Heterocorallia from southern Poland.- Palaeontologia Polonica 61: 3-88.- FC&P 32-1, p. 21, ID=1674^Topic(s): ; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Devonian Fam; Geography: Poland S^Famennian corals (Rugosa and Heterocorallia) occur in three areas of southern Poland: the Holy Cross Mountains and the Kraków area situated along the south-western margin of the East European Platform, and the Sudetes located within the Variscan orogenic belt. In the deep-water Famennian environments of the Holy Cross Mountains (Kowala) the first corals appeared after the Frasnian-Famennian crisis in the *P. marginifera* to *P. trachytera* zones. They are represented by monospecific assemblages of *Circellia concava*, a species able to live on a soft muddy and dysaerobic bottom. On even more organic-rich sediment heterocorals *Oligophylloides* flourished; they are suggested to feed on suspended or dissolved organic matter. When the environment became more aerated in the *P. expansa* and *S. praesulcata* zones more diverse coral assemblages appeared, including large disseminated solitary rugosans. In the extremely shallow-water limestone facies ("Stromatoporoid Rocks") of the Kraków region, two species of the colonial rugose coral *Pseudoendophyllum* and several solitary corals are represented. The shallow shelf carbonate facies of the Sudetes (Main Limestone) starts with assemblages dominated by three species of massive colonial *Scruttonia* followed by assemblages with a few species of solitary disseminated corals. The

colonial corals disappeared with the incursion of deeper-water cephalopod wocklumeria limestone facies and only solitary non-dissepimented corals and heterocorals remained. The colonial Rugosa of Famennian age are almost unknown in other regions of the world. Their abundance in the Sudetes and the Kraków region suggests that these areas represented a refuge for corals during the high sea stand of the latest Devonian. Several Famennian corals reveal characters typical for those of either the Frasnian or Viséan. These characters are more likely to develop convergently than representa continuity within lineages. Pseudoendophyllum raclaviense sp. n. Scruttonia sudetica sp. n., S. fedorowskii sp. n., and Oligophylloides weyeri sp. n. are proposed.^1";

- 607 s[604] = "SOTO F., MENDEZ-BEDIA I. (1985).- Estudio de una asociacion coral Rugoso-Estromatoporido en el arrecife de Arnao (Fui. Moniello, Asturias, NO de Espana).- Trabajos de Geologia, Universidad de Oviedo 15 : 203-209.- FC&P 15-1.2, p. 29, ID=0803^Topic(s): Rugosa, stroms, association; Systematics: Cnidaria Porifera; Rugosa Stromatoporoidea; Stratigraphy: Devonian Eif; Geography: Spain, Cantabrian Mts^In this paper a Rugose coral-Stroraatoporoid association is studied, which is present in several levels of an organic buildup occurring within the middle part of the Moniello Formation (Emsian-Eifelian) in Arnao (Asturia, Cantabrian Mountains, NW Spain). The features of this fossil association are analysed in detail in order to establish the possible relationship between its components. A commensal relationship with clear benefit for the Rugose coral is suggested. (Original summary)^1";
- 608 s[605] = "PREAT A., COEN-AUBERT M., MAMET B., TOURNEUR F. (1984).- Sedimentologie et paleoecologie de trois niveaux recifaux du Givetien inferieur de Resteigne (Bord Sud de Bassin de Dinant, Belgique).- Bulletin de la Societe belge de Geologie 93, 1-2: 227-240.- FC&P 13-2, p. 56, ID=0598^Topic(s): reefs, sedimentology, ecology; reefs, sedimentology, ecology; Systematics: Cnidaria Porifera algae; Rugosa Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: Ardennes^Three reefal complexes are observed in the Early Givetian carbonate platform of the Dinant Basin. The first biostome is characterized by stromatoporoids-coral-phylloid algae (bafflestones, bindstones and floatstones). The second level is composed of an accumulation of Trachypora and abundant Frutexites (lagunal wackestones and floatstones). The third complex is characterized by Pachyfavosites-Xystriphyllum floatstones and issinellid-kamaenid packstones.^1";
- 609 s[606] = "BIRENHEIDE R. (1998).- Rugose und tabulate Korallen aus der Bohrung Viersen 1001.- Fortschr. Geol. Rheinld. u. Westf. 37: 161-213.- FC&P 27-2, p. 50, ID=3907^Topic(s): Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Germany, Viersen 1001 bh^Rock samples of the Viersen 1001 borehole from depths between 1,012.85 and 1,496.80 m contain specimens of seven rugose and nine tabulate coral species which are described and figured herein; one of the tabulates, Remesia obscura n.sp., is new. The species composition of the coral fauna is comparable to that of the Aachen Massenkalk limestone and the Ardennes. The investigated material comprises a time interval between Early (?) Givetian and Upper Frasnian. By far the greatest part of this interval is represented by the Polygnathus varcus conodont zone. Furthermore, the coral record also allows a discrimination of a Middle Givetian (here: Rodert to Kerpen Formation) and part of the Fromelennian. In thin sections, the Fromelennian and Frasnian specimens show evidence of dispersal caused by rough weather periods within a normally quiet, shallow-water environment with a relatively high content of clay components. On the other hand all the Middle Givetian and possible Lower Givetian specimens come from the basal phyllite conglomerate of the examined section.^1";

- 610 s[607] = "BOGOYAVLENSKAYA O.V. (1977).- Nekotorye Stromatoporoidei iz rannedevonskikh otlozheniy vostochnogo sklona Urala. [some Early Devonian Stromatoporoidea from the eastern slopes of the Urals; in Russian].- Trudy Inst. geol. geofiz. AN SSSR, Ural. nauch. centr. 128 [G.N. Papulov & M.G. Breyvel (eds): Novye materyaly po paleontologii Urala]: 13-30.- FC&P 8-2, p. 51, ID=0191^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Russia, Urals^Besides new data on stratigraphy, Stromatoporoidea of the Lower Devonian from the eastern slope of the Ural are described for the first time. These characterize all subgroups of the local stratigraphy. Three new genera are described: Bullatella n.gen., Auroriina n.gen. and Lamellistroma n.gen. The last two genera, together with Densastroma Flügel and Desmosostroma Bolshakova represent the new subfamily Densastromatidae n.fam.^1";
- 611 s[608] = "BOGOYAVLENSKAYA O.V. (1977).- New Stromatoporoidea of the Early and Middle Devonian of the eastern slope of the Urals.- Akademiya Nauk SSSR, Paleont. Inst. (Scientific Council on the Problems of the Ways and Rules of the Historical Evolution of animal and plant Organisms) New Species of Ancient Plants and Invertebrates Bul 4, 14-18.- FC&P 7-1, p. 25, ID=0193^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L M; Geography: Russia, Urals^The new genus Coenellostoma (with type species C. kalyanum n.sp.) is proposed and three species in all belonging to the genus are described. Two new species of Parallelopora and one of Stromatopora are also described.^1";
- 612 s[609] = "ZUKALOVA V. (1976).- Biostratigraphy of the Paleozoic in the basement and foreland of the Carpathians east of Brno. [in Czech with English summary].- Casopis pro mineralogii a geologii 21, 4: 369-385.- FC&P 7-1, p. 26, ID=0199^Topic(s): biostratigraphy; stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: Czech Republic, Moravia^[Frasnian limestones containing Stromatoporoidea have been penetrated by deep boreholes in the Carpathian flysch Belt and Neogene foredeep in Moravia; stromatoporoidea are listed but not described]^1";
- 613 s[610] = "HLADIL J. (1983).- The biofacies section of Devonian limestones of the central part of the Moravian Karst.- Sbor. Geol. Ved., Geol. 38: 71-94.- FC&P 12-2, p. 43, ID=0522^Topic(s): reefs, ecology; reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^Attention is paid to the section of a Devonian carbonate complex in the Moravian Karst. The following facies are recognized: banks (comprising six subfacies), back-reef, reef, fore-reef (comprising five subfacies), and reef cap (comprising three subfacies). The banks, reef and reef cap facies developed especially in Givetian, Lower Frasnian and Upper Frasnian time, respectively. The condensed carbonate sedimentation traceable at the upper boundary of the complex until Lower Tournaisian time was replaced by Culm sedimentation. [original abstract]^1";
- 614 s[611] = "ZUKALOVA V. (1984).- Biostratigrafie devonu ve vrtu Ostravice NP-824 jizne od Ostravy [Biostratigraphy of the Devonian in the Ostravice NP-824 borehole south of Ostrava].- Acta Universitatis Carolinae Geologica .- FC&P 15-1.2, p. 46, ID=0793^Topic(s): biostratigraphy; stroms, stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv Fra; Geography: Czech Republic, Silesia^Twenty-three taxa of stromatoporoidea are identified from the Givetian and Frasnian beds in this well. Many are illustrated in 5 plates.^1";
- 615 s[612] = "MENDEZ-BEDIA I. (1984).- Primera nota sobre los stromatoporoidea de la formacion Moniello (Devonico de la Cordillera Cantabrica, NW de Espana).- Trabajos de Geologia, Universidad de Oviedo

- 14: 151-159.- FC&P 14-1, p. 56, ID=1048Topic(s):new records; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Eif; Geography: Spain, Cantabrian MtsSix stromatoporoid species, of which three are identified only as to genus, are briefly described and illustrated.¹"
- 616 s[613] = "MISTIAEN B., WEYER D. (1999).- Late Devonian stromatoporoid from the Sudetes Mountains (Poland) and endemicity of the Upper Famennian to Uppermost Famennian (= &Strunian&) stromatoporoid fauna in western Europe.- Senckenbergiana lethaea 79, 1: 51-61. [in memoriam Dr. Wolfgang Struve].- FC&P 29-1, p. 69, ID=1520Topic(s):endemism; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Poland, SudetesA single large stromatoporoid specimen collected by one of us (D.W.) from the so-called &Main Limestone& at Dzikowiec (=Ebersdorf) in the Sudetes Mountains of Lower Silesia, Poland, is here assigned to Trupetostroma Parks, 1936. It is typical of the Upper Famennian to Uppermost Famennian (= &Strunian&) stromatoporoid assemblage No. 3 defined by Stearn (1987) and Stearn, Halim-Dihardja & Nishida (1987). This assemblage, confined to western Europe and Kazakhstan, is dominated by clathrodictyids but without labechiids. Other genera present with Trupetostroma in this assemblage include Amphipora, Anostylostroma, Atelodictyon, Clathrocoilona, Clathrodictyon, Clathrostroma, Geronostroma, Petridiostroma, and Stromatopora. All these genera were widespread globally through the Middle and Upper Devonian (Givetian-Frasnian) but in the Upper Famennian to Uppermost Famennian (= &Strunian&) deposits of western Europe they appear as &Lazarus taxa& - a consequence of the Frasnian/Famennian boundary Kellwasser event which terminated reefal environments world-wide. Viewed at the generic level, the western European Upper Famennian to Uppermost Famennian stromatoporoid fauna is essentially ubiquitous, but at the species level endemism is pronounced. This may have resulted from reactivation of distinct biotopes when conditions became conducive, locally, to renewed reef development. The endemicity is analysed using the Jaccard coefficient.¹"
- 617 s[614] = "MENDEZ-BEDIA I. (1999).- El género Actinostroma Nicholson (estromatoporoideos) en la formación Santa Lucía (Devónico, Cordillera Cantábrica NO de España).- Revista Española de Paleontología no. extra homenaje al Prof. J. Truyols: 121-128.- FC&P 30-1, p. 36, ID=1528Topic(s):taxonomy; stroms, Actinostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Ems Eif; Geography: Spain, Cantabrian MtsThe Santa Lucía Formation, from the Devonian (late Emsian-early Eifelian) in the Cantabrian Mountains (NW Spain) yields an abundant and diversified stromatoporoid fauna; one of the most common taxa is the genus Actinostroma Nicholson. In this work the specimens studied are assigned to four species of this genus. A. stellulatum Nicholson, A. verrucosum (Goldfuss), A. geminatum Lecompte and A. cf. conglomeratum Lecompte. The last two species have already been reported from the Cantabrian Mountains, but they are figured for the first time. A. verrucosum, A. geminatum, and A. cf. conglomeratum corresponding to the Actinostroma verrucosum group of Lecompte, have been a matter of discussion and even, assigned to the genus Nexililamina Mallett. The above mentioned species show a typical hexactinellid network which allows us to keep them in the genus Actinostroma s.l.¹"
- 618 s[615] = "MAY A. (2002).- Bisher noch nicht bekannte Stromatoporen aus dem Pragium (Unterdevon) von Koneprusy (Böhmen).- Coral Research Bulletin 7: 115-140. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-2, p. 57, ID=1715Topic(s):reefs; reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Prag; Geography: Czech Republic, Barrandianwithin the Pragian (Lower

- Devonian) reefs are extremely rare world-wide. A remarkable exception is the occurrence of a large reef complex in the Pragian near the Bohemian village of Koneprusy (ca. 30 km SW of Prague). Two large quarries expose the Koneprusy limestone (of kindlei conodont zone) in which stromatoporoids are rare. In addition to the taxa found by Pocta (1894) and May (1999) the following stromatoporoids were found and are described in detail: *Actinostroma clathratum*, *A. sertiforme*, *Plectostroma yunnanense*, *P. crassum*, *Stromatoporella* sp., *Hermatostroma holmesae*, and *Salairella insignis*. Common commensal worms and growth pits induced by non-preservable organisms are also described.¹¹;
- 619 s[616] = "ZUKALOVA V. (1981).- Distribution and stratigraphical significance of the stromatoporoids and microfossils contained in the Devonian limestones (Givetian and Frasnian) from deep boreholes south and southeast of Brno.- *Knihovnicka Zemniho plynu a nafty 2* [J. Kalvoda (ed.): *Biostratigrafie paleozoika na jihovychodni Morave*]: 49-57; Hodonin.- **FC&P 11-2**, p. 44, ID=1877^**Topic(s): **distribution; stroms; **Systematics: **Porifera; **Stromatoporoidea; Stratigraphy: **Devonian Giv Fra; **Geography: **Czech Republic, Moravia¹¹";
- 620 s[617] = "MISTIAEN B. (1987).- Stromatopores du Givetien et du Frasnien de Ferques (Boulonnais - France).- *Biostatigraphie du paleozoique 7* [BRICE D. et al. (eds)]: .- **FC&P 16-1**, p. 19, ID=1933^**Topic(s): **stroms; **Systematics: **Porifera; **Stromatoporoidea; Stratigraphy: **Devonian Giv Fra; **Geography: **France, Boulonnais^Cette etude complete une precedente monographie (Mistiaen 1980) consacree aux Stromatopores du Givetien de Ferques. 60 taxons sont reconnus, leur repartition est precisee. Les 18 taxons suivants sont decrits: *Actinostroma* cf. *filitextum* Nicholson 1886, *Actinostroma* ? cf. *sertiforme* Lecompte 1951, *Pseudostictostroma* sp., *Clathrocoilon* *inconstans* Stearn 1962, *C. spissa* (Lecompte 1951), *Stictostroma* *saginatum* (Lecompte 1951), *S. ciuriosa* (Bargatzky 1881), *Gerronostroma* *lemniscum* (Lecompte 1951), *Syringostromella* *cooperi* (Lecompte 1952), *Habrostroma* *percanaliculata* (Lecompte 1951), *Stachyodes* *australe* (Wray 1967), *Idiostroma* *roemeri irregularis* (Heinrich 1914), *Amphipora* *pervesiculata* Lecompte 1952, *A. cf. laxeperforata* Lecompte 1952, *A. sp.*, *Euryamphipora* sp. Plusieurs biozones a Stromatopores sont proposees, 3 pour le Givetien et 2 pour le Frasnien; elles sont caracterisees par des associations, l'extension ou l'acme de certaines especes. Deux ensembles fauniques tres distincts sont mis en evidence: un ensemble givetien, caracterise par une grande diversite (polystoeie) au niveau generique (19 genres) et specifique (41 especes) et un ensemble frasnien a faible diversite (oligostoeie) generique (8 genres) et specifique (15 especes), pour des nombres comparables de specimens recoltes. Cette observation peut etre correelee au mode de construction recifale: de type bioherme, a nombreuses possibilites de niches ecologiques au Givetien - biostromes aux conditions ecologiques plus homogenes au Frasnien.¹¹;
- 621 s[618] = "WILDER H. (1985).- Mikrofazielle und geochemische Untersuchungen zum oberdevonischen Stromatoporen-Riffsterben am Nordrand des mitteleuropaischen Variszikums [microfacies and geochemical research on termination of Upper Devonian stromatoporoid reefs growth along the Northern Mid-European Variscides; in German].- Aachen Technische Hochschule, Dissertationen; 178 pp., 49 figs., 13 tabs. [disseration] - **FC&P 16-1**, p. 75, ID=2013^**Topic(s): **reefs stromatoporoid, extinctions; reefs stroms; **Systematics: **Porifera; **Stromatoporoidea; Stratigraphy: **Devonian Fra/Fam; **Geography: **Europe, Central^[unpublished ?] The worldwide Devonian reef growth was terminated in the large areas during the triangularis- and gigas-Zone (do I γ/δ). To explain this phenomenon six profiles with the transition from reef- to non-reef facies ranging from Namur (Belgium) to Wuppertal (W.-Germany) were investigated microscopically and

geochemically. * It turned out that the periodically increased production and sedimentation of clayey and mainly organic material directly controlled the Upper Devonian reef growth and finally caused its termination. * Increased plate tectonical shifting of the land areas during the Upper Devonian finally triggered off the following chain of events: increasing rates of periodical rainfall - intensified spreading of land plants - increased chemical weathering - periodically increased transport of nutrients and clastic material into the reef habitat - increased production and sedimentation of phytoplankton - termination of reef growth - final euxinic sedimentation (lower Kellwasser limestone, do I δ).^1";

- 622 s[619] = "MAY A. (2007).- Lower Devonian stromatoporoids of the Sierra Morena (Southern Spain) and their palaeogeographic affinities.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 139-151. ISBN 978-3-7001-3826-6.- FC&P 35, p. 43, ID=2321^Topic(s): biogeography; stroms, biogeography; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Spain, Sierra Morena^For the first time the stromatoporoid fauna from two locations in the Penón Cortado Limestone (Upper Emsian) from the Sierra Moreno (Southern Spain) has been examined in detail. The fauna contains 8 stromatoporoid species. One of them, a new species, is described as Pseudotruperostroma anacontentoae n.sp. The absence of stromatoporoids with branched coenostea and the scarcity of stromatoporoids with thin-layered encrusting growth form probably served as an obstacle to reef construction. The fauna of the Sierra Morena is unrelated to that of the Eastern Americas Realm. However, it is closely related to Emsian faunas of Australia and Canada. There is no evidence to suggest that Southern Spain was a refuge for Eastern Americas stromatoporoids.^1";
- 623 s[620] = "KREBEDUNKEL J. (1995).- Stromatoporen aus dem Givet und Frasn des Bergischen Landes.- Geologisches Institut der Universitaet zu Köln, Sonderveröffentlichungen 106: 182 pp.- FC&P 25-1, p. 48, ID=3057^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv Fra; Geography: Germany, Bergisches Land^In the lower Givetian reef builders used littoral sediments of sand, silt and clay as a foundation for thin biostromes which could exist in spite of repeated sedimentation. In consequence of constant favourable conditions a reef with typical reef facies developed in the upper Givetian. In the Frasnian these bioherms were drowned as sea level rose. The reef evolution of the Bergisch Gladbacher-Paflrather Mulde is analysed by the description of the stromatoporoids which represent an important group of Devonian reefbuilders. The descriptions include 56 species, 11 taxa comparable with described species (cf.), and 2 taxa identified only generically (sp.). The shapes of the skeletons are also described. To better describe and define the species the scanning electron microscope and image processing supplemented the usual skeletal measurements. Except for the dendroid species, all stromatoporoids changed their growth structure according to the predominate environment. Therefore layered flat species appear mostly at the base of the reef and knobby, globular or massive stromatoporoids existed mostly in high energy reef zones. The dendroid species were often found in the lower energy reef zones with high sedimentation rates. The stratigraphic distributions of several species from the area were compared with those from other areas. The distribution of the Middle Devonian Clathrocoilonabeona and Anostylostroma columnare and the Upper Devonian Truperostroma cimanense are notable. [original abstract, with minor modifications]^1";
- 624 s[621] = "ISAACSON P.E., GALLE A. (1991).- Significance of Amphipora floatstones within the Lazanky Limestone (Late Givetian), Moravian Karst.- Vestn. Ustred. ustavu geol. 66, 5: 275-285.- FC&P 21-1.1, p. 55, ID=3265^Topic(s): ; stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy:

- Devonian Giv; Geography: Czech Republic, Moravia^Four lithofacies are apparent in the studied sections: fore-reef facies with possible contourite, resulting from presumed reef drowning or reef backstep; poorly developed buildup facies with boundstones of encrusting stromatoporoids; Amphipora-rich back-reef facies, mainly with floatstones; and anoxic lagoon facies of dark, laminated mudstone without fossils and bioturbations. The backstepping of the reef is interpreted here as a result of eustatic and subsidence changes which finally prevented the development of reef facies.^1";
- 625 s[622] = "HERBIG H.-G., WEBER H.M. (1996).- Facies and Stromatoporoid Biostromes in the Strunian (Latest Devonian) of the Aachen Region, Germany.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke1 F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: 359-364.- FC&P 26-1, p. 45, ID=3617^Topic(s): reefs, biostromes; reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Germany, Aachen region^During the Strunian (latest Devonian), a transgression initiated shallow-water carbonate sedimentation on the western European Condroz shelf along the southeastern shore of the Old Red Continent. The succession contains the youngest Stromatoporoid biostromes of the world. Facies studies from the Aachen region demonstrate a mixed carbonate - siliciclastic ramp with confined fossil assemblages. Biostromes are pioneer structures with extremely low diversity and integration. The binder guild, only formed by stromatoporoids, is of overwhelming importance. Biostromes are neither linked distinctly to Devonian nor Carboniferous buildups. Expansion and extinction is mostly controlled by sealevel changes. ^1";
- 626 s[623] = "MENDEZ-BEDIA I., MISTIAEN B. (1997).- Genus Stromatoporella Nicholson 1886 from the Cantabrian Mountains (Santa Lucia Formation, Lower-Middle Devonian, NW Spain).- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 343-353.- FC&P 26-2, p. 19, ID=3695^Topic(s): ; stroms, Stromatoporella; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L M; Geography: Spain, Cantabrian Mts^The genus Stromatoporella Nicholson 1886 is very abundant in the Santa Lucia Formation (Upper Emsian-Lower Eifelian), in the Cantabrian Mountains, NW Spain. The present study is based on more than one hundred specimens collected from different sections, all of them located on the southern slope of the Cantabrian Mountains. The studied specimens show large variations in the typical characters of the genus, especially the shape and abundance of ring-pillars. Five species have been recognized in open nomenclature; a comparative study was made, mainly based on the different features of the ring-pillars, in order to verify if they allow characterization of the different species. In general, the morphological features of ring-pillars such as shape, relative number of shorter, higher ring-pillars or as high as one interlaminar space, presence of dissepiments and wall thickness are suitable criteria to differentiate the species involved in this study. Some other features, such as density are more variable and, thus, are of less systematic value.^1";
- 627 s[624] = "LACKHEM H., MISTIAEN B. (1994).- Stachyodes australe (Wray 1967), stromatopore a morphologie et mode de croissance particuliers.- Memoires Institut Geologique de l'Universite Catholique de Louvain 35: 191-195.- FC&P 26-2, p. 79, ID=3769^Topic(s): ; stroms, Stachyodes; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: Ardennes^The genus Keega Wray 1967, was created for a Frasnian species and originally interpreted as a coralline alga. In 1974 Riding demonstrated it was not an alga but a laminar stromatoporoid belonging to the genus Stachyodes. S. australis is here recorded for the first time in the Frasnian of Belgium. Some paleoecological observations lead us to think that S. australe was growing in a very quiet environment and was not encrusting

- but just like a loose sheet lying on the bottom.^1";
- 628 s[625] = "MISTIAEN B. (1997).- Decouverte du genre *Amphipora* Schulz 1883, dans le Famennien terminal, "Strunien" de la carriere du Parcq, a Etroeungt, stratotype du Calcaire d'Etroeungt et ailleurs en Avesnois (Nord de la France).- Comptes Rendu, Academie des Sciences, Paris 655, ser. Ila: 655-662.- FC&P 26-2, p. 80, ID=3771^Topic(s): taxonomy; stroms, *Amphipora*; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: France, Avesnois^The genus *Amphipora* Schulz 1883, widely represented during Givetian and Frasnian times, was considered extinct at the end of the Frasnian, at least in western Europe. In fact, it still exists in the latest Famennian (Strunian) in Avesnois, North of France. It has been observed at several levels in two sections, in du Parcq quarry near Etroeungt (stratotype of the Calcaire d'Etroeungt) and in Bocahut quarry near Avesnes.^1";
- 629 s[626] = "KONIGSHOF P., GEWEHR B., KORDNER L., WEHRMANN A., BRAUN R., ZANKL H. (1991).- Stromatoporen-morphotypen aus einen zentralen Riffbereich (Mitteldevon) in der sudwestlichen Lahmulde.- *Geologica et Palaeontologica* 25: 19-35.- FC&P 27-1, p. 108, ID=3860^Topic(s): reefs; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^^1";
- 630 s[627] = "LUCZYNSKI P. (1998).- Stromatoporoid morphology in the Devonian of the Holy Cross Mountains, Poland.- *Acta Palaeontologica Polonica* 43, 4: 653-663.<http://www.pp.pan.pl/article/item/app43-653.html>.- FC&P 28-1, p. 52, ID=3989^Topic(s): morphology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Poland, Holy Cross^Stromatoporoids have been measured in three Upper Devonian localities: Karwow, Kadzielnia and Sitkowka quarries. Quantitative analysis in the measurements demonstrated several differences that have been interpreted in terms of ecological variations between localities. Rate of deposition is proposed to be of special importance in controlling stromatoporoid morphology. Deposits exposed in Kadzielnia and Karwow quarries represent an environment with periodically accelerating deposition and water turbidity, where low domical individuals with a ragged surface and non-enveloping arrangement of latilaminae constitute the most numerous group of stromatoporoids. The deposits outcropping in Sitkowka-Kowala quarry, formed in a calm setting with low deposition rate, are characterized by the following stromatoporoid features: usually extended domical or bulbous shape, smooth surface and an enveloping arrangement of latilaminae. The similarity of stromatoporoid assemblages from Karwow and Kadzielnia confirmed that dolomite exposed in the Karwow quarry represents Kadzielnia-type reef-mound deposits.^1";
- 631 s[628] = "MAY A. (1998).- Das Riff im Pragium (Unter-Devon) von Koneprusy (Bohmen) und seine Stromatoporen-Fauna.- Abstract"Geo-Berlin - 98" Technische Universitat Berlin, Oktober 6-9, 1998: v 222. [abstract] - FC&P 28-1, p. 53, ID=3991^Topic(s): reefs stromatoporoid; reefs stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Czech Republic, Barrandian^^1";
- 632 s[629] = "MAY A., HLADIL J. (1997).- Spodnodevonsti stromatoporoidi z Koneprus (stupen prag).- *Zpravy a geologicky vyzkumech v roce 1997*: 94-97.- FC&P 28-1, p. 53, ID=3992^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Czech Republic, Barrandian^The following species are identified from the Koneprusy Limestone of the Pragian stage: *Actinostroma clathratum*, *A. sertiforme*, *Plectostroma latens*, *P. yunnanense*, *P. crassum*, *Schistodictyon neglectum*, *S. n.sp. aff. neglectum*, *Stromatoporella sp.*, *Stictostroma clarum*, *Amnestostroma holmesae*, *Salairella perinsignis*, *Syringostromella columnaris*, *Atopostroma contextum*, *A. frustulum*,

- Parallelopora florida. Those species marked are Pocta's species with revised generic names.¹";
- 633 s[630] = "MAY A. (1999).- Stromatoporen aus dem Ober-Emsium (Unter-Devon) der Sierra Moreno (Sued-Spanien).- Munstersche Forschungen zur Geologie und Palaontologie 86: 97-106.- FC&P 28-2, p. 38, ID=4036Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Ems; Geography: Spain, Sierra MorenaFor the first time the stromatoporoid fauna from 2 localities in the Pefion Cortado Limestone (Upper Emsian) from the Moreno (southern Spain) is investigated systematically and figured. Described are Actinostroma compactum Ripper 1933, and Schistodictyon n.sp. aff. amygdaloides (Lecompte 1951). The fauna contains 8 stromatoporoid species (in addition to the above ~ Plectostroma salairicum, Clathrocoilona (Clathrocoilona) sp., Stromatopora ex. gp. polaris, Pseudotruperostroma sp., Syringostromella zintchenkovi, Parallelostroma sp.) and shows close relations to Emsian faunas of Australia and Canada.1"
- 634 s[631] = "MAY A. (1999).- Die Stromatoporen-Fauna des Mitteldevons von Zentral-Bohmen.- Munstersche Forschungen zur Geologie und Palaontologie 86: 121-134.- FC&P 28-2, p. 39, ID=4037Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: Czech Republic, BarrandianFor the first time the stromatoporoid fauna of the Acanthopyge Limestone (Eifelian and Lower Givetian) from Koneprusy (Central Bohemia) has been investigated systematically. The fauna contains 19 stromatoporoid species. Data concerning the stratigraphical and geographical distribution of the taxa are given. Except for Actinostroma vastum Pocta 1894, all taxa are known from other parts of the world.1"
- 635 s[632] = "SLUPIK A. (1994).- Rodzaj Amphipora (Stromatoporoidea) z franu Jaworzni w Górach Swietokrzyskich [Genus Amphipora (Stromatoporoidea) from the Frasnian of Jaworznia in the Holy Cross Mts, Poland; in Polish, with English summary].- Prace Nauk. Uniw. Slaskiego, Geologia 12/13: 126-136.- FC&P 23-2.1, p. 19, ID=4220Topic(s): taxonomy; stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross1"
- 636 s[633] = "CORNET P. (1974).- Morphogénèse et caractères écologiques des Stromatoporoïdes du bassin de Dinant (Belgique).- C. R. Acad. Sci. Paris 279, 5, sér. D: 393-396.- FC&P 3-2, p. 47, ID=4986Topic(s): morphogenesis; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ArdennesL'auteur propose un mécanisme d'édification du squelette des Stromatoporoïdes et une interprétation du rôle des Astrorhizes. Une étude détaillée réalisée sur le terrain permet de répartir les différentes formes de colonies en 8 types principaux auxquels correspondent des conditions paléoécologiques différentes. Enfin, la distribution de ces formes dans les faciès récifaux est brièvement esquissée.1"
- 637 s[634] = "FLUGEL E. (1974).- Stromatoporen aus dem Schwelmer Kalk (Givet) des Sauerlandes.- Paläontologische Zeitschrift 48, 3-4: 149-187.- FC&P 4-1, p. 46, ID=5176Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts1"
- 638 s[635] = "MISTIAEN B. (1976).- Stromatopores du Devonien de Ferques (Boulonnais).- Univ. Sciences et Techniques, Lille, Thesis, Dr. 3e cycle, 24 May, 1976.- FC&P 5-2, p. 12, ID=5457Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: France, Boulonnais[unpublished Thesis ?]1"
- 639 s[636] = "KERSHAW S., RIDING R. (1980).- Stromatoporoid Morphotypes of the Middle Devonian Torbay Reef Complex.- Proc. Ussher Soc. 5:13-23.-

- FC&P 10-2, p. 75, ID=6097^Topic(s): morphology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: Britain, Devonshire^A section in Devon shows a transition from laminar forms, through domal forms to bulbous forms at the top. The changes in the growth forms are documented through use of the triangular plot suggested by Kershaw and Riding (1978). The raggedness index is also measured. The changes in form suggest a shallowing upward sequence.^1";
- 640 s[637] = "MISTIAEN B. (1980).- Stromatopores du Givetien de Ferques (Boulonnais, France).- Bulletin du Museum national d'histoire naturelle Paris, 4e ser. 2 (C), 3: 167-257.- FC&P 10-2, p. 79, ID=6098^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: France, Ferques^Givetian fauna of stromatoporoids of Ferques (Boulonnais), up to now completely unknown, has, however, revealed itself very varied. Thirteen levels, more or less rich in stromatoporoids, have been located. They all belong to the "Membre du Griset". Among more than 40 taxons present, 36 are described, belonging to 15 different genera. Their stratigraphic distribution is given and discussed. Comparisons, especially with the "Ardenne", are worked out. [original summary; stratigraphy of the section and the occurrence of the stromatoporoids in each bed is documented; thirty-six species belonging to 15 different genera are described and illustrated: Actinostroma (9), Atelodictyon (1), Clathrodiction (1), Anostylostroma (1), Trupetostroma (2), Pseudostylodictyon (1) Clathrocoilona (3), Stromatoporella (1), Synthetostroma (1), Hermatostroma (6), Stromatopora (6), Ferestromatopora (1), Parallelopore (1), Stachyodes (1), and Dendrostroma (1)]^1";
- 641 s[638] = "OSPANOVA N.K. (2009).- Vytautas Leono Leleshus, 25 March 1930 - 18 August 2007.- FC&P 35: 17-23.- FC&P 35, p. 17, ID=7259^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[obituary note, with attached list of recent publications of Leleshus]^1";
- 642 s[639] = "ZUKALOVA V. (1981).- Stromatoporoids in the Devonian Carbonate Complex in Moravia (Czechoslovakia).- Acta Palaeontologica Polonica 25, 3-4: 671-679.- FC&P 10-2, p. 76, ID=6106^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^[the stratigraphy and distribution of carbonate facies in the basin are described; special attention is given to shapes of stromatoporeid coenostea and the stratigraphical significance of the stromatoporoids]^1";
- 643 s[640] = "Da SILVA A.C., KERSHAW S., BOULVAIN F. (2010).- Stromatoporeid palaeoecology of the Frasnian (Upper Devonian) of southern Belgium.- Third International Palaeontological Congress Programme and Abstracts, p. 135. [abstract] - FC&P 36, p. 29, ID=6392^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: Ardennes^Stromatoporeid faunas from the Frasnian of southern Belgium are abundant in the carbonate platform and mound environments present in this area. Stromatoporoids dominate the large skeletal organisms, with their principal occurrence in biostromes and mound deposits. Stromatoporeid genera include Actinostroma, Amphipora, Euryamphipora, Atelodictyon, Clathrocoilona, Idiostroma, Salairella, Stachyodes, Stictostroma, Stromatopora and Trupetostroma. Comparable facies were observed in the carbonate platform and in the mound, so it appears that even if the mound and platform were independent, similar stromatoporoids occur in similar facies indicating a strong palaeo-environmental control. From the more distal to the more proximal, facies are: (1) outer platform or off-mound (shales, crinoidal packstones); (2) outer intermediate platform or deep mound (muddy facies with crinoids and reef-builders); (3) inner intermediate

platform or shallow mound (muddy facies with algae) and (4) restricted platform or mound (laminites, mudstones, paleosols). Low profile stromatoporoids (dominated by *Stictostroma* and *Salairiella*) are often observed at the beginning of sequences, as stabilizers and in facies 1 and 2 (so they likely led to expansion of the carbonate factory). High domical stromatoporoids (dominated by *Actinostroma*, *Atelodictyon* and *Trupetostroma*) occur in facies 3 and 4, in association with branching stromatoporoids. Stromatoporoid growth forms seem to be related mostly to environmental parameters but there is also some taxonomic control.¹¹;

644 s[641] = "LUCZYNSKI P. (2008).- Growth forms and distribution patterns of stromatoporoids exposed on Devonian palaeobottom surfaces; Holy Cross Mountains, central Poland.- *Acta Geologica Polonica* 58, 3: 303-320.<http://www.geo.uw.edu.pl/agp/>.- **FC#038;P 36**, p. 35, ID=6401^Topic(s): growth forms, distribution patterns; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Poland^well preserved palaeobottom surfaces with stromatoporoids are exposed in two Devonian localities in the Holy Cross Mountains in central Poland: Skaly and Bolechowice-Panek quarries. The stromatoporoids were subjected to morphometric analysis and distribution studies. Stromatoporoids were studied hitherto only in vertical cross sections; the study of three-dimensional stromatoporoid domes has created a need to introduce a new set of parameters describing their shapes, which includes: horizontal length and width, vertical height, elongation ratio and elongation azimuth. In order to make the measurements made by various methods comparable, and thus to allow comparable interpretations, recalculation formulas have been presented. Comparison of the results obtained by the two methods indicates that the measurements made in vertical cross sections substantially bias the dimensions and shapes of the stromatoporoids, which may influence stromatoporoid-based palaeoenvironmental reconstructions. The results of the measurements were interpreted in terms of palaeoenvironmental conditions. In Bolechowice-Panek the stromatoporoids lived in a quiet shallow water setting with a low and stable sedimentation rate. In Skaly the stromatoporoids grew in a shallow subtidal setting and located themselves on parallel ripples, most probably to escape being buried by deposits accumulating in inter-ripple depressions.¹¹;

645 s[642] = "LUCZYNSKI P. (2009).- Stromatoporoid growth orientation as a tool in palaeotopography: a case study from the Kadzielnia Quarry, Holy Cross Mountains, central Poland.- *Acta Geologica Polonica* 59, 3: 319-340.<http://www.geo.uw.edu.pl/agp/>.- **FC#038;P 36**, p. 36, ID=6402^Topic(s): growth orientation; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Poland, Holy Cross^Growth orientation of stromatoporoids has allowed reconstruction of the palaeotopographic position of a large Frasnian organic buildup exposed in the Kadzielnia Quarry in the Holy Cross Mountains, central Poland. Two main, mature stage, stromatoporoid growth modes have been discerned: erect and semi-buried. The growth orientations of the stromatoporoids were studied in 17 sections that expose four different facies in the quarry. The inclinations of the basal surfaces of specimens and direction of the growth axes were measured and compared in terms of different growth modes, facies and positions in the organic buildup. The results support the earlier opinions that the inclined contact between the Kadzielnia stromatoporoid-coral limestones and the detrital limestones is depositional and represents an inclined depositional surface, and that the Kadzielnia buildup developed in a calm water setting below the storm wave base on a slope or at its foot. General conclusions emerging from the studies are: 1) stromatoporoid growth directions hold a key to reconstructing ancient topography; 2) erect stromatoporoids that grew on inclined surfaces changed the growth axes to the vertical direction during their growth; and 3) stromatoporoid growth directions and particularly the changing mode of growth of erect forms support the

- view that Palaeozoic stromatoporoids acted photosensitively.¹";
- 646 s[643] = "WOLNIEWICZ P. (2009).- Late Famennian stromatoporoids from Debnik Anticline, southern Poland.- Acta Palaeontologica Polonica 54, 2: 337-350.- FC&P 36, p. 47, ID=6427^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Poland S^Famennian Stromatoporoidea from the Quasiendothyra communis Foraminiferal Zone and slightly younger strata from the Debnik anticline, southern Poland, form a succession of three consecutive assemblages. Assemblages 1 and 3 consist of representatives of the order Clathrodictyida, while assemblage 2 is dominated by the order Labechiida. The clathrodictyids are represented by the genus Gerronostroma, and labechiids are represented by the genus Stylostroma. Species assigned here to the genus Gerronostroma show a network of amalgamated pillars in the central part of the columns, a feature regarded by previous authors as typical of the genus Clavidictyon. Two new species, Stylostroma multiformis sp.nov. and Gerronostroma raclaviense sp.nov., are described. Stromatoporoids from southern Poland differ from the Famennian fauna of western Europe, showing affinity to eastern European and Siberian Stromatoporoidea.¹";
- 647 s[644] = "HLADIL J., KOPTIKOVA L., SCHNABL P., SLECHTA S., GALLE A., STRNAD L., DRABKOVA V. (2010).- Complex pathways of iron uptake in stromatoporoid skeletons: variability mapped by magnetic susceptibility.- IGCP 580 Meeting: Applications of Magnetic Susceptibility on Paleozoic Rocks, 28th November-4th December 2010, Guilin, China; Meeting Programme and Abstracts [D. Chen & A. C. da Silva (eds.)]: 4-5; Beijing.- FC&P 36, p. 127, ID=6580^Topic(s): Fe uptake; stroms, Fe uptake; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: Czech Republic, Moravia^The authors of this extended abstract are studying middle Givetian Actinostroma and upper Frasnian Stromatopora from the Moravian Karst. In Actinostroma they have detected differences in the deposition of iron within the CaCO3 of three types of seasonal banding, each prevailing in short periods of decadal scale.¹";
- 648 s[645] = "KAZMIERCZAK J. (2003).- Stromatoporoid stromatolites. [grupa stromatolity stromatoporoidowe; in Polish].- Budowa Geologiczna Polski. III. Atlas skamieniałości przewodnich i charakterystycznych, part 1b, Dewon [L. Malinowska et al. (eds.)]: pp 690-707, pls 390- 403; Państwowy Instytut Geologiczny, Warszawa.- FC&P 33-1, p. 40, ID=7193^Topic(s): atlas of fossils; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Poland^This section of the Polish Atlas of Index and Characteristic Fossils is a condensation of the 1971 monograph of Kazmierczak on Stromatoporoids from the Holy Cross Mountains (Palaeontologia Polonica 26). Thirty-nine species are described briefly and illustrated with rearranged photomicrographs from the 1971 publication. Generic discussions are not included. Ten species have been dropped from the faunal list. In an introduction of two and a half pages the hypothesis that the stromatoporoids should be placed in the Cyanophyta is adopted. [comment by C.W. Stearn; see also bibliographic note in Fossil Cnidaria & Porifera 32, 2, p. 56]¹";
- 649 s[646] = "LUCZYNSKI P. (2003).- Stromatoporoid morphology in the Devonian of the Holy Cross Mountains, Poland, and its palaeoenvironmental significance.- Acta Geologica Polonica 53, 1: 19-27.- FC&P 33-1, p. 40, ID=7194^Topic(s): morphology, ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Poland, Holy Cross^Stromatoporoid skeletons from polished slabs of stromatoporoid- and coral-bearing limestones of the Upper Devonian Kowala Formation from the Holy Cross Mountains in central Poland have been measured using a classic parameterization method, introduced by Kershaw & Riding (1978) and improved by Kershaw (1984, 1998). The

- stromatoporoid shape appeared to be strongly dependent on its size - the V/B ratio decreases along with increasing B. The relation can be well matched by a curve described by a formula: $f(x) = 5.7103x^{0.81633}$. The size of the measured specimens must therefore be taken into account in those studies of the stromatoporoid morphology, where it is concerned a palaeoenvironmental indicator. The stromatoporoids adopted several types of initial surfaces, corresponding to various growth strategies in the first phase of their growth in response to various environmental conditions, such as substrate consistency and sedimentation rate. Latilaminae arrangement well records the stromatoporoid growth history and therefore its studies are crucial in environmental interpretations, as the conclusions inferred from the shape alone might be very misleading. [original abstract]^1";
- 650 s[647] = "RACKI G., SOBSTEL M. (2004).- Very large stromatoporoid indicating Early Frasnian reef core (Holy Cross Mts., Poland).- Geological Quarterly 48, 1: 83-88.- FC&P 33-1, p. 78, ID=7224^Topic(s): strom reefs; stroms reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^A large stromatoporoid *Actinostroma* cf. *crassipilatum* Lecompte, 1951, at least 0.85m in height, occurs in the Sluchowice quarry, Kielce, Holy Cross Mountains. The sponge occurs in growth position within Early Frasnian (transitans Zone) intraclast-rich reef-rubble deposits. The unique preservation of the reef-builder close to a reef core is implied for the northern flank of the developing Dyminy Reef during the maximum expansion northward into the Kostomloty intrashelf basin. [original abstract]^1";
- 651 s[648] = "ZUKALOVA V. (1976).- Upper Devonian Stromatoporoids, foraminifers and algae in the borehole Nepasice (western Bohemia).- Vestnik Ustredniho ustavu geologickeho 51: 281-284.- FC&P 7-1, p. 26, ID=0198^Topic(s): ; stroms, forams, Algae; Systematics: Porifera algae Foraminifera; Stromatoporoidea; Stratigraphy: Devonian U; Geography: Czech Republic W^[*Atelodictyon* cf. *A. variabile* (Riabinin) is described and illustrated]^1";
- 652 s[649] = "ZUKALOVA V. (1981).- Stromatoporoidea, Foraminifera and red algae from the Givetian and Frasnian of the Krasna-1 borehole.- Sbornik geol. ved. Paleont. 24: 63-94.- FC&P 10-2, p. 76, ID=6105^Topic(s): ; fossils, stroms; Systematics: Porifera algae Foraminifera; Stromatoporoidea; Stratigraphy: Devonian Giv Fra; Geography: Czech Republic, Moravia^[the following stromatoporoids are described: *Actinostroma clathratum*, *A. verrusosum*, *A. cf. moravicum*, ?*Trupetostroma* cf. *pertabulatum*, *Stachyodes* cf. *radiata*, *S. cf. caespitosa*, *Amphipora angusta*, *A. laxeporata*; other specimens are assigned with uncertainty to *Trupetostroma*, *Hermatostroma*, *Clathrocoilona*, *Stachyodes*]^1";
- 653 s[650] = "MAY A. (1994).- Fossilien aus dem Schwelmer Kalk. IV. Stromatoporen und Korallen.- Beiträge Heimatkd. Schwelm Umgebung n.F. 44: 9-16. [in German].- FC&P 24-1, p. 58, ID=4466^Topic(s): ; stroms, corals; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^[in this general report some good figures of rugose and tabulate corals as well as stromatopoids are given]^1";
- 654 s[651] = "NEIDHARDT S. (1985).- Stromatoporen, Chaetetiden und Solenoporaceen aus der Eifel-Stufe (Mitteldevon) des südlichen Bergischen Landes (Rechtsrheinisches Schiefergebirge).- FC&P 14, 1: 30-33.- FC&P 14-1, p. 30, ID=6619^Topic(s): taxonomy, ecology; stroms, Chaetetida, algae; Systematics: Porifera algae; Stromatoporoidea Chaetetida; Stratigraphy: Devonian Eif; Geography: Germany, Rhenish Mts^Aus dem südlichen Bergischen Land werden erstmalig Stromatoporen, Chaetetiden und Solenoporaceen monographisch beschrieben. * Die Fundpunkte gehören stratigraphisch in die Eifel - Stufe, die im Untersuchungsraum

folgendermaßen gegliedert wird: * Selscheider Schichten: Schönenborn - Horizont * Mühlenberg - Schichten: Bilstein - Horizont, Grenzkalk * Hobracker Schichten: Basiskalk * Hohenhöfer Schichten: Tonstein - Folge. * Das Ablagerungsmilieu ist nach litho- und biofaziellen Merkmalen als marine strandnahe Akkumulation mit geringer terrigener Sedimentzufuhr gekennzeichnet. [initial part of a short paleontological note; list of taxa contains species of genera Actinostroma, Atelodictyon, Anostylostroma, Geronostroma, Synthetostroma, Stromatoporella, Clathrocoilon, Stictostroma, Stromatopora, Syringostroma, Ferestromatopora, Trupetostroma, Chaetetes and Solenopora]^1";

- 655 s[652] = "OEKENTORP K. (1980).- Coelenterata: Stromatoporoidea, Rugosa, Tabulata.- Muenstersche Forschungen zur Geologie und Palaeontologie 50: 85-126 [Kaever H., Oeketorp K. & Siegfried P. (eds): Fossilien westfalens. Invertebraten des Oberdevons].- FC&P 9-1, p. 45, ID=0284^Topic(s): taxonomy; Stroms, Rugosa, Tabulata; Systematics: Porifera Cnidaria; Stromatoporoidea Rugosa Tabulata; Stratigraphy: Devonian U; Geography: Germany, westphalia^The following species are described: Stromatoporoidea: Actinostroma (A.) clathratum Nicholson 1886, A. (A.) stellulatum Nicholson 1886, A. (A.) verrucosum (Goldfuss 1826), Stromatoporella curiosa (Bargatzky 1881), Paralleloporella bucheliensis Bargatzky 1881, Stachyodes verticillata (McCoy 1851). Amphipora ramosa (Phillips 1841). Rugosa: Metriophyllum irregulare Paeckelmann 1922, Neaxon regulus (R. Richter 1848), Amplexus helminthoides Frech 1885, Hexagonaria basaltiforme (Roemer 1885), H. hexagona (Goldfuss 1826), Phillipsastrea ananas (Goldfuss 1826), Ph. hennahi (Lonsdale 1840), Pexiphyllum heterophylloides (Frech 1885), Hankaxis tinocystis (Frech 1885), Tabulophyllum priscum (Muenster 1841). Tabulata: Thamnopora boloniensis (Gosselet 1877), Alveolites suborbicularis Lamarck 1801, Scoliopora vermicularis (McCoy 1850), Cladochonus tubaeformis Ludwig 1865.^1";
- 656 s[653] = "MISTIAEN B. (2002).- Stromatopores et coraux tabulés du Membre des Pâtures, Formation de Beaulieu (Frasnien de Ferques, Boulonnais, France).- Annales de la Societe geologique du Nord 9 (2eme serie): 85-90.- FC&P 31-1, p. 62, ID=1635^Topic(s): taxonomy, ecology; stroms, Tabulata; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Devonian Fra; Geography: France, Boulonnais^Stromatoporoids and Tabulate corals were collected in new outcrops of the Membre des Pâtures (term c), Beaulieu Formation, Frasnian of Boulonnais. The majority of the concerned taxa were never collected in this level, but they correspond to taxa previously observed below, in the Noces Member of the Beaulieu Formation, and/or above, in the Fiennes, du Bois and Parisienne Members of the Ferques Formation. Some palaeoenvironmental considerations are also developed.^1";
- 657 s[654] = "ZAPALSKI M.K., HUBERT B. NICOLLIN J.-P., MISTIAEN B., BRICE D. (2007).- The palaeobiodiversity of stromatoporoids, tabulates and brachiopods in the Devonian of the Ardennes: changes through time.- Bulletin de la Societe Geologique de France 178, 5: 383-390.- FC&P 35, p. 118, ID=2457^Topic(s): biodiversity; stroms, Tabulata; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Devonian; Geography: Ardennes^The specific biodiversity of stromatoporoids, tabulates and brachiopods from the Ardennes (706 taxa) has been analyzed stage-by-stage from the Lochkovian up to the Famennian. The diversity of each group may be correlated with external factors (e.g. facies), but it varied individually (e.g. decline of brachiopods in the Givetian). The faunas are discussed at the order level, however some more diversified orders are analyzed at family level. Biodiversity shows a single peak centered on the Givetian for the bioconstructors, and two major peaks (Emsian-Eifelian and Frasnian) for the brachiopods. The most diversified orders are Stromatoporellida (stromatoporoids), Favositida (tabulate corals) and Spiriferida (brachiopods).

- Stromatoporoids display two, tabulate corals four and brachiopods five stages of renewal of fauna.^1";
- 658 s[655] = "CARPENTIER M., PEL J. (1977).- Sur deux especes givetiens de Trachypora (Tabulata) recueillies a Givet et au bord sud du synclinorium de Dinant.- Bureau Recherches Geologiques et Minieres Memoir 89: 88-096 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-2, p. 19, ID=0148^Topic(s): ; Tabulata, Trachypora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Ardennes^Etude de deux especes de Tabules rapportees au genre Trachypora (T. circulipora Kayser 1879, T. cf. dubatolovi. Tong'Dzui 1967). L'une d'elles signalee pour la premiere fois en France et en Belgique semble identique a un Tabule decrit du Nord Vietnam. Les deux especes sont caracteristiques du Givetien inferieur. [original summary]^1";
- 659 s[656] = "STASINSKA A. (1969).- Koralowce dewonskie Tabulata z otworu Miastko 1 w polnocno-zachodniej Polsce [Devonian Tabulata from Miastko 1 borehole in NW Poland].- Acta Geologica Polonica 19, 4: 765-778.- FC&P 6-2, p. 22, ID=0162^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Poland NW^Results of a study on tabulate corals are reported from the profile of borehole Miastko 1 in the province of Koszalin (NW Poland). The typical Frasnian species are Thamnopora boloniensis (Gosselet) and Alveolites obtortus Lecompte. The assemblage of species is characteristic of the Givetian.^1";
- 660 s[657] = "STASINSKA A. (1969).- Structure and ontogeny of Kozlowskicystia polonica (Stasinska, 1958).- Acta Palaeontologica Polonica 14, 4: 553-564.- FC&P 6-2, p. 23, ID=0163^Topic(s): nomenclature; Tabulata, Kozlowskicystia; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif; Geography: Poland, Holy Cross^The genus Kozlowskia from the Couvinian of Grzegorzowice in the Holy Cross Mts, assigned to a new family kozlowskiidae, was erected by the writer in 1958. Now, on the basis of a new material, supplementary observations have been made concerning the structure of wall and ontogenetic development. At the same time, since the name of Kozlowskia was preoccupied (Fredericks, 1933), new generic and family names (Kozlowskiocysta, resp. Kozlowskiocystidae) have been introduced.^1";
- 661 s[658] = "LAFUSTE J., PLUSQUELLEC Y. (1976).- Kerforneidictyum n.gen. (Tabulata, Devonien), morphologie et microstructure.- Bulletin de la Societe geologique de France 18, 6: 1699-1711.- FC&P 7-1, p. 22, ID=0177^Topic(s): microstructures; Tabulata, Kerforneidictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: France^Pleurodictyum kerfornei Collin 1912 is designated as type species of the genus Kerforneidictyum. A way of fixation upon a non-fossilizable organism is described as well as the presence, in some species, of an arrangement of the septal ridges according to a Tetracoralla type of scheme. The microstructure shows lamellary cenenchyma and fibrous spines, the dark median line is granular. Some supports in favour of the phylogenetic connections between Tabulata and Tetracoralla are presented.^1";
- 662 s[659] = "MAREK L., GALLE A. (1976).- The tabulate coral Hyostragulum, an epizoan with bearing on hyolithid ecology and systematics.- Lethaia 9, 1: 51-64.- FC&P 5-1, p. 33, ID=0180^Topic(s): ; Tabulata, Hyostragulum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L M; Geography: Czech Republic, Moravia^The new, monotypic tabulate coral Hyostragulum and its type species H. mobile is described. This coral was found as an epizoan on the conch of different hyolithid species - and occasionally of nautiloids and gastropods - in the Bohemian and Moravian Lower and Middle Devonian. Moreover the authors discuss the validity of the hyolithid genus Pterygotheca Novak 1891, as also hyolithid ecology and systematic. The new hyolithid genus Ottomarites is established.^1";

- 663 s[660] = "WEYER D. (1976).- *Cleistopora struniana*, eine neue tabulate Koralle aus dem Etroeungt (Oberdevon) des Rheinischen Schiefergebirges.- *Jahrbuch Geol.* 7/8 (1971/72); 353-361.- FC&P 9-1, p. 47, ID=0287^Topic(s): taxonomy, new taxa; Tabulata, Cleistopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fam; Geography: Germany, Rhenish Mts^Cleistopora struniana nov. sp. is described from Etroeungtian beds of the Carboniferous limestone district near Aachen (Western Rhenish Mountains). Probably conspecific casts have been found in the same horizon of the Velbert anticline (Eastern Rhenish Mountains). The new species shows diagnostic generic features of both *Stratophyllum* Smith 1933 and *Squameophyllum* Smith 1933, which are supposed to represent synonyms of *Cleistopora* Nicholson 1888.^1";
- 664 s[661] = "HLADIL J. (1980).- On the Givetian / Frasnian boundary determination in the Devonian limestones of the Bohemian Massif slopes.- *Zemny plyn a nafta* 25, 1: 25-32.- FC&P 9-2, p. 46, ID=0353^Topic(s): stratigraphy; Tabulata, *Caliapora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Czech Republic, Bohemian Massif^A disappearance of a group of *Caliapora*-like corals, similar to *Caliapora battersbyi*, can be observed in a profile of deep boreholes at the Givetian / Frasnian boundary. The author discusses this fact depending upon the development of marine ecosystems during that period.^1";
- 665 s[662] = "IVEN C. (1980).- Alveolitiden und Heliolitiden aus dem Mittel und Oberdevon des Bergischen Landes (Rheinisches Schiefergebirge).- *Palaeontographica* A176 (4-6): 121-179.- FC&P 9-2, p. 47, ID=0357^Topic(s): taxonomy; Alveolitida, Heliolitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M U; Geography: Germany, Rhenish Mts^Middle and Upper Devonian Alveolitids and Heliolitids of the Bergisches Land, east of Cologne, were investigated and monographically described. 24 species of Alveolitids were found. Nine new species and one new genus were established. Among other criteria, statistical methods have been used in the characterization of the species. The colonial growth forms were reduced to three fundamental types. The microstructure of the skeleton (especially of the tabulae and the wall neighbouring the pores) were examined. Two budding types are described. The new alveolitid species are: *A. pseudorbicularis*, *A. bergeri*, *A. lindensis*, *A. bilsteinensis*, *Subalveolites praetenuissimus*, *S. parvicorallitus*, *Alveolitella schladensis*. The new genus *Spongialveolites* is characterized as follows: Diagnosis: Transverse sections of the corallites kidney-shaped. At the lower wall of the corallites a robust ridge is always developed. Pores of the wall numerous and large, mostly higher than wide. Many pores in the corners of the corallites are arranged in such a manner that two pores combine and mutually connect three corallites. Thickness of wall and distance of tabulae and pores are equal in the entire colony. Growth not known in detail and probably varying. Remarks: The genus is clearly characterized by large oval wall pores and the robust ridge at the lower wall of the corallites. The different species are differentiated only by the dimensions. Two new species are assigned to the genus: *Sp. minor* as the type species and *Sp. minimus*. Nine subspecies of *Heliolites porosus* (Goldfuss 1826) can be distinguished in this investigation area. Three new subspecies are established. Here, statistical methods are also used in the characterization and distinction of the subspecies. Some supplementary data are given concerning Goldfuss' originals of *Heliolites porosus* which had already been revised by Lecompte (1936). The submicroscopic structure of the skeleton as well as some perceptions on foreign bodies and parasites are described. The new species *H. bilsteinensis* and the new subspecies of *H. porosus*: *H. p. bergeri* and *H. p. schladensis* are assigned to line heliolitids. Finally, the stratigraphic range of the species and the facies in which they are

- found, are indicated.^1";
- 666 s[663] = "HLADIL J. (1984).- Tabulate corals of the genus *Thamnopora* Steiningger from the Devonian of Moravia.- *Vestník Ústředního ústavu geologického* 59, 1: 29-39.- FC&P 13-1, p. 43, ID=0497^Topic(s): Tabulata, *Thamnopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^The study deals with corals of the genus *Thamnopora* Steiningger and their application to the stratigraphy of the Devonian reef complexes in Moravia. Ten known and three new taxa are described on the subspecies level. Skeletal fragments have often been found in thin section during micropaleontological and petrographical practices performed. Due to the compactness of the skeletons, this coral group shows a high resistance to reworking processes.^1";
- 667 s[664] = "HLADIL J. (1984).- Tabulatni korali z vrhu NP-824 Ostravice.- *Acta Universitatis Carolinae Geologica* 3: 251-259.- FC&P 15-1.2, p. 34, ID=0822^Topic(s): taxonomy, stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif - Fam; Geography: Czech Republic, Silesia^Tabulate corals are sampled in the depth-interval between 1877.5 and 1901.7 m. Association of corals includes *Caliopora battersbyi* (Milne-Edwards et Haime 1851), *Scoliopora denticulata denticulata* (Milne-Edwards et Haime 1851) alpha morphotype (see text fig. 1), *Scoliopora minima* Nowinski (temporarily nomen nudum), *Natalophyllum ? dubiensis* Nowinski 1976, *Thamnopora bublichenkoi* Dubatolov 1962, *Crassialveolites crassus* (Lecpte 1939). The spectrum of present coral species indicates the *Caliopora battersbyi* acrozone. In the large appendix the biozones are defined on the basis of tabulate corals. Beginning from the bottom they are as follows: Spongioalveolites intermixtus acrozone, *Trachypora dubatolovi* - *Scoliopora dubrovensis* coenozone, *Caliopora battersbyi* acrozone, Alveolites mailleuxi local problematic biozone, Alveolites delhayeii acmezone, *Crassialveolites domrachevi* s. s. acrozone, *Scoliopora denticulata vassinoensis* acmezone. These biozones represent the time span from the upper Eifelian to the lower Famennian age.^1";
- 668 s[665] = "LAFUSTE J., TOURNEUR F. (1988).- *Dendropora* Michelin 1846 et le nouveau genre dendroporimorphe *Senceliaepora* du Givetien et du Frasnien de la Belgique.- *Bulletin du Museum national d'histoire naturelle* 4 ser., 10, 1988, sec. C, 4: 307-341.- FC&P 18-1, p. 25, ID=0842^Topic(s): Tabulata, *Senceliaepora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Ardennes^Le genre monospécifique *Dendropora*, jusqu'a présent connu seulement par deux petits spécimens de musée, est redécrit sur la base d'un abondant matériel du Givetien de Belgique et du Boulonnais; celui-ci permet de préciser les caractères structuraux et microstructuraux de *Dendropora explicita* Michelin 1846. Le nouveau genre *Senceliaepora*, créé pour *S. tenuiramosa* n.gen., n.sp. se distingue du précédent par plusieurs traits morphologiques et microstructuraux; il est localement très abondant dans certains niveaux du Frasnien supérieur de Belgique et du Boulonnais. La position systématique des deux genres est discutée, ainsi que la définition de la famille *Dendroporidae* de Fromentel 1861.^1";
- 669 s[666] = "MAY A. (2005).- A new *Parastriatopora* species (Anthozoa, Tabulata) from the Lower Devonian of Colle (Spain, Cantabrian Mountains).- *Bulletin of Geosciences* 80, 4: 287-290.- FC&P 34, p. 45, ID=1253^Topic(s): biogeography; Tabulata, *Parastriatopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Spain, Cantabrian Mts^The paleontological collection of the Museo Geominero (Madrid) houses a new species of the tabulate coral *Parastriatopora*. It comes from the Lower Devonian of Colle (Prov. León) and probably originates from one of the biostromal levels in the upper part of the Valporquero Formation and the Lower part of the Coladilla Formation (Upper Emsian).

The new species, described under open nomenclature as *Parastriatopora* sp., is characterized primarily by its large corallites and calices: the 5- to 7-cornered calices are 3.5-6.9mm in diameter (mostly 5.5-6.0mm). Furthermore, it shows very interesting paleobiogeographical relationships, because the morphologically closest related species is *Parastriatopora gigantea* (Knod 1908) from the Lower Devonian of Bolivia. *Parastriatopora* sp. could be an example of a close relationship between the Cantabrian Mountains and America during the Emsian.¹";

670 s[667] = "STADELMAIER M., NOSE M., MAY A., SALERNO C., SCHRODER St., LEINFELDER R. (2005).- Ästige tabulate Korallen-Gemeinschaften aus dem Mitteldevon der Sötenicher Mulde (Eifel): Faunenzusammensetzung und fazielles Umfeld.- *Zitteliana* B25: 5-38. ISSN 1612-4138.- FC&P 34, p. 48, ID=1262Topic(s):taxonomy, facies; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^This paper describes the fauna and the facies of thamnoporoid-rich reefhorizons in the Lower Givetian (Cürten Formation to Rodert Formation) of the Sötenich Syncline (Eifel Hills, Germany). The following branched tabulate corals are described: *Alveolites* (*Alveolitella*) *fecundus* (Lecompte 1939), *Alveolites* (*Alveolitella*) *crassus* (Schlueter 1885), *Scoliopora* cf. *denticulata* (Milne-Edwards & Haime 1851), *Scoliopora* cf. *serpentina* Janet 1972, *Celechopora devonica* (Schlueter 1885), *Pachyfavosites polymorphus* (Goldfuss 1829), *Pachyfavosites tumulosus* (Janet 1965)?, *Thamnopora cervicornis* (Blainville 1830), *Thamnopora irregularis* (Lecompte 1939), *Thamnopora reticulata* (Blainville 1830), *Roemerolites brevis* (Schlueter 1889) and *Roemerolites tenuis* (Schlueter 1885)¹";

671 s[668] = "ZAPALSKI M.K. (2005).- A new species of Tabulata from the Emsian of the Holy Cross Mts., Poland.- *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte* 2005, 4: 248-256.- FC&P 34, p. 48, ID=1263Topic(s): new taxa, biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Poland, Holy Cross^A new species of a tabulate coral, *Aulopora hacqueti*, from the Upper Emsian (serrotinus-partitus zones) of the Grzegorzowice Formation (Holy Cross Mts, Poland) is proposed. The discussion of the taxonomic composition and palaeogeographic distribution of the tabulate faunas occurring in this Formation permits to conclude that the auloporid and syringoporid faunas of the Grzegowice Fm. are endemic, while favositids are widespread. The herein described new species underlines the observation on auloporid endemicity.¹";

672 s[669] = "MAY A. (1999).- Kommensalische Syringopora-Arten (Anthozoa; Tabulata) aus dem Devon von Zentral-Böhmen.- *Munstersche Forschungen zur Geologie und Paläontologie* 86: 135-146.- FC&P 28-2, p. 39, ID=1464Topic(s): commensalism; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Czech Republic, Bohemian Massif^For the first time the Syringopora species are described, which occur as commensals within the stromatoporoids of the Koneprusy Limestone (Middle Pragian) and the Acanthopyge Limestone (Eifelian and Lower Givetian) from Koneprusy (Central Bohemia). Among the 5 species, which have been found, only *Syringopora hanshanensis* CHOW 1980 and *Syringopora expansa* MAURER 1885 are known from other parts of the world. From the Pragian to the Eifelian *Syringopora* shows a drastic increase in frequency and a better adaptation to a commensalic way of life. ¹";

673 s[670] = "OEKENTORP K., BRUHL D. (1999).- Tabulaten-Fauna im Grenzbereich Unter-/Mittel-Devon der Eifeler Richtschnitte (S-Eifel/Rheinisches Schiefergebirge).- *Senckenbergiana lethaea* 79, 1: 63-87. [in memoriam Dr. Wolfgang Struve].- FC&P 29-1, p. 61, ID=1465Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: Germany, Rhenish Mts^Tabulate corals from the Lower/Middle Devonian boundary beds are described. The specimens were

recovered from the middle Heisdorf Formation – Lower Lauch Formation, ranging from the upper Emsian to lowermost Eifelian. The material was collected by Dr. Rolf Werner [8224;], Forschungsinstitut Senckenberg/Frankfurt, in the early seventies from new trenches (Richtschnitte) in Wetteldorf (Pruem Syncline; Werner 1972a), Dingdorf (Pruem Syncline; Werner 1973b, 1975), Lissingen (Gerolstein Syncline, Werner 1973a, 1976) and the Lower/Middle Devonian profile Ahuetter Kehre (Hillesheim Syncline, Werner 1972b). The following taxa have been identified: Favosites (Favosites) gilsoni Lecompte 1939, Favosites (Emmonsia) sollei (Birenheide 1985), and Squameofavosites straeleni Lecompte 1939; and Heliolites wernerii n.sp. is described. Investigation of microstructure in coral skeletons related to boring cyanophytes allows conclusions on the timing of the diagenesis to be drawn. Endobiontic worm-tubes of Chaetosalpinx huismanni Stel 1978 are described. 11";

674 s[671] = "PLUSQUELLEC Y., JAHNKE H. (1999).- Les tabulés de l'Erbslochgrauwacke (Emsien inférieur du Kellerwald) et le problème des affinités paléogéographiques de l'allochthone Giessen-Harz.- Abhandlungen der Geologischen Bundesanstalt 54: 435-451.- <FC>P 28-2, p. 26, ID=1466Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Germany, Kellerwald^Newly discovered tabulate corals from the Erbslochgrauwacke (Lower Emsian, Kellerwald, Germany) are attributed to: Pterodictyum polentinensis, Kerforneidictyum n.sp. A, Praemichelinia n.sp. e.g. guerangeri guerangeri and Hyostragulum n.sp. ? In addition the very well known Pterodictyum e.g. petrii is recorded. These forms are clearly of North Gondwanan affinities during the Pragian and Early Emsian. Their occurrence contributes to the discussion about the paleogeographic origin of the exotic rocks belonging to the Giessen-Harz nappe. 11";

675 s[672] = "GALLE A., PLUSQUELLEC Y. (2002).- Systematics, morphology, and paleobiogeography of Lower Devonian tabulate coral epibionts: Hyostragulidae fam. nov. on hyolithids.- Coral Research Bulletin 7: 053-064. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- <FC>P 31-1, p. 62, ID=1634Topic(s): pseudoplantic; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Czech Republic^The family Hyostragulidae fam. nov., encompassing the genera Hyostragulum Marek & Galle, 1976 (including the new species H. annae and H. barborae) and Marekostragulum gen. nov. (with the species M. adami) as well as cf. Marekostagulum and new genus A. Their systematics, morphology and paleology are discussed. The palaeobiogeography of Hyostragulum from Central Bohemia, Germany and Morocco, Marekostragulum from Moravia, the Armorican Massif, and Algeria, cf. Marekostragulum from Portugal and new genus A from Germany is evaluated. 11";

676 s[673] = "PLUSQUELLEC Y., HLADIL J. (2001).- Tabulate corals of Ibarmaghian affinities in the Upper Emsian of Bohemia.- Geologica et Palaeontologica 35: 31-51.- <FC>P 31-1, p. 65, ID=1639Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Czech Republic, Bohemian Massif^Some tabulate corals belonging to a genus identified for the first time in the Barrandian area (Bohemia, Czech Republic) were collected in 1948-1950 by Jiri Bouska in the vicinity of Holyne. The fossiliferous beds of the Bouska excavation are assigned to the Trebotov Formation which belongs to the Upper Emsian (Upper part of Po. serotinus Zone). This part of stratigraphic sequence consists of background sedimentation lime-mudstone, which alternates with fine-grained tentaculit-bearing and coarse-grained calciturbidites. Among the largely silicified tabulate corals – many of them still remaining undetermined – three new species have significant palaeogeographic implications, being

- inconsistent with previous knowledge of Bohemian coral biofacies. These species are *Kerfernoidictyum rex* n.sp., *Pterodictyum holynesis* n.sp. and *Taouzia vulvaria* n.sp. During the Upper Emsian, these genera are typical for the Ibarmaghian Domain of the Gondwana margin (north Sahara, Iberian Peninsula and Armorican Massif) or in the Maghrebo-European Realm (north Gondwana and Avalonia). *Pterodictyum* and *Taouzia* were formerly identified only in the Ibarmaghian Domain; *Kerferneidictyum* is widely distributed. The oldest occurrences of the latter genus are from the Lower Emsian of the North Gondwana Province, but this genus has also been recorded from the Uppermost Emsian of the Sauerland. The co-occurrence of *Kerferneidictyum*, *Pterodictyum* and *Taouzia* in the Upper Emsian of Bohemia indicates clear affinities with the Ibarmaghian Domain and gives supplementary evidence for retaining central Bohemia at the north Gondwana margin.¹;
- 677 s[674] = "FUCHS G., PLUSQUELLEC Y. (1982).- *Pleurodictyum problematicum* Goldfuss 1829 (Tabulata, Devonien). Status, Morphologie, Ontogenie.- *Geologica et Palaeontologica* 15: 1-26.- FC&P 11-1, p. 49, ID=1768Topic(s): nomenclature, phylogeny; Tabulata, Pleurodictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Germany, Eifel^Because the type specimens of *Pleurodictum problematicum* Goldfuss 1829 are lost, a neotype is created here coming from the Lower Emsian of Oberstadtfeld/Eifel. Species range from the Upper Siegenian to the Lower Emsian/Upper Emsian boundary. The fossils can be found in life position only in the silty shallow water sediments together with many Chonetids, while well-preserved specimens coming from fine quartzitic sandstones show features of redeposition. Morphology and ontogeny of the specimens are studied in details. Quantitative analysis shows an anagenetic trend in the evolution of some characters. A proterogenetic trend is pointed out from *PI. problematicum* to *PI. latum*.¹;
- 678 s[675] = "HLADIL J. (1981).- The genus *Caliapora* Schlueter (tabulate corals) from the Devonian of Moravia.- *Vestn. Ustred. Ustavu geol.*, 56 (3): 157-168.- FC&P 11-1, p. 49, ID=1770Topic(s): taxonomy, stratigraphy; Tabulata, *Caliapora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Czech Republic, Moravia^In the Middle Devonian limestone complexes in Moravia nine species of *Caliapora*, including three new species, have been found in total. This group of tabulate corals has been used in the solving of the Paleozoic biostratigraphy on the slopes of the Bohemian Massif. The paper also gives a short description of the phylogenesis and ecology of the Moravian members of the genus. [the species described are: *Caliapora batterbyi* (Milne-Edwards & Haime), *C. venusta* Yanet, *C. robusta* (Pradacova), *C. reducta* Yanet, *C. plagiosquamata* n.sp., *C. chaetetooides* Lecompte, *C. uralica* Yanet, *C. ochoensis* n.sp., *C. celechovicensis* n.sp.; *Caliapora* is mostly associated with semilagoonal environments or coral banks generated beneath the reach of more intensive wave action].¹;
- 679 s[676] = "HLADIL J. (1981).- Devonian tabulate corals from the deep boreholes located south of Brno. [in Czech, with English summary].- *Biostratigrafie Paleozoika*: 31-36; *Hodonin*.- FC&P 11-2, p. 32, ID=1845Topic(s): taxonomy, distribution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^In the region described, the tabulate coral faunas are mainly associated with the lower part of the Devonian limestone complex. They are characteristic of dark coloured, partially dolomitized limestones of the semilagoonal facies and of coral bank facies. The flat fringing reef developing in the roof and comprising laminites and breccia intercalations as well as nodular limestone beds (Skocek 1978) ceases to include subfacies suitable to the growth of tabulate corals. The diversity of the corals decreases until they get gradually extinct. * The vertical trends in the evolution of tabulate coral assemblages in the southern region are similar to those in the central region (Hladil 1974). However, as can

be concluded from the intermittently cored boreholes, the Frasnian associations of the southern region seem to restrict themselves even more pronouncedly to ramose representatives of the subfamily Natalophyllinae Sokolov. Lower Givetian age can be ascribed to the assemblage determined in the Menin-1 borehole, core No. 12: Striatopora cf. devonica Schlueter, Thamnopora bilamellosa Yermakova, Th. tumefacta Lecompte, Caliapora taltiensis Yanet, Mastopora sp., Remesia sp., Crassialveolites crassus (Lecompte), Cr. aff. crassus (Lecompte), Natalophyllum sp. A, Scoliopora ex gr. denticulata (Milne-Edwards et Haime). * The presence of Chaetetes raritabulatus Deng in core No. 27 of the Nemcicky-2 borehole seems to indicate Lower Givetian age as well. Caliapora battersbyi (Milne-Edwards et Haime) that is diagnostic in Moravia of the upper parts of the Givetian as high as the Givetian / Frasnian boundary was recognized only in core No. 26 from the Nemcicky-2 borehole. * Only Scoliopora denticulata (Milne-Edwards et Haime) and Natalophyllum sp. B are present in the Frasnian limestones.^1";

680 s[677] = "NOWINSKI A., PREJBISZ A. (1986).- Devonian tabulate corals from Western Pomerania.- Acta Palaeontologica Polonica 31, 3-4: 237-261. [imprint 1985].- FC&P 16-2, p. 24, ID=1937^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Poland, Pomerania^Seven species of Tabulata (including three new ones: Alveolitella pseudoramosa sp. n., Syringoporella stasinskae sp. n., Sinopora minima sp. n.) from the Givetian and Frasnian of the Wyszecorz 1 borehole, north-western part of Poland has been described and figured. Tabulata occur with other fossils in three rich in fossils horizons of the Wyszecorz 1 profile.^1";

681 s[678] = "HLADIL J. (1987).- The Lower Famennian tabulate corals from southern Moravia.- Vestn. ustred. ustavu geol. 62, 1: 41-46.- FC&P 16-1, p. 64, ID=1972^Topic(s): stratigraphy, taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fam; Geography: Czech Republic, Moravia^The reef benthic communities had survived at Mokra in southern Moravia till the Lower Famennian age. Coral samples are dated by conodont fauna into upper part of the Palmatolepis crepida Zone (see Friakova et al. 1985). The Frasnian / Famennian boundary in southern Moravia is placed at the limit of the Lower and Middle Palmatolepis triangularis Zone, following the recently most acceptable conception (see Chlupac 1984). The taxa Scoliopora denticulata rachitiforma subsp. n. and Natalophyllum persicum sp. n. are newly described in the present paper.^1";

682 s[679] = "LAFUSTE J., PLUSQUELLEC Y. (1986).- Les caulicules, elements nouveaux de l'axe des trabecules du Tabule Devonien Ligulodictyum Plusquellec 1973.- C. R. Acad. Sci. Paris 303, II/8: 761-764 [in French, with English summary].- FC&P 16-1, p. 65, ID=1975^Topic(s): microstructures; Tabulata, Ligulodictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: France, Finistree^Polished slides have been cut in specimens of Ligulodictyum Plusquellec 1973 from the Lower Devonian of Finistere, France. In the axis of trabeculae are observed monocrystalline rods, whose diameter is distinctly greater than the one of the surrounding embossed fibers. We propose to call it cauliculae. The hyaline calcite which constitutes them is loaded with uniformly scattered particles. Cauliculae have been until now encountered in a single genus: therefore, any part can be attributed to them in systematics or phylogeny of the Tabulate corals.^1";

683 s[680] = "BIRENHEIDE R., PLUSQUELLEC Y., TOURNEUR F. (1989).- Neubeschreibung des Originalmaterials von Pleurodictyum petrii Maurer 1874, der Typus-Art von Petridictyum Schindewolf 1958 (Tabulata; Unter-Devon, Rheinisches Schiefergebirge).- Neues Jahrbuch Geologie Palaeontologie Monatshefte 1989, 6: 356-374. [in German, with English and French summaries].- FC&P 18-2, p. 36,

- ID=2483^Topic(s): nomenclature; Tabulata, Pleurodictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Germany, Rhenish Mts^Our revision confirms the validity of the genus Petridictyum Schindewolf 1958. Its distinctive features are the convex shape of the proximal surface, a concentric mode of budding around the protocorallite (= petrioid budding), a strong development of spiny septal crests apparently arranged in two cycles and lack of the commensal worm Hicetes. A more precise definition, including the microstructure, will have to await future studies of material that is not decalcified.^1";
- 684 s[681] = "SCRUTTON C.T. (1990).- Ontogeny and astogeny in Aulopora and its significance, illustrated by a new non-encrusting species from the Devonian of southwest England.- Lethaia 23, 1: 61-75.- FC&P 19-1.1, p. 33, ID=2610^Topic(s): ontogeny & astogeny; Tabulata, Aulopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Britain SW^A new non-encrusting species of Aulopora is described from the Middle Devonian of southwest England. Its colonial form is reconstructed from serial sections using a computer program. These sections also allow the description of protocorallite ontogeny and the formation of offsets in the new species. For comparison, aspects of ontogeny and astogeny were investigated in some other auloporids: protocorallite ontogeny and colony form in 'Plexituba'? cucullina; increase in Aulopora serpens and Aulocystis sp. cf. A. amica. Most reptant auloporids show a more or less constant angle of offsetting to the parent, but in 'P.'? cucullina, the interoffset angle decreases with each successive increase event in the colony. The phylogenetic significance of the auloporids is reassessed on the basis of these new data on protocorallite ontogeny and increase. [original abstract]^1";
- 685 s[682] = "HLADIL J. (1989).- Branched tabulate corals from the Koneprusy reef (Pragian, Lower Devonian, Barrandian).- Vestn. Ustred. Ustavu geol. 64, 4: 221-230.- FC&P 19-1.1, p. 51, ID=2663^Topic(s): revision; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Prag; Geography: Czech Republic, Barrandian^Whereas the assemblage of tabulate corals forming massive coralla has been known from the Pragian stage for some time, the branched colonies are faced with a revision, which should complement the survey of fauna from the type outcrops of the Pragian stage in the Barrandian region. In the submitted paper, an assemblage of 6 species from the northern part of the Cisarsky Lom quarry near Koneprusy, from the upper part of the Koneprusy Limestone outcrops is described [with]: Yacutipora bohemia sp.nov., Scoliopora (Protoscoliopora) francisca subgen. et sp.nov., Coenites (Levisicoenites) equiaurei subgen. et sp.nov., Coenites aff. carnosus Koksarskaya 1975, Coenites cf. dunginensis Sarkova 1981, and Coenites crassus Dubatolov 1968.^1";
- 686 s[683] = "KOWALSKI H. (1988).- Pleurodictyum problematicum - eine merkwürdige Versteinerung der Eifel.- Eifeljahrbuch 1989: 172-174.- FC&P 19-2.1, p. 26, ID=2741^Topic(s): ; Tabulata, Pleurodictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Germany, Eifel^1771 beschrieb der Jenaer Professor der Dichtkunst und Beredtsamkeit Johann Ernst Immanuel walch (1725-1778) im 3. Teil seiner Naturgeschichte der Versteinerungen zur Erläuterung der Knorr'schen Sammlung von Merkwuerdigkeiten der Natur ein sonderbares und noch wenigen Naturforschern bekanntes Geschopf, dem 58 Jahre spaeter der Bonner Palaeontologe Georg Goldfuss (1782-1848) in seiner Petrefacta Germaniae den Namen Pleurodictyum problematicum gab. [initial part of a paper]^1";
- 687 s[684] = "TOURNEUR F. (1990).- Occurrence du Tabule Dualipora Termier & Termier 1980 dans le Devonien inferieur de Boheme (Tchecoslovaquie).- Geologica et Palaeontologica 24: 1-9. [in French, with English summary].- FC&P 20-1.1, p. 61, ID=2789^Topic(s): ; Tabulata, Dualipora; Systematics:

- Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Czech Republic, Barrandian^The original material of *Dualipora preciosa* Termier & Termier 1980, type species of the genus *Dualipora* Termier & Termier 1980, from the Lower Emsian of the Moroccan Presahara, has been revised; some specimens of this species, coming from the Lower Emsian (Zlichovian) of Bohemia, are also described. The genus is characterized by the strong dimorphism of calices and the presence of two continuous septal ridges in the larger calices. It belongs to the family Pachyporidae and to the subfamily Striatoporinae.^1";
- 688 s[685] = "SCRUTTON C.T. (1990).- A new *Aulopora* from the Devonian of south-west England and its significance.- Proc. Ussher Soc. 7: 307. [poster abstract] - FC&P 20-1.1, p. 24, ID=2811^Topic(s): astogeny; Tabulata, *Aulopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Britain SW^A new species of the simple tabulate coral genus *Aulopora*, from the Chercombe Bridge Limestone (Eifelian) of the Lemon Valley near Newton Abbot, South Devon, is free living. Its presence was detected in serial sections and its three-dimensional form reconstructed by computer. Members of this genus not occurring as weathered out encrusting material are probably much more common than recorded but usually escape detection. Characteristic features are only more apparent in sections cut in the plane of bedding, whilst most working sections are cut perpendicular to bedding. * The protocorallite of this new species shows the development of a macrospine in the plane of bilateral symmetry. Such a structure has not previously been described in a tabulate coral, but suggests comparison with the first formed counter-cardinal septal plate of rugose corals. In addition, the serial sections yield new information on the mode of origin of new corallites in the auloporid colony. * The pattern of offsetting compares closely with that seen in the genus *Eofletcheria* rather than with the mode typical of most tabulate corals. This supports an earlier deduction that *Aulopora* evolved from *Eoflecteria* in the Middle Ordovician, rather than the Russian view of *Aulopora* as ancestral to all tabulate corals (Scrutton 1984, 1990). [poster abstract]^1";
- 689 s[686] = "TOURNEUR F., FERNANDEZ-MARTINEZ E. (1991).- *Parastriatopora cantabrica*, nueva especie de Tabulado del Devonico inferior (Emsiense) de la Cordillera Cantabrica (NO de Espana).- Revista Espanola de Paleontologia 6, 1: 3-19.- FC&P 20-2, p. 31, ID=2892^Topic(s): new taxa; Tabulata, *Parastriatopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Spain, Cantabrian Mts^A new species of the genus *Parastriatopora*, *P. cantabrica*, is described from two localities in the Cantabrian Mountains (NW Spain) : Adrados in the Asturo-Leonese facies and Lebanza in the Palentian facies. The two occurrences are of Emsian age (La Vid Group and Abadia Formation). The species is characterized by the very large dimensions of the branches and corallites (the largest of the genus) and by the slight thickening of the skeletal elements. Bases of colonies, in the form of flat lamellar expansions, are described for the first time.^1";
- 690 s[687] = "TOURNEUR F., LAFUSTE J. (1991).- Precisions sur la structure et la microstructure de *Roemeria bohemia* Pocta 1902, espece-type du genre *Roemeripora* Kraicz 1934 (Tabulata, Devonien inferieur de Boheme).- Paläontologische Zeitschrift 65, 1/2: 77-103.- FC&P 20-2, p. 32, ID=2893^Topic(s): revision; Tabulata, *Roemeria*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Czech Republic, Bohemian Massif^The species *Roemeria bohemia* Pocta 1902 has been revised on the basis of its original material and of topotypical specimens : its characters are in general consistent with those of *Calamopora injundibulifera* Goldfuss, 1829, type species of the genus *Roemeria* Milne-Edwards & Haime 1851. *Roemeria bohemia* is characterized by the numerous complex tabulae and the strong development of septal spines. These characters

- are considered by us of only specific importance and the genus *Roemeripora* Kraicz 1934, based on *R. bohemia*, is thus considered as a junior synonym of *Roemeria*. An exhaustive list of the Devonian species attributed to *Roemeria* or to *Roemeripora* is given.¹";
- 691 s[688] = "LAFUSTE J., FERNANDEZ MARTINEZ E., TOURNEUR F. (1992).- *Parastriatopora* (Tabulata) de las Calizas del Lorito (Devonico inferior, Provincia de Cordoba): morfologia y microestructura.- *Revista Espanola de Paleontologia* 7, 1: 3-12.- FC&P 21-1.1, p. 11, ID=3194Topic(s): morphology, microstructures; Tabulata, Parastriatopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Spain, CordobaTabulate corals from the Lower Devonian Lorito Limestones (Cordoba Province) are described in detail and they are assigned to *Parastriatopora* ex gr. *annulata* (Le Maitre 1952), a group until now mostly known from North Africa and Armorica. The Lorito Limestones probably belong to the upper part of the Gedinnian, according to their tabulate coral fauna content. The microstructural evolution of the median lamina of the wall, from the axial part of the branches until the periphery, is described in detail. We observed a replacement of granules by elongated rods and, close to the surface of the corallum, a complete disappearance of any median structure. This feature is compared with other cases, of known branching tabulate corals.^1"
- 692 s[689] = "LATHUILIERE B. (2009).- Sylvie Barta-Calmus (1937-2007).- FC&P 35: 16-17.- FC&P 35, p. 16, ID=7258Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^1[obituary note]^1"
- 693 s[690] = "FERNANDEZ-MARTINEZ E., TOURNEUR F. (1993).- El genero *Caliapora* (Tabulate) en el Devonico de la Cordillera Cantabrica (NW de Espana).- *Revista Espanola de Paleontologia* [special volume]: 58-70.- FC&P 22-2, p. 24, ID=3476Topic(s): systematics; Tabulata, *Caliapora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Spain^1The genus *Caliapora* Schlueter 1889 is subdivided in three subgenera *Caliapora* (*Caliapora*) Schlueter 1889, limited to the Givetian; *Caliapora* (*Mariusilites*) Mironova 1974 probably the direct ancestor of *Caliapora* (*Caliapora*) and known from the Lowermost Devonian until the Lower Givetian; and *Caliapora* (*Luciaella*) nov. subgen., from the Upper Emsian - Lower Eifelian of the Cantabrian Mountains (NW Spain). The genus *Caliapora* is recorded for the first time from the Cantabrian Mountains with *Caliapora* (*Mariusilites*) cf. *chaetetoides* Lecompte 1939 and *Caliapora* (*Luciaella*) *daedala* nov. sp. Some general considerations concerning the genus *Caliapora* are developed: the systematic position of the genus at familial level, the stratigraphical range of the different subgenera, the paleogeographical repartition and the paleoecological requirements.^1"
- 694 s[691] = "NOWINSKI A. (1993).- Tabulate corals from the Givetian and Frasnian of the Holy Cross Mountains and Silesian Upland.- *Acta Palaeontologica Polonica* 37, 2-4: 183-216. [monograph] - FC&P 22-2, p. 28, ID=3485Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Poland, Holy CrossTabulate corals and single species each of the heliolitid anthozoans and chaetetid sclerosponges mostly from the Givetian and Frasnian stromatoporoid-coral series of the Holy Cross Mts and the Silesia-Cracow Region are reviewed from an ecological and stratigraphical point of view. *Thamnopora*, or the branched pachyporids, and massive alveolitids are usually the most significant reef-builders. The most distinctive fauna, with *Caliapora* *battersbyi* and *Heliolites* *porosus*, thrived in the earlier Givetian bank habitats. Late Givetian biostromal-complex associations with *Alveolites* *obtortus*, *Striatopora* *enigmatica*, and especially *Alveolitella* *fecunda*, as well as the succeeding Frasnian *Alveolites*-dominated reef-complex faunas with *A. maillieuxi*, and later with *A. tenuissimus*, *Aulocystis* and syringoporids, are far more uniform. In addition, a local *Coenites*

- Laminosa-Chaetetes yunnanensis fauna is recognized in the Middle Givetian of the Kostomloty area. The transitional biogeographic position for Polish tabulate assemblages between Variscan Europe and Russia is clearly evident. Forty eight species have been identified. Pachyfavosites polonicus sp. n., Striatopora enigmatica sp. n., Alveolitella polygona sp. n., Armalites minimus sp. n., and Syringoporella raritabulata sp. n, Alveolites edwardsi frasnianus subsp. n., and Caliapora battersbyi minor subsp. n. are proposed. [original abstract]^1";
- 695 s[692] = "HLADIL J. (1993).- Strange squamulate coral from the Eifelian Acanthopyge Limestone (Koneprusy, Central Bohemia).- Vestnik Ceskeho geologickeho ustavu 68, 2: 43-44.- FC&P 22-2, p. 83, ID=3515^Topic(s): taxonomy; Tabulata, Esperanzia; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif; Geography: Czech Republic, Barrandian^The new Lichenariid taxon Esperanzia obscura n.gen. et n.sp. is described and figured. Its resemblance to Caliapora is discussed.^1";
- 696 s[693] = "LUTTE B.-P. (1993).- Zur stratigraphischen Verteilung tabulater Korallen im Mittel-Devon der Soetenicher Mulde (Rheinisches Schiefergebirge, Nord-Eifel).- Geologica et Palaeontologica 27: 55-71.- FC&P 22-2, p. 84, ID=3518^Topic(s): stratigraphic distribution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Germany, Eifel^In the present paper the distribution of tabulate corals in the Middle Devonian of the Soetenich Syncline (Rheinisches Schiefergebirge, Northern Eifel Hills) is shown. All known taxa are discussed and compared with faunas from other Devonian areas. In the systematic part the following species are described: Favosites goldfussi d'Orbigny 1850, Pachyfavosites polymorphus (Goldfuss 1826), Alveolitella fecunda (Lecompte 1939), Crassialveolites crassus (Lecompte 1939), Scoliopora crassa (Schlueter 1885) and Roemerolites tenuis (Schlueter 1885).^1";
- 697 s[694] = "MAY A. (1993).- Korallen aus dem hoheren Eifelium und unteren Givetium (Devon) des nordwestlichen Sauerlandes (Rheinisches Schiefergebirge). Teil I: Tabulate Korallen.- Palaeontographica A227, 4-6: 87-224.- FC&P 22-2, p. 84, ID=3519^Topic(s): monograph; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif/Giv; Geography: Germany, Rhenish Mts^From the Middle Eifelian to the lower Givetian strata of the northwestern Sauerland (map sheet 4612 Iserlohn, 4711 Luedenscheid, and 4713 Plettenberg) are 29 tabulate coral species described. Informations about the type material and the previously known distribution are given for every species. The material has been collected mostly in the coral limestones of the Gruenewiese-Member (uppermost Eifelian) of the Ihmert-Formation and the Bredenbruch-Member (lower Lower Givetian) of the Unterhonsel-Formation. The subspecies Squameoalveolites strigosus cusanorum n.ssp.is new. Axuolites ? szechwanensis (Tchi 1964), Thamnopora urensis spinulosa Tchudinova 1970, Platyaxum (Platyaxum) cf. laminosum (Guerich 1896), Platyaxum ? (Microalveolites) leve leve (Tchernychev 1951), and Roemerolites brevis rhiphaeus (Yanet 1972) have been found for the first time in Central or Western Europe. 7 other species are described from the Eastern Rhenish Massif for the first time as well. The correct name of the species known as "Caunopora placenta" is Syringopora hanshanensis Chow 1980. Many species show an important expansion of their known stratigraphical range. The most Devonian reef-builders allow only rough stratigraphical classifications.^1";
- 698 s[695] = "MAY A. (1993).- Thamnopora und verwandte astige tabulate Korallen aus dem Emsium bis Unter-Eifelium von Asturien (Devon; Nord-Spanien).- Geologica et Palaeontologica 27: 23-101.- FC&P 22-2, p. 85, ID=3520^Topic(s): ; Tabulata, Thamnopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: Spain, Asturias^Eight species of ramose tabulate corals related to Thamnopora are described in detail from the

Ferrones Formation (Lower Emsian to lower Upper Emsian) and the Aguión Formation (Upper Emsian) of the Raneces Group and the Moniello Formation (upper Upper Emsian to lowermost Eifelian) of the central Asturian coast as well as from the Valporquero Formation and the Coladilla Formation (Upper Emsian) of the La Vid group and the Santa Lucia Formation (upper Upper Emsian to lowermost Eifelian) of Asturias. Among them are two species and one genus new. *Thamnopora* ? *sotoi* n.sp. from the Upper Emsian shows strong and abundant squamulae. *Oekentorpia* n.gen., with the only one species *Oekentorpia radigi* n.gen., n.sp. from the Upper Emsian of Asturias, has thin, three-dimensionally connected branches with small *Caliapora*-like corallites. *Thamnopora pulchra savitschevae* Dubatolov 1964, *Thamnopora irregularis* Lecompte 1939, *Thamnopora cervicornis* (Blainville 1830), *Striatopora tschichatschewi* Peetz 1901, *Parastriatopora fallatis* Yanet 1968, and *Parastriatopora obsolenta* Dubatolov 1969 are found for the first time in the Emsian of Spain. These corals have only a little biostratigraphical importance. They show close palaeobiogeographical relations to Siberia. Furthermore are informations given about the fossil contents of the Valporquero Formation and then Coladilla Formation of the La Vid Group.^1";

699 s[696] = "BRUHL D. (1996).- Die Gattungen *Alveolites* Lamarck 1801 und *Squameoalveolites* Mironova 1969 (Anthozoa, Tabulata) im unteren Mittel-Devon (Eifelium) der Dollendorfer Mulde / Eifel (Rheinisches Schiefergebirge).- *Senckenbergiana lethaea* 76, 1/2: 1-51.- FC&P 26-1, p. 64, ID=3633^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^The stratigraphical distribution of the tabulate coral genera *Alveolites* Lamarck 1801 and *Squameoalveolites* Mironova 1969 from the lower Eifelian (Middle Devonian) of the Dollendorf Syncline / Eifel Hills (Rheinisches Schiefergebirge) has been examined in detail. Through investigation of the morphological characters it is possible to distinguish the following species at different stratigraphical levels: *Alveolites suborbicularis* Lamarck 1801, *Alveolites edwardsi* Lecompte 1939, *Alveolites intermixtus intermixtus* Lecompte 1939, *Alveolites intermixtus minimus* (Iven 1980), *Alveolites megastomus* Steininger 1849, *Alveolites minutus* Lecompte 1939, *Alveolites subaequalis* Milne-Edwards & Haime 1851, *Alveolites crassus* Lecompte 1939, *Alveolites cavernosus* Lecompte 1933, *Squameoalveolites fornicatus* (Schlueter 1889), *Squameoalveolites robustus* (Pradacova 1938) and *Squameoalveolites straeleni* (Lecompte 1939). The coral assemblage in the north-eastern part of the Dollendorf Syncline is dominated by faunal elements of the North Eifel area with a clear bohemian influence. In the south-western part of the syncline a typical South Eifel fauna can be recognized. In addition, a distinct faunal influence from the Ardennes (Belgium) can be recognized at some stratigraphical levels. The species *Alveolites suborbicularis*, hitherto considered as typical of Givetian and Frasnian deposits, occurs first in the upper Eifelian. Also remarkable is the first record of the species *Squameoalveolites robustus* (Pradacova 1938) in the upper Eifelian. This species was hitherto known from comparable sediments of Bohemia / Moravia, Russia and Austria. The occurrence of the rare species *Alveolites megastomus* Steininger 1849 in the Freilingen Formation is also of special interest. The preservation of the skeletal microstructure of the different species was examined particularly with respect to diagenetic alteration. There are numerous microstructures, which cannot be accounted for as of primary morphological origin. These secondary pseudostructures were caused by diagenetic recrystallization processes during fossilization.^1";

700 s[697] = "BRUHL D., OEKENTORP K1. (1997).- Secondary microstructures in tabulate corals of the genus *Alveolites* Lamarck 1801 from the Middle Devonian of the Dollendorf Syncline (Eifel Hills, Germany).- *Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica* 92, 1/4: 87-097.- FC&P 26-2, p. 24, ID=3705^Topic(s): microstructures; Tabulata; Systematics: Cnidaria; Tabulata;

- Stratigraphy: Devonian M; Geography: Germany, Eifel^The skeletal elements of representatives of the genus Alveolites Lamarck 1801 from the Eifelian (Middle-Devonian) of the Eifel Hills (Rheinisches Schiefergebirge / Germany), especially from the Dollendorf Syncline, were investigated in detail with regard to their post-mortem diagenetic changes. Numerous microstructures, which cannot be interpreted morphogenetically, have been recognized in the skeletons of diverse species of Alveolites Lamarck 1801. The present study is devoted mainly to the most important skeletal element of tabulate coral colonies, the wall, which is especially affected by post-mortem recrystallization due to fossilization. The new observatives on Alveolites with a Scanning Electron Microscope gives impressive proofs that the primary skeletal microstructure of the wall has been partly replaced by different secondary textures and, moreover, has been thickened by deposition of cement A and additional overprinting as a result of diagenetic processes. As an important criterion of these different alterations of the original structure, recrystallization ("aggrading neomorphism") is indicated by the formation of coarse crystal aggregates, which appear in the shape of dark saw-toothed rhombs. Distinct cleavage structures in the neomorphic calcite have been observed as zigzag patterns and also as pseudolamellar structures. Last but not least, the recrystallization of syntaxial cements is a clear sign of diagenetic alteration.^1";
- 701 s[698] = "BRUHL D. (1997).- Tabulate Korallen aus der Curten-Formation (Mittel-Devon / Unter-Givetium) des Ahrtalprofils der Dollendorfer Mulde (Eifel / Rheinisches Schiefergebirge).- Sonderveroeffentlichungen, Geologisches Institut der Universitat zu Koeln 114 (Festschrift Eugen K. Kempf): 137-157.- FC&P 27-1, p. 79, ID=3818^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Germany, Eifel^The rocks of the Upper Curten Formation (Scheid Member) of the Ahr valley in the NE part of the Dollendorf Syncline are very rich in a benthic fauna, especially in rugose and tabulate corals. The sequence is characterized by an interbedding of bituminous silty limestones, brown marly siltstones and marly shales. Special interest is layed on the Tabulata, which are present with some typical taxa for the lower Givetian of the Eifel Hills. The systematic description of this characteristic association within the Scheid Member of the Ahr valley section gives the first record of the following species for the Cuerten Formation of the northeastern Dollendorf Syncline: Favosites goldfussi d'Orbigny 1850, Pachyfavosites polymorphus polymorphus (Goldfuss 1829), Thamnopora cervicornis (Blainville 1830), Alveolites crassus Lecompte 1939, scoliopora denticulata (Milne-Edwards & Haime 1851), and Roemerolites tenuis (Schlueter 1885).^1";
- 702 s[699] = "HLADIL J., MAZUR S., GALLE A., EBERT J.R. (1999).- Revised age of the Maly Bozkow limestone in the Klodzko metamorphic unit (early Givetian, late Middle Devonian) implications for the geology of the Sudetes, SW Poland.- N. Jb. Geol. Palaont. Abh. 211 3: 329-353.- FC&P 28-1, p. 65, ID=4006^Topic(s): hercynian metamorphism; Tabulata, Caliapora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Poland, Sudetes^Interpretations of a Caledonian (early to mid-Devonian) tectono-metamorphic event in the Klodzko unit and therefore, throughout the entire west Sudetes were largely based on the assumption of a Silurian age for the limestones in the area of Maly Bozkow. Additional collection of tabulate corals, restudy of previous collections and confirmation of the presence of Caliapora battersbyi in the fauna indicate that the deposition continued in the basin into the Givetian. Consequently, deformation and metamorphism of the west Sudetes postdate the Middle Devonian and cannot be associated with the Caledonian orogeny. Post-Givetian tectonism in the Sudetes signifies that Variscan orogenesis was the pre-eminent event in the region, mixed

- paleogeographic characteristics in the maly Bozkow fauna suggest close proximity of the southern Laurussia margin to the northern Gondwana margin during the Middle Devonian.¹¹";
- 703 s[700] = "LAFUSTE J., TOURNEUR F. (1992).- Révision des espèces de Cladochonus McCoy, 1847 (Tabulata) décrites dans le Frasnien de la Belgique par Lecompte en 1939.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 62: 23-41.- FC&P 23-1.1, p. 70, ID=4149Topic(s): microstructures, taxonomy; Tabulata, Cladochonus; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fra; Geography: Ardennes^The original material of the three species from the Frasnian of Belgium formerly assigned to the genus Cladochonus McCoy 1847 by Lecompte (1939) has been revised. Two of these species are considered valid and maintained in the genus: C. robustus Lecompte 1939 and C. maillieuxi Lecompte 1939; C. brevicollis devonicus is for us a synonym of the last species. A microstructural study of C. robustus affords a useful comparison with the microstructure of typical Cladochonus from the Carboniferous. A systematical hierarchy of characters is proposed for the family Pyrgiidae De Fromentel 1861.¹¹";
- 704 s[701] = "MAY A. (1995).- Thamnopora (Anthozoa; Tabulata) aus dem Givetium bis Frasnium von Asturien (Devon; Nord-Spanien).- Muenstersche Forschungen zur Geologie und Palaeontologie 77: 479-491. [in German, with English abstract].- FC&P 24-2, p. 87, ID=4583Topic(s): Tabulata, Thamnopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Spain, Asturias^Three species of ramose tabulate corals of the genus Thamnopora are described in detail. The material originates from the Candás Formation (Givetian to Frasnian) and the Pineres Formation (Frasnian) of the central Asturian coast as well as from the Portilla Formation (Givetian) of Asturias. Thamnopora nicholsoni (Frech 1885) and Thamnopora bilamellosa Ermakova 1960 are found in Spain for the first time. These corals have only a little biostratigraphical importance. They indicate close paleobio-geographical relations to Siberia. [original abstract; the third species described herein is Th. boloniensis (Gosselet 1877)]¹¹";
- 705 s[702] = "DETHIER M., PEL J. (1971).- Periphacelopora exornata gen. nov., sp.nov., Tabulé du Givétien inférieur de Hampteau (Bord oriental du Synclitorium de Dinant).- Annales de la Societe geologique de Belgique 94: 301-310.- FC&P 2-2, p. 14, ID=4788Topic(s): systematics; Tabulata, Parastriatopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Ardennes^In the Gib of Hampteau-sur-Ourthe several specimens of a new tabulate (coral) have been collected. The colony has a compact base from which rise blades of varying thickness. The arrangement of the individuals in the colony is the most unusual character of the genus: in the central part of the blade the corallites are prismatic and welded into a cerioid colony, while outside this they diverge from one another forming a phaceloid colony whose development often exceeds that of the massive part. The new tabulate is described and figured in detail. An attempt is made to assign it to its systematic position.¹¹";
- 706 s[703] = "LEJEUNE M., PEL J. (1973).- Un autre Tabulé nouveau du Givétien de l'Ardenne belge - Antostegites hillae gen. et sp.nov.- Annales de la Societe geologique de Belgique Liège 95, 2: 457-461.- FC&P 2-2, p. 17, ID=4805Topic(s): Tabulata, Anthostegites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Ardennes^Etablissement d'une nouvelle espèce et d'un nouveau genre de Tabulé provenant du Givétien moyen de Hampteau-sur-Ourthe. Polypier caractérisé par des étages largement séparés de polypiérites, les uns courts terminés par un calice peu élevé au-dessus de leur étage, les autres longs et ayant contribué à la formation d'un ou même deux étages supérieurs. A insérer dans les Auloporoides sans que l'on puisse préciser

- d'avantage sa position systématique.¹¹";
- 707 s[704] = "PEL J., LEJEUNE M. (1971).- Trypanopora gabeliensis sp.nov., Tabulé énigmatique du Mésodévonien supérieur de Givet (France).- Annales de la Société géologique de Belgique 94: 295-300.- FC&P 2-2, p. 18, ID=4808Topic(s): ; Tabulata, Trypanopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: France, Givet^A very thin bed packed with organic remains attributable to the genus Trypanopora has been located in the Upper Givetian of the Mont d'Haur (Givet). This organism has been classified with the tabulate corals although it comprises accumulations of corallites which are seemingly independent. The species from Givet is described as being new and is compared with the Trypanopora already known. An attempt has also been made to express statistically the variation of certain of its characters.¹¹";
- 708 s[705] = "MENN le J., PLUSQUELLEC Y., MORZADEC P., LARDEUX H. (1976).- Incursion hercynienne dans les faunes rhenanes du Devonien inférieur de la Rade de Brest (Massif Armoricaïn).- Palaeontographica A153: 1-61.- FC&P 6-1, p. 23, ID=5512Topic(s): ; fossils Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: France, Armorique^Research on the top of the Grauwacke of Faou and on the base of the Shales and Grauwacke of Reun ar C'Hrank lead to the proposal of a limit between the two formations. A new fauna consisting of Coelenterates, Trilobites, Crinoids and Tentaculitids has been found. A mixed fauna of Hercynian (Lower Zlichovian) and Rhenish (Lower Emsian) species is reported for the first time from the Median Armorian Synclinorium. The coral fauna is represented by the Tabulate families Cleistoporidae (Cleistodictyum porosum Plusquellec 1973) and Pleurodictyidae (Pleurodictyum microspinosum n.sp., Pl. latum n.sp., Pl. A, Pl. B, Petridictyum petrii (Maurer 1874)? and n.gen. ? n.sp.). This tabulate coral fauna - described by Y. Plusquellec - is of rhénane type.¹¹";
- 709 s[706] = "STASINSKA A., NOWINSKI A. (1976).- Tabulata from the Givetian of South-Eastern Poland.- Acta Palaeontologica Polonica 21, 3: 293-309.- FC&P 6-1, p. 24, ID=5514Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Poland SE^The characteristics of a Tabulata assemblage from the Devonian of the Lublin area are given; the coral bearing strata are correlated with the Givetian of other parts of Poland as well as west and east European regions. * There is great similarity with the tabulate coral fauna of the Givetian of Belgium and also with that one known from the western Ural basin, but the fauna differ markedly in the specific composition from that one of the Central Devonian Field and of the South-East part of the East-European Platform.¹¹";
- 710 s[707] = "YANET F.E. (1977).- Tabulata. [in Russian].- Biostratigrafiya i fauna rannego devona vostochnogo sklona Urala: 23-42; Ural. terr. geol. upr., Min. geol. SSSR.- FC&P 8-2, p. 47, ID=5722Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Russia, Urals^From the Gedinnian - Eifelian interval described are the following taxa of tabulate corals: Parastriatopora fallacis Yanet, Palaeocorolites effectus Yanet sp.n., Favosites polaris Chekh., F. subtarejaensis Chekh., F. schiriktensis Chekh., F. intricatus Barr., F. duplaris Yanet, F. admirabilis Dubat., F. interstinctus Regn., F. preplacentus Dubat., F. kozlowskii Sok., F. lucidus Yanet, F. pseudoregularissimus Kim., F. waganensis Yanet, F. totaensis Yanet, F. karpinskyi Yanet, F. gregalis Porf., F. fedotovi Chern., Riphaeolites ramosus Yanet, R. virgatus Yanet, R. horridus Yanet, R. sokolovi Yanet, R. obuti Yanet, R. vijaicus (Yanet), Squameofavosites sokolovi Chekh., S. frequens Smirn., S. bohemicus Pocta, Gracilopora paula Yanet, G. mala Yanet, G. mitus Yanet, Cladopora actiosa Yanet, C. alba Yanet, Yacutiopora altaica Dubat., Fomitchevia aquosa Yanet sp.n., Thamnopora sarmentosa Yanet, T. faceta Yanet, T. plumosa Yanet, Trachypora spica

- (Miron.), *T. electa* Yanet, *Rudakites multiformis* Le1., *Oculipora antica* Yanet, *Coenites puberulus* Yanet.^1";
- 711 s[708] = "LAFUSTE J., PLUSQUELLEC Y. (1980).- Les Polypiers - Tabulata.- Mém. Soc. Géol. Minér. Bretagne 23 [Y. Plusquellec (coord.): Les schistes et calcaires de l'Armorique (Dévonien inférieur, Massif Armoricaïn). Sédimentologie, Paléontologie, Stratigraphie]; 30 pp, 26 figs, 10 tabl., 3 pls.- FC&P 10-1, p. 52, ID=5769^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: France, Armorique^The new genus *Praemichelinia* (type species: *Beaumontia ? guerangeri* Edwards & Haime 1851) is described with special reference to the microstructure. The walls are built up by oblique and waved lamellae, whereas the dark median line shows a granulated microstructure in central parts of colonies; it becomes broader and fibrous to the periphery with perpendicular arrangement of the fibres. The genus ranges from Upper Gedinian to the Carboniferous. The two subspecies *P. guerangeri guerangeri* Edwards & Haime 1851, and *P. guerangeri cryptospinosa* n.sp. are described. [translated French summary]^1";
- 712 s[709] = "PLUSQUELLEC Y., FRANKE C. (2010).- Présence précoce du genre *Kerforneidictyum* représenté par *K. oeslingensis* n.sp. (Cnidaria, Tabulata) dans l'Emsien inférieur du Grande-Duché de Luxembourg.- *Ferrantia* 58: 72-80.http://www.mnhn.lu/naturmusee/pubcollabo.asp.- FC&P 36, p. 76, ID=6481^Topic(s): new taxa; Tabulata *Kerforneidictyum*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Luxembourg^A new species of *Kerforneidictyum*, *K. oeslingensis* n.sp., is described. It is mainly characterized by the following features: apical angle reaching up to 160 degrees, deep calices with numerous small spines roughly of the same size, setted in two rows or scattered on septal ridges which are wider than the interseptal furrows, no obvious cardinal ridge, tabulae scarce or missing. The species has been collected in the lowermost Emsian of the Givonne-Eislek Anticlinorium in Luxembourg. It is 1) the first record of the genus in the Devonian of Luxembourg and 2) in the autochthonous part (SE Laurussia) of the Ardenno-Rhenish Mountains and 3) very likely the first - or one of the two first - representatives of the genus taking into account Gondwana and Laurussia. [original abstract]^1";
- 713 s[710] = "ZAPALSKI M.K. (2009).- Parasites in Emsian-Eifelian Favosites (Anthozoa, Tabulata) from the Holy Cross Mountains (Poland): changes of distribution within colony.- *The Geological Society, London, Special Publications* 314 [Koenigshof P. (ed.): *Case Studies in Palaeogeography and Palaeoecology*]: 125-129.- FC&P 36, p. 77, ID=6483^Topic(s): parasitism; Tabulata, parasites of; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Poland, Holy Cross^Organisms of unknown biological affinities, assigned to the genus *Chaetosalpinx*, are known to infest Palaeozoic tabulate corals and stromatoporoids. Analysis of distribution of these parasites, performed on Emsian-Eifelian material of *Favosites goldfussi* (Anthozoa, Tabulata) from the Northern Region of the Holy Cross Mountains (Poland), shows that parasites were absent in the early astogenetical stages, and that during astogeny both the absolute number of parasites per colony and the number of parasites per polyp were increasing. The latter can reach 2.7 parasites per polyp. Preferred settling places are in corallite corners (junction of three individuals), but dense infestation also produced settlement in the corallite walls (between two individuals). Probable causes of the increase are insufficient protection by host's cnidae, insufficient immune system response, and parasite ability to adapt to the host's defences. [original abstract]^1";
- 714 s[711] = "KULICKA R., NOWINSKI A. (1984).- The Devonian Tabulata of the southern part of the Swietokrzyskie (Holy Cross) Mts, Poland.- *Acta Palaeontologica Polonica* 28, 3-4: 467-490 [for 1983].http://www.mnhn.lu/naturmusee/pubcollabo.asp.- FC&P 36, p. 76, ID=6481^Topic(s): new taxa; Tabulata *Kerforneidictyum*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Luxembourg^A new species of *Kerforneidictyum*, *K. oeslingensis* n.sp., is described. It is mainly characterized by the following features: apical angle reaching up to 160 degrees, deep calices with numerous small spines roughly of the same size, setted in two rows or scattered on septal ridges which are wider than the interseptal furrows, no obvious cardinal ridge, tabulae scarce or missing. The species has been collected in the lowermost Emsian of the Givonne-Eislek Anticlinorium in Luxembourg. It is 1) the first record of the genus in the Devonian of Luxembourg and 2) in the autochthonous part (SE Laurussia) of the Ardenno-Rhenish Mountains and 3) very likely the first - or one of the two first - representatives of the genus taking into account Gondwana and Laurussia. [original abstract]^1";

- pp.pan.pl/article/item/app28-467.html.- FC&P 14-1, p. 23, ID=6611^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Poland, Holy Cross^Seventeen species of the Tabulata, including four new species and one new subspecies, have been described from the Givetian and Frasnian deposits of the Zerniki IG-1 borehole in the southern part of the Swietokrzyskie (Holy Cross) Mountains. The Givetian and Frasnian assemblages of Zerniki differ in their small taxonomic differentiation and in specific spectrum from assemblages found in other part of the Holy Cross Mts., Cracow Region and Lublin Region. * As compared with coeval assemblages of western (the Ardennes) and Eastern (the Urals, the East-European Platform) Europe, the Givetian and Frasnian assemblages under discussion are transitional in character. [original abstract]^1";
- 715 s[712] = "GOODGER K. (1986).- Devonian tabulate coral faunas of south-west England.- FC&P 15, 1.2: 23-24.- FC&P 15-1.2, p. 23, ID=6726^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Britain, Devonshire^ [presented is a list of taxa recognized in the Eifelian to Frasnian limestones of the South Devon area, in 4 successions (Torquay, Ugbroke & East Ogwell, Torbryan, Dartington, Littlehampton & Staverton) and in one area (Saltern Cove)]^1";
- 716 s[713] = "BRUHL D. (1997).- New data on Alveolites megastomus Steininger 1849 (Tabulata; Alveolitidae) from the Eifel Hills (Rheinisches Schiefergebirge / Germany).q.- FC&P 26, 2: 46-51. [short note] - FC&P 26-2, p. 46, ID=6880^Topic(s): taxonomy, types; Tabulata Alveolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^Two unknown specimens of Alveolites megastomus Steininger 1849 from the Middle Devonian (most probably upper Eifelian) of the Gerolstein Syncline deposited in the collection of the Institute of Paleontology of the University Bonn have been investigated and described. Both colonies [are] derived from the old collection material of Cl. A. Schlüter (1835-1906). [original abstract]^1";
- 717 s[714] = "ZAPALSKI M.K., NOWINSKI A. (2005).- Maksymilianites, a new name for Syringella Nowinski, 1970 (Anthozoa, Tabulata) preoccupied by Syringella Schmidt, 1868 (Porifera).- Paläontologische Zeitschrift 79, 4: 507-508.- FC&P 34, p. 49, ID=7253^Topic(s): nomenclatorial note; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Poland^A new name, Maksymilianites nom. nov. is proposed as a replacing name for Syringella Nowinski, 1970 (Anthozoa, Tabulata), monospecific genus from the Middle/Upper Devonian of Poland preoccupied by Syringella Schmidt, 1868 (Porifera).^1";
- 718 s[715] = "HLADIL J. (1981).- Alveolites corals from the Middle and Upper Devonian of the Moravian Karst (Anthozoa, Tabulata).- Acta Musei Moravicae 66: 25-32.- FC&P 11-1, p. 49, ID=1769^Topic(s): stratigraphy, facies; Tabulata, Alveolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^In the Devonian reef limestones of Moravia and, particularly, in the Moravian Karst, thirty Alveolites coral species have been known so far. The abundant associations occurring at the various stratigraphic levels and in the individual facies of the reef sedimentation correlate well with other European sedimentary areas composed of Middle and Upper Devonian reef limestones. The concise paper presents comments concerning stratigraphy, facies, investigation methods and system.^1";
- 719 s[716] = "HLADIL J. (1989).- Function morphology of Alveolitinae and its dependence on the Kellwasser and other events (Tabulata, M. to U. Devonian, Moravia, CSSR).- News]. Stratigr. 31, 1: 25-37.- FC&P 18-2, p. 37, ID=2484^Topic(s): functional morphology; Tabulata, Alveolitidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M U; Geography: Czech Republic,

- Moravia^Changes of function morphology are utilized for eventostratigraphical evaluations. 23 species from the subfamily Alveolitinae (tabulate corals) are studied on the background of 12 Middle to Upper Devonian stratigraphic levels of carbonate buildups in Moravia. Porosity, spinality and skeletization parametres have been caculated with the following interpretations: Two events re-presenting optimal reef conditions fall into the lowermost Givetian and the Upper Frasnian. The regressional event in the Upper Givetian is proved by this method, too. The impressive diminishing of variabilities is observed in the Upper Frasnian time-interval before the Kellwasser Event when Alveolitinae had extincted.^1";
- 720 s[717] = "BRUHL D. (1996).- Alveolites megastomus Steininger 1849 (Tabulate) im Mittel-Devon der Eifel (Rheinisches Schiefergebirge).- Paläontologische Zeitschrift 70, 3-4: 315-324.- FC&P 25-2, p. 50, ID=3141^Topic(s): taxonomy; Tabulata, Alveolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Germany, Eifel^Two new specimens of the rare tabulate coral Alveolites megastomus Steininger 1849 are described from the lower Middle Devonian (Eifelian) of the Eifel Limestone Synclinorium (Rheinisches Schiefergebirge / Germany). One specimen originates from the Freilingen Formation of the Dollendorf Syncline; it is the first record from the Upper Eifelian of the Rheinisches Schiefergebirge. The second specimen comes from the upper Junkerberg Formation (Middle Eifelian) of the Pruem Syncline being the first proof in this Formation. The state of conservation of the skeletal microstrucrure of both coralla is described and discussed.^1";
- 721 s[718] = "LUTTE B.-P., OEKENTORP Kl. (1993).- Alveolites megastomus, eine seltene tabulate Koralle aus dem Mittel-Devon der Eifel (Rheinisches Schiefergebierge).- Sonderveroeffentlichungen, Geologisches Institut der Universitaet zu Koeln 70 [Festschrift Ulrich Jux]: 381-396.- FC&P 23-1.1, p. 71, ID=4150^Topic(s): taxonomy; Tabulata, Alveolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif; Geography: Germany, Eifel^A new specimen of Alveolites megastomus Steininger 1849 from the Middle Devonian (Eifelian, Junkerberg Formation) of the Hillesheim Syncline (S. Eifel, Rheinisches Schiefergebirge) is described, figured and compared with similar species of the genus Alveolites Lamarck 1801. Some remarks concerning the microstructure of the neotype and the new specimen are given.^1";
- 722 s[719] = "STASINSKA A. (1974).- On some Devonian Auloporida (Tabulata) from Poland.- Acta Palaeontologica Polonica 19, 2: 265-280.http:// www.a pp.pan.pl/article/item/app19-265.html.- FC&P 6-2, p. 23, ID=0167^Topic(s): taxonomy, budding; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Poland^Description of 8 species (including 3 new, Aulopora lataeformis sp.n., Grabaulites jurkowicensis sp.n., G. skalensis sp. n.) belonging to 3 genera found in Devonian of Poland are given. Budding is investigated.^1";
- 723 s[720] = "ZAPALSKI M.K. (2005).- Palaeoecology of Auloporida: an example from the Devonian of the Holy Cross Mts., Poland.- Geobios 38, 5: 677-683.- FC&P 34, p. 49, ID=1264^Topic(s): ecology; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Poland, Holy Cross^Substrate specificity of Auloporida (Tabulata) from the Skaly Fm. (Upper Eifelian-Lower Givetian) of the Holy Cross Mts., Poland, has been recognized. Kyrtatrypa sp., a rare species in the formation (under 5%), was the most often encrusted brachiopod (59% of investigated specimens), while the most often occurring brachiopod, Aulacella eifeliensis (de Verneuil) was nearly not encrusted. The majority of encrusted brachiopods were larger than 20 mm, while smaller brachiopods occur abundantly in the Formation. The substrate specificity has been caused mainly by the ornamentation of the host's shell. The position of corallites along the commissure of the brachiopod shell

- proves that auloporids often encrusted living hosts. The epizoan probably used water currents produced by brachiopod's lophophore impoverishing the host's food composition, their relationship can therefore be described as scramble competition.¹";
- 724 s[721] = "MISTIAEN B. (1987).- Tabules Auloporida du Givetien et du Frasnien de Ferques (Boulonnais, France).- Biostatigraphie du paleozoique 7 [BRICE D. et al. (eds)]: - FC#038;P 16-1, p. 19, ID=1934Topic(s): taxonomy; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: France, Boulonnais^15 especes d#039;Auloporida sont reconnues dans le Givetien et le Frasnien de Ferques: Aulopora serpens Goldfuss 1829, A. sp. e.g. parva Lecompte 1939, A. stasinskae n.sp., A. cf. stasinskae, "Plexituba" ? cucullina (Michelin 1845). "P." briceae n.sp., "P." cf. briceae, "P." cf. lata (Lecompte 1939), Aulocystis ? sp., Aulocystis jurkowicensis (Stasinska 1974), Chia polonica (Nowinski 1970), Syringopora cf. patula (Hinde 1890), Remesia crispa (Schlueter 1885), Roemeria infundibulifera (Goldfuss 1829), Thecostegites bouchardi (Michelin 1846).Le genre Aulostegites Lejeune & Pel est considere comme un synonyme probable du genre Aulopora; le genre Mastopora Sokolov, comme une forme de croissance particuliere des genres Aulopora et Thecostegites. L#039;analyse de la microstructure en lames minces a faces polies (LFP, Lafuste 1970) permet de reconnaitre des parois constituees, selon les genres, de lamelles, de microlamelles ou de fibres. Chez deux especes (A. serpens et T. bouchardi) une symetrie d#039;ordre douze apparait tres nettement. La faune decrite presente des affinites certaines avec celle connue en Ardennes (Bassin de Dinant), en Pologne (Monts Sainte Croix); il existe aussi des analogies entre les especes d#039;Auloporida du Frasnien de Ferques et des especes voisines du Devonien moyen des U.S.A. et du Canada.¹";
- 725 s[722] = "WEYER D. (1992).- Bainbridgia (Anthozoa, Tabulata) aus dem Gebiet des Unterharzes.- Zeitschrift der geologischen Wissenschaften 20, 4: 403-409.- FC#038;P 22-1, p. 38, ID=3396Topic(s): Tabulata, Bainbridgia; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: Germany, Harz^Bainbridgia Ball 1933 is a rather common coral of the European Lower and Middle Devonian of hercynian Greifenstein facies type. The Givetian fossil locality Buechenberg yields Bainbridgia alternans (Roemer 1850).¹";
- 726 s[723] = "TOURNEUR F., BIRENHEIDE R. (1994).- Structure et microstructure du genre Schlueterichonus Byra 1983 (Tabulata, Auloporida; Devonien moyen de l#039;Eifel).- Geologica et Palaeontologica 28: 65-77.- FC#038;P 23-2.1, p. 17, ID=4218Topic(s): Schlueterichonus; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Germany, Eifel^L#039;espece du corail tabule Aulocystis entalophoroides Schlueter 1889, du Devonien moyen, espece-type du genre Schlueterichonus Byra 1983, est redecrite sur la base du materiel original de Schlueter. Ses caracteres internes, inconnus jusqu#039;a present, sont precises: planchers developpes sous forme de grandes vesicules accolees aux parois, abondance des epines fusiformes inserees dans les murailles ou reposant sur les planchers. La microstructure, remarquablement preservee, montre, autour d#039;une lame mediane constituee de granules et de biocristaux etires transversalement, des lamelles onduleuses longues; la premiere serie de ces lamelles forme avec la lame mediane un diedre ouvert vers le haut; les autres series sont disposees en chevrons plus ou moins reguliers. L#039;ensemble des caracteres structuraux et microstructuraux permet d#039;attribuer le genre Schlueterichonus a la famille Aulocystidae Sokolov 1950, au sein de laquelle il se distingue par son habitus branchu erige. Le genre est egalement represente dans le Devonien des Etats-Unis et d#039;Algerie.¹";

- 727 s[724] = "GALLE A., HLADIL J. (1997).- Functional Morphology Analysis of the Tabulae in Favosites sp. from the Emsian / Eifelian Boundary Interval in Barrandian, Czech Republic.- Coral Research Bulletin 05: 141-149.- FC&P 27-1, p. 82, ID=3822^Topic(s): functional morphology; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: Czech Republic, Barrandian^Upper surfaces of the tabulae of Favosites sp. bear funnel-shaped depressions or elongated grooves. They are positioned close to the corallite axes. The tabulae bear flutings adjacent to the mural pores. Explanation of those structures by means of functional morphology analysis using the paradigm approach is attempted, with results supporting the conclusions of wens (1969) and Sorauf (1974) on centripetal growth of tabulae and hydrostatic elevation of polyps.^1";
- 728 s[725] = "OEKENTORP K. (1976).- Beschreibung und Systematik devonischer Favositidae Asturiens und Betrachtungen zur Biogeographie nord-spanischer Korallenfaunen.- Muenster. Geol. Palaeont. 37: 1-129.- FC&P 5-1, p. 33, ID=5386^Topic(s): taxonomy; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L M; Geography: Spain, Asturias^Representatives of the genus Favosites resp. the subgenera Fav. (Favosites), Fav. (Astrocerium), Fav. (Squameofavosites), Fav. (Emmonsia) and the genus Pachyfavosites out of Lower and Middle Devonian beds at the Asturian coast (Northern Spain) are here described. The following new species are named: Fav. (Squameofav.) hispanicus n.sp., Fav. (Squameofav.) verminosus n.sp., Fav. (Emmonsia) moniellensis n.sp. and Pachyfav. pseudoseptatus n.sp. Besides endemic species the described coral fauna shows close relationships to those of the Devonian of the USSR.^1";
- 729 s[726] = "GALLE A. (1976).- Favositids of the basal Zlichov Limestone (Lower Devonian) of Bohemia.- Casopis pro mineralogii a geologii 21, 4: 363-368.- FC&P 6-1, p. 22, ID=5509^Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Czech Republic, Bohemian Massif^The paper describes two previously known and one new species of tabulate corals, which belong to Favosites (F. cf. intricatus Pocta 1902), Squameofavosites (S. kukuk sp.n.) and Thecia (Thecia (Thecia) sp.). This fauna derived from the base of the Zlichovian is very close to the favositid fauna of the Koneprusy Limestone (Pragian, Lower Devonian). [original abstract]^1";
- 730 s[727] = "MAY A. (2007).- Reply to the comments of Yves Plusquellec and Esperanza Fernandez-Martinez on the paper by A. May "Micheliniidae and Cleistoporidae (Anthozoa, Tabulata) from the Devonian of Spain".- Bulletin of Geosciences 82, 1: 90-94.- FC&P 35, p. 109, ID=2440^Topic(s): ; Tabulata, Micheliniidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Spain^^1";
- 731 s[728] = "PLUSQUELLEC Y., FERNANDEZ-MARTINEZ E. (2007).- Comments on the paper by A. May "Micheliniidae and Cleistoporidae (Anthozoa, Tabulata) from the Devonian of Spain".- Bulletin of Geosciences 82, 1: 85-89.- FC&P 35, p. 112, ID=2447^Topic(s): paper review; Tabulata, Micheliniidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Spain^^1";
- 732 s[729] = "MAY A. (2006).- Micheliniidae and Cleistoporidae (Anthozoa, Tabulata) from the Devonian of Spain.- Bulletin of Geosciences 81, 3: 163-172.- FC&P 34, p. 46, ID=1254^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: Spain^The present article describes five different tabulate coral species of the families Micheliniidae and Cleistoporidae from the Emsian and Eifelian of various localities in northern and central Spain. The species Pleurodictyum elisabetae sp.nov. is erected. Michelinia guerangeri

- (Milne-Edwards & Haime 1851) and *Cleistopora smythi* Le Maître 1952 are described for the first time from Spain. The Spanish fauna's biogeographical relationships to France, Germany and northern Africa are very close. The Spanish fauna belongs to the Ibarmaghian Domain of the North Gondwana Province. The biostratigraphical value of the species found is very limited.¹";
- 733 s[730] = "LUKIN V.Yu. (2006).- Novye vidy syringoporid iz Eifel'skikh otlozheniy pripolyarnogo Urala.- Paleontologicheskii Zhurnal 2006, 4: 20-24.- FC#038;P 34, p. 45, ID=1252^Topic(s): ; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif; Geography: Russia, Urals^A high diversity of tabulate corals in Eifelian deposits of the Syv'syu River basin (Subpolar Urals) is reported for the first time. Most of the corals are represented by colonies of syringoporids. Five new species: *Syringopora parva* sp.nov., *S. insueta* sp.nov., *S. indecora* sp.nov., *Tetraporina syvjuensis* sp.nov., and *Armalites serotinus* sp.nov. are described.¹";
- 734 s[731] = "COEN-AUBERT M. (1980).- Le genre *Thecostegites* Edwards et Haime 1848 (Tabulata) dans le Frasnien de la Belgique.- Bulletin de la Societe belge de Geologie 89, 2: 103-113.- FC#038;P 10-1, p. 51, ID=5850^Topic(s): ; Tabulata, Thecostegites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fra; Geography: Ardennes^Three species of the genus *Thecostegites* Edwards, H.M. et Haime J. 1849 from the Frasnian of Belgium: *T. bouchardi* (Michelin H. 1846), *T. cf. lepas* Sokolov B.S. 1952 and *T. dumoni* n.sp. are described, figured and placed in their stratigraphic context. [original summary]¹";
- 735 s[732] = "HLADIL J. (1993).- Tabulatormorphs and stromatoporoids below and above the upper boundary of the Acanthopyge Limestone, (Eifelian / Givetian transitional interval, Central Bohemia).- Vestnik Ceskeho geologickeho ustavu 68, 2: 27-42.- FC#038;P 22-2, p. 83, ID=3516^Topic(s): stratigraphy, ecology; tabulatormorpha, stroms; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif / Giv; Geography: Czech Republic, Barrandian^Abundant tabulatormorphs and stromatoporoids settled the shallow water flanks of the Koneprusy islet elevations during the late and terminating Eifelian. *Caliapora* ex.gr. *venusta*, *C. reducta*, *Spongioalveolites minor*, *Heliolites lindstromi*, *Celechopora devonica* and *Salairella* spp. belong to the most common species. Many species flourished here earlier than around the Northern Devonian Continents. The coral / stromatoporoid assemblage above the dark beds (shallow water equivalent of the Kacak Shale) differs significantly from the pre-event assemblages. More diversified actinostromatids and alveolitids substituted the previous dominant species. *Favosites goldfussi*, *Alveolites praetenuissimus* and *Heliolites intermedius* are common, as well as *Caliapora* ex.gr. *battersbyi*.¹";
- 736 s[733] = "BYRA H. (1983).- Revision der von Cl. Schlueter (1880-1889) beschriebenen Chaetetida und Tabulata aus dem Rheinischen Devon.- Courier Forschungsinstitut Senckenberg 059: 1-127.- FC#038;P 13-1, p. 42, ID=0491^Topic(s): revision; Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^The Devonian Chaetetida and Tabulata of the Rhenish Mountains which were described by Cl. Schlueter (1880-1889), are revised morphologically and systematically by means of the original specimens and of new collections; all species are provided with new illustrations.¹";
- 737 s[734] = "BIRENHEIDE R. (1985).- Chaetetida und tabulate Korallen des Devon.- Leitfossilien, begründet von Georg Guerich 3: 1-249. [Ziegler W. (ed.)].- FC#038;P 14-1, p. 52, ID=1025^Topic(s): taxonomy; Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian; Geography: Germany^^1";

- 738 s[735] = "SARNECKA E. (1986).- Tabulata and Chaetetida from the borehole Ostalow 1.- Kwartalnik geologiczny 30, 1: 49-62 [in Polish, English summary].- FC&P 16-1, p. 21, ID=1938^Topic(s): Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian; Geography: Poland, Ostalow 1 bh^^1";
- 739 s[736] = "SARNECKA E. (1987).- Tabulata and Chaetetida in selected columnar sections of Eifelian deposits in the Gory Swietokrzyskie.- Biuletyn Instytutu Geologicznego 354: 125-144.- FC&P 16-1, p. 65, ID=1939^Topic(s): distribution; Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian Eif; Geography: Poland, Holy Cross^The author has characterized Tabulata assemblages occurring in Eifelian deposits obtained from boreholes in the Gory Swietokrzyskie. She has described the state of preservation of the fossils and the frequency of the occurrence of Tabulata and the accompanying fauna in various lithological complexes. Eleven species of Tabulata and one species of Chaetetida have been determined. Among these, three species (Thamnopora angusta Lecompte, Striatopora tenuis Lecompte, Cladopora tenuissima Dubatolov) are described for the first time in Poland. Two species (Gracilopora sp. A and Caliapora sp. A) belong to genera which, so far, have been described in Poland from the Upper Devonian stages (Frasnian, Givetian). The author has distinguished index species of stratigraphic importance. The occurrence of the particular species and genera in the Kielce region and in the Bodzentyń Syncline has been presented, as well as their stratigraphic range.^1";
- 740 s[737] = "GALLE A., HLADIL J., MAY A. (1999).- Two new corals from the Koneprusy Limestone (Lower Devonian, Pragian, Barrandian, Czech Republic).- Journal Czech geological Society 44, 1-2 [Barrande Vol.]: 181-187.- FC&P 28-1, p. 33, ID=1440^Topic(s): taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian Prag; Geography: Czech Republic, Bohemian Massif^Two new species [the rugose coral Joachimastrea barrandei gen. nov., sp. nov. and the tabulate coral Remesia koneprusiana sp. nov.], one of them considered a new genus, are described from the Pragian Koneprusy Limestone. Members of the new genus display characters of both disphyllids and phillipsastraeids. Ecology and sedimentology of the Koneprusy Limestone is briefly discussed and the morphology of the Koneprusy reef is mentioned. [original abstract]^1";
- 741 s[738] = "PLUSQUELLEC Y. (1981).- Les tabules et les tetracoralliaires.- Mem. Soc. geol. min. Bretagne 24; 89-102 [Morzadec P. et al. (eds): La tranchee de la Lezais (Emsien superieur) du Massif Armoricaïn].- FC&P 11-2, p. 33, ID=1834^Topic(s): taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian Ems; Geography: France, Armorique^La tranchée de La Lezais a livré une faune de Tabulés et de Tétracoralliaires solitaires. Quelques Tabulés imparfaitement conservés et un plus grand nombre de Tétracoralliaires (environ 150) n'ont pu être déterminés. La faune étudiée comporte les espèces suivantes: Pleurodictyum sp. A ? Plusquellec 1976, Paracleistopora intermedia n.sp., Adradosia barroisi Birenheide & Soto 1977 simplex n.subsp., Petronella ? sp., Syringaxon ? sp., Combophyllum oehlerti n.sp., morphotypes A et B. [original summary]^1";
- 742 s[739] = "TOURNEUR F., BABIN C., BIGEY F., BOULVAIN F., BRICE D., COEN-AUBERT M., DREESEN R., DUSAR M., LOBOZIAK S., LOY W., STREEL M., (1989).- Le Devonien du sondage de Nieuwkerke (Flandre Occidental, Belgique - extremite occidentale du Synclinorium de Namur).- Annales de la Societe geologique du Nord 108: 85-112. [in French, with English summary].- FC&P 19-1.1, p. 20, ID=2577^Topic(s): geology; geology; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian Giv/Fra; Geography: Ardennes^The hydrogeological reconnaissance borehole Nieuwkerke has traversed the

Givetian-Frasnian boundary. Different fossil groups provide the framework for a biostratigraphic zonation. An ecological break between a supratidal restricted environment and a subtidal open marine environment has been observed in a carbonate sequence, which precedes the biostratigraphic boundary based on conodonts. * Because of its intermediate geographical position, the Nieuwkerke borehole can be lithostratigraphically correlated with the Tournai region of the Namur Synclinorium (Belgium) and the Ferques region in Boulonnais (N. France). The lower unit is equivalent to the Mazy Formation and to the Bastien Member of the Blacourt Formation but environmental instability and biofacies variation observed at this level are probably due to the regressive tendencies in the Uppermost Givetian at the southern margin of the Brabant Massif. The upper unit can be easily correlated with the lower part of the Bovesse Formation and with the lower part of the Cambreseques Member of the Beaulieu Formation. The transgression which nearly marks the base of the Frasnian has probably produced a more regular and uniform facies distribution. * [in annexes described and illustrated are *Disphyllum virgatum* (Hinde 1890) by M. Coen-Aubert and *Thamnopora polyforata* (Schlotheim 1820), *Aulocystis* sp. and *Dendropora explicita* Michelin 1846 by F. Tourneur.¹];

- 743 s[740] = "BIRENHEIDE R., COEN-AUBERT M., LUTTE B.-P., TOURNEUR F. (1991).- Devonian coral bearing strata of the Eifel Hills and the Ardennes.- Excursion B1, VI International Symposium on Fossil Cnidaria and Porifera, Muenster, 113 pp.- FC&P 20-2, p. 48, ID=2908Topic(s): excursion guide; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts, Ardennes¹";
- 744 s[741] = "BIRENHEIDE R., GABRIELLI P. (1993).- Stratigraphie und Korallen des unteren Mittel-Devon im NE-Teil der Rohrer Mulde in der Eifel.- Senckenbergiana lethaea 73, 1: 7-24.- FC&P 22-2, p. 79, ID=3501Topic(s): stratigraphy, taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian M; Geography: Germany, Eifel¹The stratigraphical data of the NE part of the Middle Devonian Rohr syncline in the Eifel hills, based on field work of P. Gabrielli are outlined herein. Of the Eifelian fossil collections from this area five rugose and three tabulate coral species are described and figured which are either insufficiently known or of stratigraphical value. Moreover the generic rugose taxa *Argutastrea* Crickmay 1960 and *Disphyllia* He 1978 are estimated to be only of subgeneric rank with respect to *Disphyllum* Fromentel 1861, whereas *Pseudohexagonaria* Kraemer 1982 falls under synonymy of *Disphyllum* (*Argutastrea*).¹";
- 745 s[742] = "HLADIL J., CEJCHAN P. (1997).- Tissue-to-tissue competition between caliaporids and stromatoporoids: related skeletal features and possible strategies.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 273-283.- FC&P 26-2, p. 17, ID=3690Topic(s): competition; Tabulata, Stroms; Systematics: Cnidaria Porifera; Tabulata Stromatoporoidea; Stratigraphy: Devonian M; Geography: Czech Republic, Moravia¹Although stromatoporoids colonized the dead surfaces of coral skeletons there is also evidence for competition between stromatoporoids and caliaporids. Different species and genera of stromatoporoids display different abilities to attack the caliaporid corals. *Actinostroma devonense* was, at least in the Middle Devonian of Moravia (Central Europe), a dangerous killer of caliaporids. However, the representatives of the genera *Trupetostroma*, *Hermatostroma* and *Clathrocoelona* were less successful if forced into close, tissue-to-tissue competition. The caliaporids responded to the stromatoporoid attack using two strategies: escape and counter-attack. The close competition led to malformations in the tabulate coral skeleton, especially affecting the squamulae: reduction of squamulae to irregular thick spines is the major malformation trend.¹";
- 746 s[743] = "BRUHL D. (1997).- Eine besondere wuchsform fossiler

- Riffbewohner (Alveolitidae, Stromatoporoidea und Bryozoa) aus dem Mittel-Devon der Eifel (Rheinisches Schiefergebirge).- Coral Research Bulletin 05: 121-133.- FC&P 27-1, p. 44, ID=3799^Topic(s): growth forms; Tabulata, stroms; Systematics: Cnidaria Porifera; Tabulata Stromatoporoidea; Stratigraphy: Devonian M; Geography: Germany, Eifel^The tabulate corals Squameoalveolites fornicatus (Schlueter 1889) and Platyaaxum (Roseoporella) taenioforme (Schlueter 1889), the stromatoporoid species Stromatoporella granulata (Nicholson 1873) and the bryozoan colony Fistuliporella aff. constricta (Hall 1883) are described by a special growth form from the Freilingen Formation (Upper Eifelian) of the Dollendorf Syncline (Eifel Hills / Rheinisches Schiefergebirge). This dome-shaped growth form resulted from the successive encrustation of the different reef-organisms.^1";
- 747 s[744] = "TOURNEUR F., LACHKHEM H., MISTIAEN B. (1995).- Trypanopora conili nov. sp. (Annelida ?) du Calcaire de Couvin, Eifelien du bord sud du Synclinorium de Dinant (Belgique). Affinites biologiques et relations avec les organismes holes.- Memoires de I'Institut geologique de I'Universite catholique de Louvain 35 : 83-122.- FC&P 25-1, p. 5, ID=2987^Topic(s): epibionts of Chaetetida & Stromatoporoidea; Annelida Trypanopora; Systematics: Annelida; Stratigraphy: Devonian Eif; Geography: Ardennes^A new species of the genus Trypanopora (Sokolov and Obut 1955), T. conili, is described from the Couvin Limestone, Lower Eifelian of the southern margin of the Dinant Synclinorium (Belgium). Its morphological and microstructural characters are studied in detail. The stratigraphical and geographical distribution of the genus is summarized. The biological affinities of the family Trypanoporidae (Li 1981), successively compared with Tabulata, Annelida and Tentaculitida, are discussed; an attribution to the Polychaetes annelids is suggested. The relationships between the Trypanopores and their hosts - Chaetetids and Stromatopores - are examined: they formed mutual overgrowths.^1";
- 748 s[745] = "COEN-AUBERT M., COEN M. (1974).- Le Givétien et le Frasnien dans la vallée de la Meuse, de Tailfer à Yvoir (bord Nord du Bassin de Dinant).- Annales de la Societe geologique de Belgique 97, 2: 499-524.- FC&P 4-2, p. 56, ID=5260^Topic(s): geology; geology; Systematics: Cnidaria; Stratigraphy: Devonian; Geography: Ardennes^A la faveur de la vallée de la Meuse, du Burnot et du Bocq, une quinzaine de coupes du Givétien et du Frasnien au bord Nord du Bassin de Dinant sont décrites en détail. L'accent est mis sur le point de vue lithostratigraphique. Un lithostratotype est proposé (formation de Lustin). Des Coelentérés sont signalés dans chaque coupe.^1";
- 749 s[746] = "BIRENHEIDE R. (1976).- Devonische Cnidaria aus der Bohrung Saar 1.- Geol. Jb. A27: 335-349.- FC&P 6-1, p. 21, ID=5486^Topic(s): ; Cnidaria; Systematics: Cnidaria; Stratigraphy: Devonian; Geography: Germany^The deep drilling projet Saar 1 has delivered the Rugosa Pachyphyllum cf. ibergense (Romer), Pterorrhiza sp. and Tabulophyllum gracile (Walther); the Tabulata: Alveolites suborbicularis Lamarck, Scoliopora sp. and the Stromatoporoids: Actinostroma cf. stellulatum Nicholson, Stromatoporella oblitterata Lecompte, Stachyodes caespitosa Lecompte, Amphipora angusta Lecompte and Amphipora sp. These forms are out of Middle and Upper Devonian beds.^1";
- 750 s[747] = "BRICE D., BIGEY F., MISTIAEN B., PONCET J., ROHART J.-C. (1977).- Les organismes constructeurs (Algues, Stromatopores, Rugueux, Tabules, Bryozaires) dans le Devonien de Ferques (Boulonnais - France): Associations, Repartition Stratigraphique.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 136-151.- FC&P 6-2, p. 17, ID=0138^Topic(s): distribution; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy:

- Devonian; Geography: France, Boulonnais^Includes detailed stratigraphic distribution of species of algae, stromatoporoids, corals and bryozoans in the Ferques Devonian.^1";
- 751 s [748] = "FRIAKOVA O., GALLE A., HLADIL J., KALVODA J. (1985).- A Lower Famennian fauna from the top of the reefoid limestones at Mokra (Moravia, Czechoslovakia).- Newsletter for Stratigraphy 15, 1: 43-56.- FC&P 14-2, p. 32, ID=0947^Topic(s): ; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: Devonian Fam; Geography: Czech Republic, Moravia^The five zonal divisions (conodont, foraminiferal, tabulate coral, rugose coral, and stromatoporoid) are correlated in the Lower Famennian Vilemovice Limestones (Macocho Formation). The age of the reefoid limestones corresponds to the upper part of the Palmatolepis crepida Zone. Stromatoporoid and formaminiferal fauna do not differ substantially from the Upper Frasnian association in the bottom, some differences were observed in the tabulate corals, while the rugose corals show pronounced changes. (Original summary)The corals will be described separately. Here only a list of species found in the section is given:Tabulate Corals: scoliopora dentiaulata vassinoensis DUBATOLOV, Sc. denticulatum n. ssp., Natalophyllum n.sp., Syringopora sp. Rugose Corals: Alaiophyllum ? n.sp., Disphyllum n.sp., Tabulophyllum n.sp. and Rugosa indet.^1";
- 752 s [749] = "BRICE D., MISTIAEN B., ROHART J.-C. (2002).- Progrès dans la connaissance des Flores et Faunes Dévoniennes du Boulonnais (1971-2001).- Annales de la Société géologique du Nord 9 (2ème série): 61-74.- FC&P 31-1, p. 52, ID=1411^Topic(s): paleontology; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: Devonian; Geography: France, Boulonnais^Since 1970, an inventory of all the present fossil groups to be found in the largest part of the Devonian series in the Ferques area has been realized, after the establishment of the detailed stratigraphic series and the updating of new outcrops (especially from 1975). This inventory has been established from all the old and recent available material. The latter was collected bed by bed on the new outcrops, jointly by various specialists. Thanks to the exemplary collaboration of well informed amateurs such as Jean-Pierre Vidier and Christian Loones, the collection has been continued allowing new studies and discoveries.The studies and the systematic revisions, the definitions of taxonomic and biostratigraphic units were established with a concern for replacing the fossils in their sedimentary context, for giving their stratigraphic and biogeographic distribution in correlation with the international conodont scale. Since the publication of results, the Devonian conodont scale has been revised. Correlation between the old scale and the new one will be found in fig.1. The affinities of the flora and the fauna with those of the more or less remote regions were also analysed.The different taxa recognized in the Devonian of the Ferques area (more than 780) are listed below, following by one or several numbers referring to one or several papers where they are described or quoted. When a taxon has been revised, the paper quoting this taxon before the revision is not mentioned. These taxa belong to about twenty different fossil group : Calcareous algae, miospores, acritarchs, chitinozoans, foraminifers, moravamminids, stromatoporoids, rugose and tabulate corals, bryozoans, brachiopods, bivalve and cephalopod mollusks, tentaculites, crinoids and echinida, trilobites, ostracodes, conodonts, vertebrate remains (ichthyofauna)^1";
- 753 s [750] = "PAJCHLOWA M., MALINOWSKA L., MILACZEWSKI L., SARNECKA E., WORONCOWA-MARCINOWSKA T. (2003).- Geological Structure of Poland III, Atlas of index and charactersitic fossils, Pt 1b, Devonian (Fasc. 1, 2).- Geological Structure of Poland III, Atlas of index and charactersitic fossils, Pt 1b, Devonian (Fasc. 1, 2). ISBN 83-7372-639-X.- FC&P 32-2, p. 56, ID=1415^Topic(s): atlas of fossils; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: Devonian; Geography:

- Poland^<contains chapters on corals and sponges from the Polish Devonian, authored by Fedorowski J., Hurcewicz H., Kazmierczak J., Nowinski A. and Sarnecka E.; stroms are described as Cyanobacteria by Kazmierczak stromatoporoid stromatolites] ^1";
- 754 s[751] = "MISTIAEN B., BECKER T., BRICE D., DEGARDIN J.-M., DERYCKE C., LOONES C., ROHART J.-C. (2002).- Données nouvelles sur la partie supérieure de la formation de Beaulieu (Frasnien de Ferques, Boulonnais, France).- Annales de la Societe geologique du Nord 9 (2eme serie): 75-84.- FC&P 31-1, p. 53, ID=1416^Topic(s): biostratigraphy, ecology; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: Devonian Fra; Geography: France, Boulonnais^A new and temporary accessible Upper Devonian outcrop in the Ferques area, Boulonnais, North of France, has allowed one to observe and sample not visible levels in the upper part of the Patures Member. They have proved rich in fauna. The systematic studies on several fossils groups (stromatoporoids, tabulate and rugose corals, brachiopods, cephalopods, conodonts, vertebrate remains) yield interesting biostratigraphic and paleoecological data.^1";
- 755 s[752] = "FUCHS A. (1987).- Conodont biostratigraphy of the Elbingerode Reef Complex, Harz Mountains.- Acta Geologica Polonica 37, 1-2: 33-50.- FC&P 17-1, p. 38, ID=2150^Topic(s): reefs stratigraphy; reefs, stratigraphy; Systematics: Chordata; Stratigraphy: Devonian Giv Fra; Geography: Germany, Harz^The stratigraphy and development of the Elbingerode Reef Complex (Harz Mountains) are presented in the light of conodont investigations. The Elbingerode Reef Complex, which developed on an isolated submarine volcanic rise within the Renish Trough, displays an atoll-like structure of facies pattern. Correlations based upon conodonts indicate the onset of reef growth in the Middle varcus Zone and its diachronous termination up to the Upper gigas Zone. The younger, post-reef sediments ranging up to the anchoralis-latus Zone are recognized as the neptunian dykes and the pockets within the reef carbonates. The termination of reef formation in the Elbingerode Reef Complex is interpreted as result of the increasing subsidence of the sea floor. The conodont distribution within the reef carbonates is restricted to the fore-reef facies, but no clear depth segregation of conodonts is observed. Differentiation of CAI values within the Elbingerode Reef Complex is also discussed.^1";
- 756 s[753] = "STANLEY G.D.jr, STURMER W. (1983).- The first fossil Ctenophore from the Lower Devonian of West Germany.- Nature 303, 5917: 518-520.- FC&P 12-2, p. 46, ID=6245^Topic(s): Ctenophora; Systematics: Ctenophora; Stratigraphy: Devonian L; Geography: Germany, Hunsruck^^1";
- 757 s[754] = "RIGBY J.K., PISERA A., WRZOLEK T., RACKI G. (2001).- Upper Devonian sponges from the Holy Cross Mountains, Central Poland.- Palaeontology 44, 3: 447-488.- FC&P 30-1, p. 38, ID=1550^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^The rich fauna of Late Devonian (late Frasnian) siliceous sponges from the Holy Cross Mountains, Poland is composed of 15 species and 11 genera. Both astylospongid demosponges (lithistids) and hexactinosan hexactinellids are present. The following new genera and/or species are proposed: D. regukara Rigby and Pisera sp.nov., Jazwicella media Rigby and Pisera gen. et sp.nov., Astyloscyphia irregularis Rigby and Pisera gen. et sp. nov, A. turbinata Rigby and Pisera gen. et sp.nov., Astylotuba modica Rigby and Pisera gen. et sp.nov., Paleaoregulara cupula Rigby and Pisera gen. et sp.nov., Paleoramospongia bifurcata Rigby and Pisera gen. et sp.nov., Cordiospongia conicas Rigby and Pisera gen. et sp.nov., Paleoraticularia elongata Rigby and Pisera gen. et sp.nov., P. gigantia Rigby and Pisera gen. et sp.nov., Polonospongia devonica Rigby and Pisera gen. et sp.nov., P. fistulata Rigby and Pisera gen. et sp.nov., Urnospongia modica Rigby and Pisera gen. et sp.nov., and Conicospongia

- annulata Rigby and Pisera gen. et sp.nov. The investigated fauna contains the youngest astylospongiids known and the oldest well-preserved and most diversified Palaeozoic hexactinosans. The sponge fauna constituted a significant element of a brachiopod-coral-sponge assemblage that inhabited a deep slope of the local Dyminy Reef structure, during its final phase of growth, in a clearly hemipelagic setting. This fauna is limited to the intrashelf depression within an incipiently drowned carbonate platform.¹¹;
- 758 s[755] = "JUX U. (1992).- Schwamme aus dem obersten Mitteldevon der Bergisch Gladbach-Paffrather Mulde (Bergisches Land).- Decheniana 145: 302-311.- FC&P 22-1, p. 48, ID=3418Topic(s):taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Devonian Giv; Geography: Germany, Bergisches Landwith the exception of rock forming stromatoporoids and dispersed megascleres, fossil sponges were just recently recognized within the Devonian sequence of strata of the Bergisches Land. The specimens in question are preserved in original globular shapes exhibiting all the characters of a Rhagon-type sponge. Described under the name Globispongia paffratheri n.gen., n.sp., the fossils refer to Astylospongiidae Rauff 1893 on account of identical internal organization. The sponges were detected in a partly dolomitized, originally dark bed of limestone at the base of the Hornstein-Horizon, which is the youngest mappable unit of Middle Devonian rocks in the Bergisch Gladbach-Paffrather syncline.¹¹;
- 759 s[756] = "ZAPALSKI M.K., PINTE E., MISTIAEN B. (2008).- Late Famennian ?Chaetosalpinx in Yavorskia (Tabulata): the youngest record of tabulate endobionts.- Acta Geologica Polonica 58, 3: 321-324.http://www.geo.uw.edu.pl/agp/table/abstracts/58-3.htm.- FC&P 35, p. 67, ID=2373Topic(s):Tabulata, endobionts; Chaetosalpinx ?; Systematics: problematica; Stratigraphy: Devonian Fam; Geography: France N^Tabulate corals are sometimes associated with other organisms occurring within their skeletons. These tabulate endobionts are common in Lower Palaeozoic (Ordovician and Silurian) and Devonian strata, but until now they have not been recognized in strata younger than early Frasnian. Here we report ?Chaetosalpinx sp. occurring within the skeletons of the tabulate coral Yavorskia sp. (Favositida, Cleistoporidae) from the latest Famennian ("Strunian") in the Etroeungt area (Northern France). It can be stated that these endobionts survived the Frasnian-Famennian boundary crisis and recovered in the Late Famennian.¹¹;
- 760 s[757] = "MORZADDEC P., PLUSQUELLEC Y. (1977).- Hyostragulum simplex n.sp. (incertae sedis) du Devonien du Massif Armoricaïn, interet paleobiogeographique et systematique.- Geobios 10, 4: 573-579.- FC&P 7-1, p. 22, ID=0179Topic(s): enigmatic Hyostragulum; Systematics: problematica; Stratigraphy: Devonian Ems; Geography: France, ArmoriqueIn the western part of the synclinorium median armoricaïn (Rade de Brest), the presence of Hyostragulum simplex n.sp. in the lower part of the Troan formation (Upper Emsian) is a supplementary element of hercynian fauna in Brittany during lower Devonian time. For the new species, characterized by lack of a septum on the base of the corallite (basal disc), a fibrous microstruture, perhaps trabecular, is shown. Pores are absent. Some tabulae are developed. Corallite diameters range between 1.2 - 1.9 mm (1.0 - 1.4 mm in the sense of measuring by Marek & Galle 1976). Thickness of the walls is 0.04 - 0.1 mm. The systematic position of the genus - by Marek & Galle thought to be a representative of the suborder Alveolitina Duncan 1872 - is discussed but ending with the suggestion to let it remain incertae sedis.¹¹;
- 761 s[758] = "DIEKEN G. (1996).- Karbonatmikrofazies, Palaeoökologie und Genese der Stromatactis-Strukturen des Suchomasty- und des basalen Acanthopyge-Kalksteins im Barrandium (Tschechische Republik).- Aachener Geowissenschaftliche Beiträge 19: i-xi + 1-116. [monograph] - FC&P 25-2, p. 65, ID=3168Topic(s): stromataxis;

Systematics: problematica; Stratigraphy: Devonian Ems Eif; Geography: Czech Republic^These investigation results relate to the Devonian Suchomasty limestone (upper Emsian - lowest Eifelian) and basal Acanthopyge limestone (Eifelian), which is restricted to the south-western area of the Barrandian (Czech Republic) known as the Koneprusy area. From the beginning of the Pragian stage to the beginning of the Eifelian stage, this region underwent its own course of development, independent of the other Barrandian area. The frequency and distribution of the bioliths, the associated fauna and the sediment structures of the Suchomasty limestone and the base of the Acanthopyge limestone indicate the formation of a shallow subtidal environment. The sponge-cement framestone which occurs only at the base of the Suchomasty limestone suggest that the palaeobathymetric position of the sedimentation area was more shallow than the several tens of metres generally assumed to date, at least at the beginning of the sedimentation of the Suchomasty limestone. [first fragment of extensive summary]^1";

762 s[759] = "HUSSNER H., FLAJS G., VIGENER M. (1995).- Stromatactis-Mud Mound Formation - A Case Study from the Lower Devonian, Montagne Noire (France).- Beiträge zur Paläontologie 20: 113-121.- FC&P 25-2, p. 69, ID=3173^Topic(s): reefs, mud mounds; reefs; Systematics: problematica; Stratigraphy: Devonian Ems; Geography: France, Montagne Noire^Mud mounds in the Emsian of the Montagne Noire are built by red biomicrites and white sparitic layers. The latter fall into the category of stromatactis structures. Sponges and bryozoans are dominant in the micrites. The stromatactis structures are interpreted as spar-filled cavity-systems, which originated from microbial mats decaying in the sediment. The bryozoan / sponge community as well as the microbial mat community both contributed to the growth of the mounds. Mound growth was thus primarily biologically controlled, but influenced by sea level changes. Spectral analysis of detailed measurements of quarry sections revealed orbital cycles to be responsible for the sea level changes.^1";

763 s[760] = "FLAJS G., HUSSNER H., VIGENER M. (1996).- Stromatactis Mud Mounds in the Upper Emsian of the Montagne Noire (France): Formation and Diagenesis of Stromatactis Structures.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: 345-348.- FC&P 26-1, p. 44, ID=3614^Topic(s): reefs, mud mounds; reefs; Systematics: problematica; Stratigraphy: Devonian Ems; Geography: France, Montagne Noire^The Upper Emsian mud mounds in the Montagne Noire are composed of interlayering red micrites and Stromatactis layers. Four types of Stromatactis were distinguished by their morphology and cementation pattern. The micrites are characterized by a baffling and / or binding microbial / sponge / bryozoan association. The formation of Stromatactis voids was caused by the decay of extensive microbial mats which proliferated during times of low or nondeposition. We present arguments for an early formation of the voids after the burial of the mats by increasing sediment influx, as well as for their early stabilization by cementation and by early lithification of the lime mud. The frequent changes from the microbial / sponge / bryozoan association to microbial mats were due to high-frequency sealevel fluctuations. The cyclic arrangement of Stromatactis layers is supposed to be caused by orbital cycles.^1";

764 s[761] = "FLAJS G., DIEKEN G., HUSSNER H. (1996).- Upper Emsian and Lower Eifelian Stromatactis Limestones of the Koneprusy Area (Barrandian, Czech Republic).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 44, ID=3615^Topic(s): ; stromataxis, limestones; Systematics: problematica; Stratigraphy: Devonian Ems Eif; Geography:

- Czech Republic, Barrandian^The upper Emsian Suchomasty limestone and the Eifelian Acanthopyge limestone of the Barrandian are composed of red to gray biomicrites and white sparitic layers, which fall into the category of Stromatactis structures. A distinction of four types of Stromatactis fabrics by their morphology and cementation pattern is possible. The stromatactis fabrics of type A and B are interpreted as spar-filled cavity-systems, which originated from decaying microbial mats. Stromatactis type A occurs only in combination with sponge-cement framestones at the base of the Suchomasty limestone. This microfacies type probably documents an "embryonic" mud mound stage in the lowest Suchomasty limestone. The occurrence of Sphaerocodium at the base of stromatactis fabrics type B indicates the origin of this stromatactis type due to former presence of "microbial mats". Concerning the distribution of the stromatactis fabrics type A and B in the section a change of sediment input was the dominant controlling factor.^1";
- 765 s [762] = "FLAJS G., HUSSNER H. (1993).- A Microbial Model for the Lower Devonian Stromatactis Mud Mounds of the Montagne Noire (France).- Facies 29, 1-2: 179-194.- FC&P 23-1.1, p. 87, ID=6841^Topic(s): ; stromatactis; Systematics: problematica; Stratigraphy: Devonian L; Geography: France, Montagne Noire^1";
- 766 s [763] = "SCRUTTON C.T. (1977).- Facies variations in the Devonian limestones of eastern South Devon.- Geological Magazine 114: 165-193.- FC&P 6-2, p. 15, ID=0120^Topic(s): carbonates; carbonates reefs; Systematics: ; Stratigraphy: Devonian; Geography: Britain, Devonshire^Includes lists of coral faunas and discussion of reef facies in Tor Bay Reef-Complex.^1";
- 767 s [764] = "TSIEN H.-H. (1977).- Morphology and development of Devonian reefs and reef complexes in Belgium.- Third International Symposium on Coral Reefs, Miami: 191-200.- FC&P 6-2, p. 16, ID=0124^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Devonian; Geography: Ardennes^A general account of the development of Devonian reef facies in Belgium.^1";
- 768 s [765] = "JUX U., MANZE U. (1978).- Milieu-Indikationen aus einem mitteldevonischen biohermalen Riff des Bergischen Landes mittels C- und O-Isotopen.- Decheniana 131: 300-324.- FC&P 8-1, p. 57, ID=0241^Topic(s): reefs bioherms, stable isotopes, C O; reefs ecology; Systematics: ; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^[Environmental indications from a Middle Devonian biohermal reef of the Bergisches Land, W-Germany) by means of C- and O-isotope methods.] Nachdem bereits ein Stromatoporen-Biostrom aus dem Mitteldevon des Bergischen Landes isotopenphysikalisch untersucht worden ist (Jux & Makze 1976), stand nunmehr als Vergleichsobjekt ein Rugosen-Bioherm des gleichen geosynklinalen Ablagerungsraumes im Blickfeld der Betrachtung.^1";
- 769 s [766] = "HLADIL J. (1979).- Reefal fauna from the Devonian limestones at Malhostovice (eastern border of the Boskovice Furrow).- Vestnik Ustredniho ustavu geologickeho 54, 5: 179-183.- FC&P 9-2, p. 47, ID=0355^Topic(s): reefs biota; reefs, stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: Czech Republic, Moravia?^In an abandoned quarry at Malhostovice, eastern margin of the Boskovice Furrow, a recrystallized reefal fauna has been found. From the determined corals, Crassialveolites domrachevi (Sokolov), Scoliopora denticulata vassinoensis Dubatolov and, according to A. Galle, Frechastraea pentagona minima (Rozkowska) are bearing evidence of Upper Frasnian age. An isolated find of autochthonous corals bearing morphological features of the genus Caliapora is remarkable. However, the recrystallized material does not allow an unequivocal determination of their systematic position. With regard to the biofacies, this is the frontal margin of the reef core including a zone of a stromatoporoid block reef alternating with a zone of tabular

- alveolites.^1";
- 770 s[767] = "PONCET J. (1979).- Evolution sedimentaire d'une serie carbonatee de plate-forme: la serie carbonatee Eodevonienne de Vire, est du massif Americain, France.- France. Sediment. Geol. 24: 307-322.- FC#038;P 9-2, p. 51, ID=0375^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Devonian L; Geography: France, Armorique^1";
- 771 s[768] = "COEN-AUBERT M., DEJONGHE L., CNUUDE C., TOURNEUR F. (1986).- Etude stratigraphique, sedimentologique et geochemique de trois sondages effectues a Membach (Massif de la Vesdre).- Professional Papers of Service Geologique de Belgique 1985, 10: 223.- FC#038;P 15-1.2, p. 7, ID=0841^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian Giv Fra; Geography: Ardennes, Membach B^Description of three boreholes in the Upper Givetian and Frasnian of Eastern Belgium, with notes on the distribution of Rugose corals, brief descriptions and figurations of several unnamed species of Thamnopora, scoliopora, Natalophyllum and Hillaepora and of Caliapora battersbyi.^1";
- 772 s[769] = "COEN-AUBERT M., LACROIX D. (1985).- Le Frasnien dans la partie orientale du bord nord du synclinorium de Namur.- Bulletin de la Societe belge de Geologie 94, 2: 117-128.- FC#038;P 15-1.2, p. 25, ID=0860^Topic(s): stratigraphy, geology; stratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^1";
- 773 s[770] = "DVORAK J., FRIAKOVA O., GALLE A., HLADIL J., SKOCEK V. (1984).- Correlation of the reef and basin facies of Frasnian age in the Krtiny HV-105 borehole in the Moravian Karst.- Sbornik geologickych ved., Geol. 39: 73-163.- FC#038;P 14-1, p. 65, ID=1079^Topic(s): reefs stratigraphy; reefs, stratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: Czech Republic, Moravia^The Krtiny HV-105 borehole was located at the boundary of two blocks in the Proterozoic crystalline basement In Palaeozoic sediments this boundary was marked by a flexure associated with rapid fades changes and thickness variations. The alternation of reef and basin facies during the Frasnian makes possible a partial comparison between the evolution of reef-building organisms and the conodont parastratigraphy.^1";
- 774 s[771] = "MENDEZ-BEDIA I., SOTO F. (1984).- Paleoecological successions in a Devonian organic buildup (Moniello Fm., Cantabrian Mountains, NW Spain).- Geobios 8: 151-157.- FC#038;P 14-1, p. 67, ID=1082^Topic(s): ecological succession; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^A Lower Devonian organic buildup (Moniello Formation) from the Cantabrian Mountains (Asturias, NW Spain) displays a vertical paleoecological zonation reflecting different stages in the reef development. Four zones have been established, namely: stabilization, colonization, diversification and domination zones. The biologic and taxonomic composition of these zones as well as their lithofacies relations are indicated. Rugose corals (Synaptophyllum) played an important role as stabilizing organisms; the frame builders themselves (Stromatoporoids and Corals) also contribute to that function. Finally, the autogenic or allogenic character of the succession is discussed^1";
- 775 s[772] = "BARCHY L., COEN-AUBERT M., MARION J.M., COEN M. (2004).- Mise en évidence de la Faille de Marenne sur la carte géologique Aye - Marche-en-Famenne.- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 74, ?: 59-71.- FC#038;P 33-2, p. 10, ID=1096^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian Giv; Geography: Ardennes^[…] The dating by rugose corals has allowed to define with precision the Givetian lithologic units that have been put in contact by this normal fault with a later, right-lateral strike-slip component. […]^1";
- 776 s[773] = "BOULVAIN F., CORNET P., Da SILVA A.-C., DELAITE G., DEMANEY

B., HUMBLET M., RENARD M., COEN-AUBERT M. (2004).- Reconstructing atoll-like mounds from the Frasnian of Belgium.- *Facies* 50, 2: 313-326.- **FC#038;P 33-2**, p. 10, ID=1097^**Topic(s):** reefs, atolls; reefs; **Systematics:**; **Stratigraphy:** Devonian Fra; **Geography:** Ardennes^A succession of Frasnian mounds on the southern border of the Dinant Synclinorium (Belgium) was investigated for their facies architecture, sedimentary dynamics and palaeogeographic evolution. Seven mound facies were defined from the Arche (A) and Lion (L) members, each characterized by a specific range of textures and association of organisms (A2/L2: red or pink limestone with stromatactis, corals and crinoids; A3/L3: grey, pink or green limestone with stromatactis, corals and stromatoporoids; A4/L4: grey limestone with corals, peloids and dasycladaceans; A5/L5: grey microbial limestone; A6/L6: grey limestone with dendroid stromatoporoids; A7/L7: grey laminated limestone with fenestrae; and A8/L8: grey bioturbated limestone). Laterally equivalent sediments include substantial reworked material from the buildups and background sedimentation. Textures and fossils suggest that A2/L2 and A3/L3 facies developed close to storm wave base, in a subphotic environment. Facies A4/L4, occurring near fair weather wave base in the euphotic zone, includes lenses of A5/L5 with stromatolitic coatings and thrombolites. A6/L6 corresponds to a slightly restricted environment and shows a progressive transition to fenestral limestone of A7/L7. This facies was deposited in a moderately restricted intertidal area. A8/L8 developed in a quiet lagoonal subtidal environment. The mounds started with A2/L2 or A3/L3 in which microbial lenses and algal facies A4/L4 became progressively more abundant upwards. Following 20m of laterally undifferentiated facies, more restricted facies occur in the central part of the buildups. This geometry suggests the initiation of restricted sedimentation, sheltered by bindstone or floatstone facies. The facies interpretation shows that after construction of the lower part of the mounds during a transgression and a sea-level highstand, a lowstand forced reef growth to the margin of the buildups, initiating the development of atoll-like crowns during the subsequent transgressive stage. The persistence of restricted facies results from the balance between sea-level rise and reef growth. [original abstract]^1";

- 777 s[774] = "BOULVAIN F., COEN-AUBERT M. (2006).- A fourth level of Frasnian carbonate mounds along the south side of the Dinant Synclinorium (Belgium).- *Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre* 76, ? : 31-51.<http://hdl.handle.net/2268/19038>.- **FC#038;P 34**, p. 29, ID=1224^**Topic(s):** reefs, carbonate mounds; reefs, Rugosa; **Systematics:**; **Stratigraphy:** Devonian Fra; **Geography:** Ardennes^An additional level of Frasnian mounds has been recognized in the La Boverie quarry at Rochefort and in four boreholes drilled in the Nord quarry at Frasnes, on the south side of the Dinant Synclinorium. It occurs between the Arche and Lion Members belonging respectively to the Moulin Liénaux and Grands Breux Formations, in the middle part of the stage. The new name of La Boverie Member is introduced at the top of the Moulin Liénaux Formation, for the deposits lying between the Arche and Bieumont Members; the latter is the basement of the Lion mound. The same succession has been observed in the sections of Moulin Bayot close to Vodelée, in the southeastern part of the Philippeville Anticlinorium. The La Boverie Member starts with rather deep bioclastic sediments, after the collapse of the carbonate factory at the top of the Arche mound. In the upper part of the lithostratigraphic unit, there is a thin buildup characterized by relatively shallow facies. The solitary rugose corals *Macgeea boveriensis* n.sp., *M. socialis* Soshkina, 1939 and *Sinodisphyllum posterum* (Ivaniya, 1965) collected in the lower part of the La Boverie Member are described in detail whereas the revision of *S. kieltense* (Rozkowska, 1979) occurring in the Bieumont Member is also provided.^1";

- 778 s[775] = "BOULVAIN F., DEMANY B., COEN-AUBERT M. (2005).- Frasnian carbonate buildups of Southern Belgium: the Arche and Lion Members interpreted as atolls.- *Geologica Belgica* 8, 1-2: 69-89.<http://popups.ulg.ac.be/Geol/document.php?id=562>.- **FC**;P 34, p. 72, ID=1308**Topic(s):** reefs; reefs; **Systematics:** **Stratigraphy:** Devonian U; **Geography:** Ardennes^The facies architecture, sedimentary dynamics and paleogeographic evolution were reconstructed for a number of Frasnian buildups developed on a carbonate platform on the south side of the Dinant synclinorium (Belgium). Bed-by-bed sampling and detailed petrography were complemented by magnetic susceptibility analysis, allowing for high-precision lateral correlation. Six facies were recognised in the buildups, each characterized by a specific range of textures and assemblage of organisms: grey, pinkish or greenish limestone, with stromatactis, corals and stromatoporoids (facies A3-L3); grey limestone with corals, peloids and dasycladales (facies A4-L4); grey, microbial limestone (facies A5-L5); grey limestone with dendroid stromatoporoids (facies A6-L6); grey, laminar fenestral limestone, (facies A7-L7); grey, bioturbated limestone (facies A8-L8). The time-equivalent off-buildup sediments include a large amount of transported material that originally came from the buildups. Sedimentological evidence suggests that facies A3-L3 developed between the storm wavebase and the fairweather wavebase, in a oligophotic environment. This facies contains lenses of facies A5-L5, with stromatolitic coatings and Renalcis-rich thrombolitic bushes. These lenses were developed in greatest abundance closest to the fairweather wavebase, and they became anastomosing. Facies A6-L6 was developed in an environment with slightly restricted water circulation; there is a steady transition between this facies and the fenestral limestone A7-L7, which were deposited in a moderately protected subtidal to intertidal area. Facies A8-L8 developed at subtidal depths in a quiet, lagoonal environment. The buildups started with the development of facies A3-L3, with microbial lenses and algal facies becoming progressively more abundant upwards. Above about 20m in each buildup, more protected facies are found in the buildup's central part. This atoll-like geometry suggests the development of restricted sedimentation in this central area, sheltered by bindstone or floatstone facies. The initial development of the lower part of a buildup during a transgression and subsequent highstand would have been followed by reefal growth along the edge of the buildup during the succeeding lowstand; an atoll crown would then have started to develop during the following transgressive stage. The presence of restricted facies can be seen as the consequence of the balance between sea level rise and reef growth. [original abstract]^1";
- 779 s[776] = "FERNANDEZ L.P., NOSE M., FERNANDEZ-MARTINEZ E., MENDEZ-BEDIA I., SCHRODER St., SOTO F. (2006).- Reefal and mud mound facies development in the Lower Devonian La Vid Group at the Colle outcrops (León province, Cantabrian Zone, NW Spain).- *Facies* 52, 2: 307-327.- **FC**;P 34, p. 77, ID=1318**Topic(s):** sedimentology; reefs; **Systematics:** **Stratigraphy:** Devonian L; **Geography:** Spain, Cantabrian Mts^In the locality of Colle (Cantabrian Zone, NW Spain), the upper part of the Valporquero Shale Formation (Emsian, La Vid Group) contains an interval of shales and marlstones (barren, greenish-grey shales and fossiliferous, greenish-grey or reddish shales/marlstones) with beds and packages of homogeneous and cross-bedded skeletal limestones. Metrescale mud mounds and coral biostromes occur encased in the fossiliferous reddish and greenish-grey shales/marlstones, respectively, with the coral biostromes overlying conspicuous skeletal limestone bodies. These rocks were deposited on a carbonate ramp, ranging from above storm wave base for the cross-bedded skeletal limestones to below the storm wave base for the remaining deposits, organic buildups included. The vertical stacking of these facies and the occurrence of the two types of buildups are

interpreted to reflect the interplay among several (possibly 4th and 5th) orders of relative sea-level variations, during a 3rd-order highstand. Coral biostromes occur in early 5th-order transgressive system tracts developed within late 4th-order highstand, and are interpreted to have thrived on a stable granular substrate (skeletal limestones) in non-turbid waters, being later aborted by the onset of muddy sedimentation. Biostrome features suggest that they developed under environmental conditions essentially different from those related to the sedimentation of their granular substrate. Mud mounds occur in 5th-order transgressive and early highstand system tracts tied to early 4th-order sea-level rise. Field relationships suggest that mud mounds grew coevally with muddy sedimentation, with high-frequency variations in carbonate vs. terrigenous mud sedimentation influencing their development.¹;

- 780 s[777] = "HERBIG H.-G., WEBER H.M. (1997).- Der mitteldevonische Riffzyklus im Bergischen Land - von der siliziklastischen Rampe zum Karbonatschelf.- Terra Nostra 1997, 3: 51-67. [excursion guide] - FC&P 34, p. 82, ID=1320Topic(s):reefs, reef cycle; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts¹";
- 781 s[778] = "COEN-AUBERT M., BOULVAIN F. (2006).- Frasnian.- Geologica Belgica 9: 19-25.- FC&P 34, p. 93, ID=1350Topic(s):stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes¹The name Frasnian, which comes from the locality of Frasnies near Couvin in Belgium, was introduced by Gosselet in 1879 and was formally retained for the lower stage of the Upper Devonian by the Subcommission on Devonian Stratigraphy in 1981. The modern definition of the Frasnian is based on conodonts and the historical background of the stage is developed in detail herein. Data about the lithostratigraphy, sedimentology, biostratigraphy, chronostratigraphy and absolute age of the Frasnian can also be found in this contribution.¹;
- 782 s[779] = "HALAMSKI A.T., ZAPALSKI M.K. (2006).- Les schistes a brachiopodes de Skaly - un niveau exceptionnel. Premiere partie: inventaire faunistique.- Bulletin mensuel de la Société linnéenne de Lyon 75, 3: 145-150.- FC&P 34, p. 96, ID=1357Topic(s):list of taxa; paleontology; Systematics: ; Stratigraphy: Devonian Eif; Geography: Poland, Holy Cross¹";
- 783 s[780] = "ANTOSHKINA A.I. (2003).- Ecology of Early Devonian reefs in the Western Urals, Russia.- Courier Forschungsinstitut Senckenberg 242: 111-123.- FC&P 32-2, p. 69, ID=1429Topic(s):reefs, ecology; reefs; Systematics: ; Stratigraphy: Devonian L; Geography: Russia, Urals¹";
- 784 s[781] = "POHLER S.M.L., BRUHL D., MESTERMANN B. (1999).- Struves Mud Mound am Weinberg - carbonate buildup-Facies im otomari-Intervall, Hillesheimer Mulde, Eifel.- Senckenbergiana lethaea 79, 1: 13-29. [in memoriam Dr. Wolfgang Struve].- FC&P 29-1, p. 66, ID=1511Topic(s):reefs, mud mounds; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts¹Middle Devonian carbonates of the Ahbach Formation are exposed in a quarry at Weinberg, in the western Hillesheimer Syncline. At this locality, the Hallert Member of the formation reaches maximum thickness. The basal carbonates containing Stromatactis, bryozoans, sponge spicules, and phylloid algae are interpreted as mud mound sediments. The mound appears to have developed above crinoidal detrital limestones with incipient biostromes (upper Bohnert Member), whose deposition was initially caused by exogenic factors, such as an elevated position, and hydrodynamic processes, such as storms, and contour currents. Detrital and reefal limestones, and dolomites with stromatoporoids and chaetetids, occur above the mound sediments, indicating shallowing. The younger inter-bedded bituminous limestones and dolomites with Amphipora/stromatoporoid biostromes of the succeeding Hallert-Lahr Member, were deposited in shallow quiet water,

- and suggest increasing restriction of circulation within the basin.^1";
- 785 s[782] = "CHLUPAC I., GALLE A., HLADIL J., KALVODA J. (2000).- Series and stage boundaries in the Devonian of the Czech Republic.- Courier Forschungsinstitut Senckenberg 225: 159-172.- FC&P 30-2, p. 9, ID=1592^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: Czech Republic^^1";
- 786 s[783] = "MORZADEC P., BRICE D., CYGAN C., FEIST R., MAJESTE-MENJOULAS C., PARIS F., RACHEBOEUF P.R. (2000).- The Devonian of France: a tentative tie with the GSSP of the Devonian stages.- Courier Forschungsinstitut Senckenberg 225: 115-129.- FC&P 30-2, p. 11, ID=1597^Topic(s): stratigraphy, correlation; stratigraphy, correlation; Systematics: ; Stratigraphy: Devonian; Geography: France^^1";
- 787 s[784] = "MISTIAEN B., BRICE D., ROHART J.-C. (2002).- Trente années de recherche sur le Dévonien de Ferques (Boulonnais): Données acquises en litho- et biostratigraphie.- Annales de la Société géologique du Nord 9 (2eme serie), 2: 5-12.- FC&P 31-1, p. 54, ID=1616^Topic(s): geology, fossils, research history; Boulonnais, stratigraphy, geology; Systematics: ; Stratigraphy: Devonian; Geography: France, Boulonnais^The Marquise sheet in 1/50000 was published for the first time in 1971, just thirty years ago. During these three decades, several opportunities appeared: excavations for the foundation of a water-tower on Ferques area and some neighbouring houses; a new trench of railroad connecting Caffiers with Marbres du Boulonnais quarries, the extension of the Banc Noir quarry (also named Stinkal quarry… However, most of the old outcrops and most of the new ones which appeared between 1971 and 2001, are today in a very bad state of preservation, or of particularly difficult access or have disappeared. If the work of the last three decades was to be done again only with today's outcrops, the results would very probably not be the same. ^1";
- 788 s[785] = "BOULVAIN F. (2001).- Facies architecture and diagenesis of Belgian Late Frasnian carbonate mounds.- Sedimentary Geology 145: 269-294.- FC&P 31-1, p. 68, ID=1642^Topic(s): reefs, facies, diagenesis; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^Facies architecture and diagenesis of Belgian Late Frasnian carbonate mounds.^1";
- 789 s[786] = "GLAZEK J., KARWOWSKI L., RACKI G., WRZOLEK T. (1981).- The early Devonian continental/marine succession at Checiny in the Holy Cross Mts, and its paleogeographic and tectonic significance.- Acta Geologica Polonica 31, 3-4: 233-250.- FC&P 11-1, p. 31, ID=1755^Topic(s): geology, fossils; geology fossils; Systematics: ; Stratigraphy: Devonian L; Geography: Poland, Holy Cross^^1";
- 790 s[787] = "SZULCZEWSKI M., RACKI G. (1981).- Early Frasnian bioherms in the Holy Cross Mts.- Acta Geologica Polonica 31, 3-4: 147-162.- FC&P 11-2, p. 41, ID=1871^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Poland, Holy Cross^The Frasnian bioherms exposed along the southern limb of the Galezice syncline in the Holy Cross Mts., Central Poland, occur in the highest part of the stromatoporoid coral sequence, and their facies equivalent are chiefly the coral biostromes of the Upper Sitkowka Beds. In spite of small bathymetric differences between bioherms and biostromes, they contrast in ecology of the contained invertebrates, especially in brachiopod assemblages. The bioherms have developed in the belt on a gentle southern slope of the early Frasnian shallow-water carbonate bank of the Kielce region in the central part of the Holy Cross Mts. [original abstract]^1";
- 791 s[788] = "FRIAKOVA O., ZUKALOVA V. (1986).- Biostratigraphy of the Devonian carbonates in the region south of Ostrava (Moravia).- Acta Musei Moravicae 71: 23-53.- FC&P 16-1, p. 76, ID=2017^Topic(s): biostratigraphy; stratigraphy, stroms;

- Systematics: ; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^[the stromatoporoid faunas of the Frasnian limestones are listed and discussed. They are stratigraphically placed by means of conodonts. The new species Stachyodes (Stachyodes) densilaminata is described from the lower Frasnian]^1";
- 792 s[789] = "HLADIL J., KESSLEROVA Z., FRIAKOVA O. (1986).- The Kellwasser event in Moravia.- Lecture Notes in Earth Sciences 8 [Walliser O. H. et al (eds): Global Bioevents: a critical Approach]: 213-218; Springer-Verlag, Berlin.- FC&P 16-1, p. 76, ID=2018^Topic(s): reefs, Kellwasser event; reefs extinctions; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: Czech Republic, Moravia^[discussion of the extinction of late Devonian reef communities in relation to the Frasnian / Famennian extinction event]^1";
- 793 s[790] = "MAY A. (1988).- Fossilfuehrung und Palaeokologie des lagunaeren Massenkalkes (Devon) im Sauerland (Rheinisches Schiefergebirge).- Palaeontologische Zeitschrift 62, 3-4: 175-192.- FC&P 17-2, p. 38, ID=2200^Topic(s): lagoon; fossils; Systematics: ; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^The Massenkalk north of Brilon (East-Sauerland) and north of Balve (West-Sauerland) is of lagoonal character and is Upper Givetian (Middle Devonian) in age. Stromatoporoids, which can be subdivided into different growth forms (spherical to tabular, encrusting, thin lamellar, branching), are the main reef building organisms. The species of the branching stromatoporoid Amphipora, which are hard to distinguish, dominate. The two thin laminar species Stromatopora cygnea Stearn 1983 and Stachyodes (Keega) joneirayi Stearn 1975 are described for the first time from western Europe. Tabulate corals represent about 20% of the reef-builders and permit important inferences about the restriction of environment. Rugose corals and calcareous algae are rare. Reef dwelling organisms are less important; among these brachiopods, molluscs, foraminifera, calcispheres, and ostracods are, however, widespread. Several associations of reef-builders that depend on different water depths can be distinguished. Their composition varies according to the restriction of environment. With increasing water depth water energy increased on the carbonate platform. The analysis on the stratigraphical distribution of the species of the reef-builder fauna allows no more but vague stratigraphical classifications.^1";
- 794 s[791] = "HLADIL J. (1988).- Structure and Microfacies of Middle and Upper Devonian Carbonate Buildups in Moravia, Czechoslovakia.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillan N. J. et al. (eds): Devonian of the world], vol. 2: 607-618.- FC&P 18-1, p. 47, ID=2289^Topic(s): reefs structures, microfacies; reefs; Systematics: ; Stratigraphy: Devonian M U; Geography: Czech Republic, Moravia^The most bulk (98%) of the carbonate buildups are developed on Proterozoic crystalline basement blocks. Lagoons with mud banks and patch reefs range in width from several to several tens of kilometres but the reef margin is very narrow, only some tens or few hundreds of metres wide. Thickness of the buildups is generally between 200 and 1000 m. The mean subsidence rates, calculated according to buildup thickness and duration of the buildup accumulation, varied from 20.0 to 86.7 m Myr⁻¹. The platform margin has a general retreating trend up to the upper Frasnian *Palmatolepis gigas* Zone, when an advancing trend started. Coral-stromatoporoid benthic communities are present from Eifelian to the lower Famennian *Palmatolepis crepida* Zone. Four megacycles occur which display a general succession of dark wackestones, *Amphipora*-bearing rocks and boundstones. These megacycles culminate in (1) the Eifelian-Givetian boundary interval, (2) the upper part of the middle-Givetian, (3) the lower Frasnian, and (4) the uppermost Frasnian. These culminations are characterized by maximum rates of buildup accumulation and also the synchronous deposition of black anoxic sediments (generally in deeper

environments. - the otomari, Phariceras, Manticoceras and Kellwasser events). The volumes of limestones corresponding to the standard microfacies (in the sense of Fluegel 1978) were calculated with following results: Standard microfacies No. 9 (SMF 9) - biomicritic limestones with bioclasts, 39,4 %, SMF 7 - biolitic limestones, 23.7%, SMF 8 - biomicritic limestone with biomorphs, 7.4%, etc. The abundant micrite formed in a variety of ways, partly mechanical, partly algal and other biochemical origins. Cementation at various stages completely fills porosity except for dolomitized and fractured horizons. The 129 microfacies which were distinguished during the evaluation of the material are reclassified according to the standard microfacies system (in the Fluegel's sense) as well as according to Devonian microfacies associations and Devonian development stages systems (in the sense of the author, Hladil 1986). The quantitatively restricted dependence is shown in Table 1.¹;

795 s[792] = "HUBERT B.L.M., ZAPALSKI M.K., NICOLLIN J.-P., MISTIAEN B., BRICE D. (2007).- Selected benthic faunas from the Devonian of the Ardennes: an estimation of palaeobiodiversity.- Acta Geologica Polonica 57, 2: 187-204.<http://www.geo.uw.edu.pl/agp/table/abstracts/57-2.htm>.- FC;P 35, p. 107, ID=2438Topic(s): biodiversity; biodiversity;

Systematics: ; Stratigraphy: Devonian; Geography: ArdennesA survey of the principal benthic faunas from the Devonian of the Ardennes is presented. The alpha-diversity is very high (707 species, including 138 species of stromatoporoids, 113 species of tabulates, hydroids and chaetetids, and 456 species of brachiopods). Analysis of their distribution through time indicates two brachiopod diversity peaks (Emsian/Eifelian and Frasnian), a single stromatoporoid diversity peak (Givetian), and no clear peak of tabulate corals (with the highest diversification during the Eifelian-Frasnian). The highest diversity of bioconstructors in the Givetian correlates with a decrease in brachiopod diversity. Changes in the vertical distribution of the faunas are correlated with the facies development: the development of carbonates correlates with the abundance of stromatoporoids and tabulates, while brachiopods were most abundant before and after the peak of carbonate development. Bioconstructors are absent (or nearly absent) in siliciclastic facies.¹;

796 s[793] = "GALLE A., FRIAKOVA O., HLADIL J., KALVODA J., KREJCI Z., ZUKALOVA V. (1988).- Biostratigraphy of Middle and Upper Devonian Carbonates of Moravia, Czechoslovakia.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillian N. J., Embry A. F. & Glass D. J. (eds): Devonian of the World], III: 633-645.- FC;P 18-2, p. 29, ID=2468Topic(s): carbonates; carbonates stratigraphy;

Systematics: ; Stratigraphy: Devonian Ems Eif; Geography: Czech Republic, MoraviaThis paper discusses contemporaneous knowledge of conodont, foraminiferal, stromatoporoid, tabulate and rugosan faunas through the Devonian carbonate platform of Moravia. In basal parts of the Moravian Devonian, upper Emsian to lowermost Eifelian is documented by conodonts. In the Jeseniky Mts conodonts are rare in the Middle Devonian and the Middle & Upper Devonian boundary is not yet documented by conodonts. The most important change in the conodont assemblage lies in the upper part of the Pa. triangularis Zone in Moravia; for detailed zonation of Famennian, the system based on phylogeny of Palmatolepis is accepted. Five foraminiferal zones correlated with the standard conodont zonation are distinguished in the Upper Devonian. Several stromatoporoid assemblages were distinguished in the interval from Eifelian to Frasnian; stromatoporoids pass into the Famennian. Eight tabulate coral biozones are known at present, some of which are capable of more detailed division. Biostratigraphically significant tabulates range from Eifelian to the Famennian Pa. crepida Zone. Seven rugose coral biozones are described, ranging from Eifelian to the upper Frasnian Pa. gigas or Pa. triangularis Zones with a local fauna known from the

- Famennian Pa. crepida Zone. Stromatoporoid and coral faunas are correlated with standard conodont zonation of the Upper Devonian. Stromatoporoid and coral shallow water faunas locally pass from upper Frasnian to Famennian without pronounced systematic changes. However, both diversity and abundance of coral and stromatoporoid faunas decrease noticeably across the Frasnian / Famennian boundary beds.^1";
- 797 s[794] = "BOULVAIN F., COEN-AUBERT M. (1989).- Modele sedimentologique des monticules micritiques de la partie superieure du Frasnien du Massif de Phllippeville et correlations sequentielles avec le bord nord du Synclinorium de Dinant (Belgique).- Comptes Rendus Acad. Sci. Paris 309, II: 81-87. [in French, with English summary].- FC&P 18-2, p. 41, ID=2494^Topic(s): mud mounds; mud mounds; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^In the classical area of the Dinant Synclinorium, sequential correlations, confirmed by fossils (massive rugose corals and conodonts), are established between mud mounds and stratified deposits situated closer to the continent.^1";
- 798 s[795] = "MISTIAEN B., PONCET J. (1989).- Blacourt (Givetian), Boulonnais, northern France.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 413-423.- FC&P 19-1.1, p. 14, ID=2559^Topic(s): geology; Systematics: ; Stratigraphy: Devonian Giv; Geography: France, Boulonnais^^1";
- 799 s[796] = "WELLER H. (1989).- Sedimentologie von Mud Mounds und ihr Nachweis im Harz. [sedimentology of mud mounds and proof of their presence in Harz; in German] .- Wiss. Z. Ernst-Moritz-Arndt-Univ. Greifswald, Math.-nat.wiss. Reihe 38, 1-2: 70-78.- FC&P 19-1.1, p. 60, ID=2683^Topic(s): reefs, mud mounds; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Germany, Harz^Mud mounds sind huegelfoermige Karbonatschlammakkumulationen ohne Boundstonegeruest, die im offenmarinen Raum unterhalb der Wellenbasis unter wesentlicher Beteiligung von Mikrobenkolonien aufgebaut werden. Ihre Merkmale sind Mud- und wackestones, Stromatactis, Zebrakalke, Rutschungsgefuege, eine spaerliche Makrofauna und in hoeheren Lagen Bindstone-lagen. * Fuer den Harz und fuer die Rheinischen Trogriffe wurde erstmals ein Mud Mound nachgewiesen, das in der Ibergfazies des Kappenstadiums (Frasne) im Elbingeroeder Riffkomplex auftritt. Alle von analogen Bildungen abgeleiteten Merkmale sind im Ruebelaender Mud Mound ausgebildet. Mikrobenkolonien (zumeist Cyanobacterien) sind die wesentlichen Baumeister der Matrix und eines bislang unbekanntem Stromatolithentypus, der mit der Morphotypbezeichnung Ursoscopulus versehen wird.^1";
- 800 s[797] = "WELLER H. (1989).- Das Ruebelaender Mud Mound im Riffkomplex von Elbingerode (Harz) und seine sedimentologischen Eigenschaften. [Ruebeland mud mound in Elbingerode reef complex of Harz and its sedimentological characteristics; in German, with English summary] .- Hercynia NF 26, 4: 321-337.- FC&P 19-1.1, p. 60, ID=2684^Topic(s): mud mounds; reefs, sedimentology; Systematics: ; Stratigraphy: Devonian Fra; Geography: Germany, Harz^In talus limestones of the cap-stage (Frasnian) within the reef complex of Elbingerode/Harz Mts. it succeeded to prove a mud mound with characteristic features. * Mud mounds are hill-shaped lime mud buildups without framework accumulated in open-marine quite water. Their identity is proven by a matrix of mud- and wackestones, stromatactis, zebra limestones, and stromatolitic bindstones in the upper parts. Microbial communities, presumably cyanobacteria are considered to be the essential creators of the matrix, of the zebra limestones and of novel types of stromatolites (Ursoscopulus). They accumulated hill-shaped during a rhythmical process of formation

together with finest remains of plancton and undergo permanent superficial sedimentary slide actions decomposing the primary structures.¹";

801 s[798] = "WILDER H. (1989).- New results on the termination of the Upper Devonian reef growth along the northern Mid-European Variscides.- Fortschr. Geol. Rheinld. u. Westf. 35: 57-74. [in German, with English and French summaries].- FC&P 19-1.1, p. 61, ID=2685Topic(s): reefs, extinctions; reefs; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: Europe VariscanThe worldwide Devonian reef growth was terminated in large areas during the triangularis and gigas zone (Upper Devonian I / δ). To explain this phenomenon six profiles with the transition from reef to non-reef facies ranging from Namur (Belgium) to Wuppertal (Germany) were investigated microscopically and geochemically. It turned out that the periodically increased production and sedimentation of clayey and mainly organic material directly controlled the Upper Devonian reef growth and finally caused its termination. Increased plate tectonical shifting of the land areas during the Upper Devonian finally triggered off the following chain of events: increasing rates of periodical rainfalls - intensified spreading of land plants - increased chemical weathering - periodically increased transport of nutrients and clastic material into the reef habitat - increased production and sedimentation of phytoplankton - termination of reefgrowth - finally euxinic sedimentation (Lower Kellwasser limestone, Upper Devonian I δ).¹";

802 s[799] = "BRICE D., MILHAU B., MISTIAEN B., ROHART J.-C., VIDIER J.-P. (1988).- Le Givetien superieur (Devonien) a Ferques (Boulonnais-France), observations nouvelles.- Annales de la Societe geologique du Nord 108: 113-123.- FC&P 19-1.1, p. 65, ID=2698Topic(s): geology; fossils, stroms; Systematics: ; Stratigraphy: Devonian Giv; Geography: France, BoulonnaisStromatoporoids of 27 different species are identified from 3 levels in new exposures in the Banc Noir quarry; the morphology of stromatoporoids cannot be interpreted directly in an ecologic context; some species are always massive; others, tabular.¹";

803 s[800] = "FUCHS A. (1990).- Charakter und Ende der devonischen Riffentwicklung im Elbingeroder Komplex (Harz).- Facies 23: 97-108.- FC&P 20-1.1, p. 66, ID=2847Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Germany, HarzThe Elbingerode Reef developed on a volcanic rise within the Rhenish Trough of the Variscan Geosyncline during the upper Middle Devonian (Givetian) and early part of the Late Devonian (Frasnian). Reef development can be recognized in the Elbingerode Complex from the varcus Zone up to the gigas Zone of conodont chronology. Volcanic activity came to an end in the Elbingerode Complex nearly isochronously within the Middle and Upper varcus Zone (iron-ore bed). Reef growth started in the Upper varcus Zone (Middle Devonian). The lithology of the reef limestones permits a general distinction between peripheral detrital reef limestones (fore-reef) and lagoonal limestones (back-reef). Unbedded reef debris characteristic of the outer reef flank is represented mainly by rudstones and packstones. The biogenes are clasts of corals and stromatoporoids. This facies type contains conodonts. In the lagoon facies mudstones and grainstones with peloids are abundant. Stomatactis and birdseye structures are characteristic. The bedded limestones of this region mainly contain amphiporoids, gastropods, brachiopods, calcispheres and foraminifers, and only subordinate stromatoporoids and corals. The back-reef limestones generally lack conodonts. A division of the reef complex into back-reef and fore-reef areas is only possible for the Middle Devonian (pre-rotundiloba interval). The lagoon was filled during the Late Devonian (Lower asymmetricus Zones), so that younger reef limestones (asymmetricus to gigas Zones) lack a back-reef sedimentation (cape stage). The central Elbingerode Complex displays the

palaeographical picture of an atoll with a leeward lagoon and an outer circle of calcareous reef debris. The Neuwerk and Buchenberg anticlines and other anticlines were originally volcanic rises extending in front of the atoll in a bathymetric deeper position and with an independent sedimentation. The transgressive character of reef development (formation of a so-called reef onion) is deduced from the dip of the bedding of the reef limestones. The sequence reef limestones - brachiopod limestones (post-reef limestones) - pelagic post-reef limestones also provides good evidence that the end of the reef development was caused by an increasing subsidence. The reef growth in the Elbingerode Complex terminated in different places at different times. The last sign of reef building is known from the Upper gigas Zone. The end of the Devonian reefs and the beginning of the flysch stage are genetically and temporarily related, but took place regionally separated from each other.^^1";

- 804 s[801] = "COEN-AUBERT M., MAMET B., PREAT A., TOURNEUR F. (1991).- Sedimentologie, paleoecologie et paleontologie des calcaires crinoïdiques au voisinage de la limite Couvinien-Givetien a wellin (bord sud du synclinorium de Dinant, Belgique).- Memoires pour servir a I'Explication des Cartes Geologiques et Minieres de la Belgique 31: 1-61.- FC&P 20-2, p. 31, ID=2890^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Devonian Eif / Giv; Geography: Ardennes^The sedimentology of the Eifelian-Givetian boundary beds in the wellin area indicates a transition from a siliciclastic-carbonate ramp to a gently sloping carbonate platform lacking a true reefal barrier. Prograding decametric sedimentary units form a littoral accretion megasequence. Corallian megafauna and algal microflora are highly diverse and abundant. Several communities are recognized in the ramp but they cannot be used for precise chronostratigraphic correlations. Comparison with other regions of the Dinant synclinorium shows that the basin was already partitioned into blocks in Late Eifelian time. In Early Givetian several blocks of plurikilometric extension are identified. In this context, recognition of a new formation, provisionally called "Formation X"; between the Jemelle and Hanonet Formations, is significant. This local unit, some 120 meters thick, is composed of crinoidal and reefal limestones and indicates the existence of a sharply subsiding block in the wellin area.^^1";
- 805 s[802] = "GISCHLER E., WELLER H., WEYER D. (1991).- Devonian reefs of the Harz Mountains, Germany.- Excursion A4, VI International Symposium on Fossil Cnidaria and Porifera, Muenster, 104 pp.- FC&P 20-2, p. 49, ID=2910^Topic(s): reefs, excursion guide; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Germany, Harz^^1";
- 806 s[803] = "MAY A. (1991).- Die Fossilfuehrung des westsauerlaendischen Givetiums (Devon; Rheinisches Schiefergebirge) in der Sammlung des Staedtischen Museums Menden.- Geol. Palaeont. westfalen 17: 7-42. [in German, with English summary].- FC&P 20-2, p. 52, ID=2927^Topic(s): collections of fossils; paleontology; Systematics: ; Stratigraphy: Devonian Giv; Geography: Germany, Rhenish Mts^The Municipal Museum Menden / Sauerland possesses extensive fossil collections from the northwestern Sauerland and its neighbourhood out of the Givetian strata Oberhonsel-Formation, Massenkalk, and Flinz. This collection was founded in 1912-1939 in cooperation with K. Torley. Brachiopods and reef builders (corals and stromatoporoids) are the most important fossil groups. The re-examination of the collection gave some new (bio-)stratigraphical information. The upper part of the Oberhonsel-Formation is as old as the Dreimuehlen-Formation in the Eifel. Following species are described for the first time from the Eastern Rhenish Schiefergebirge: the tabulate coral Aulopora lata Lecompte 1939, the rugose coral Siphonophrentis cantabrica Birenheide 1978, and the brachiopods

- Spinatrypa orthodina Copper 1967, Spinatrypa girzenensis Copper 1967, and Desquamatia (Variatrypa) ajugata Copper 1965. The anarcestid cephalopod Sobolewia amplorotundata (Torley 1908) is figured for the first time. Other Givetian fossils are listed as well as figured. [original summary] Briefly described and figured is the species Battersbyia aff. conglomerata (Schlueter 1881), and only figured is Endophyllum bowerbanki Milne-Edwards & Haime 1851.¹";
- 807 s[804] = "WELLER H. (1991).- Facies and Development of the Devonian (Givetian & Frasnian) Elbingerode Reef Complex in the Harz Area (Germany).- Facies 25: 1-50.- FC&P 20-2, p. 68, ID=2970Topic(s): reef complexes, facies, geohistory; reef complexes; Systematics: ; Stratigraphy: Devonian Giv Fra; Geography: Germany, HarzThe Givetian to Frasnian Elbingerode Complex, situated in the Harz area (Germany), corresponds to an atoll-like reef formed by corals and stromatoporoids on a group of submarine volcanoes. Circularly arranged stratovolcanoes enclosed a central lagoon containing up to 600 m of Givetian backreef limestones. Three of the four volcanoes were surrounded by fringing reefs; one of them remained permanently in a deeper water position. Limestone sedimentation and reef growth were controlled by differential syndimentary subsidence of blocks and by eustatic sea-level fluctuations. [first fragment of extensive summary]¹";
- 808 s[805] = "MAY A., AVLAR H. (1995).- Evolution of Rhenish faunal communities during the Late Emsian and Early Eifelian: three reviews on sedimentation, brachiopods and bioevents.- Geolines 3: 38-49.- FC&P 25-1, p. 30, ID=3005Topic(s): bioevents; biocoenoses; Systematics: ; Stratigraphy: Devonian ; Geography: Germany, Rhenish MtsData concerning the influence of the jugleri Event on reef building organisms in the western Sauerland (Eastern Rhenish Massif, Germany) includes: Cultrijugatus Beds are Upper Emsian to Lower Eifelian and consists mainly of sandy silt- and mudstones with shallow marine fauna. It is proved by brachiopods, that the upper part of the Cultrijugatus Beds is of Lower Eifelian age. With no break, fossiliferous, marly beds of the Hobracker Formation (without Paraspirifer) follows above. The upper part of the Cultrijugatus Beds contains very fossiliferous coral limestones. The majority of coral and brachiopod species continued to overlying beds with no visible mass extinction by the jugleri/Chotec Event. Probably, this event was not very important for corals and stromatoporoids. [last fragment of extensive summary]¹";
- 809 s[806] = "FERNANDEZ L.P., FERNANDEZ-MARTINEZ E., MENDEZ-BEDIA I., SOTO F. (1996).- Devonian Reef Facies from the Cantabrian Zone (NW Spain).- Department of Geology, University of Oviedo: 67 pp., 29 figs.- FC&P 25-2, p. 67, ID=3169Topic(s): excursion guide; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Spain, Cantabrian MtsThe aim of this guide is to illustrate the Devonian reef development in the Cantabrian Mountains. This internal report is a collection of data and results which have been published by the authors in the guide book "Field trip A", on the occasion of the VII International Symposium on Fossil Cnidaria and Porifera held in the Cantabrian Mountains in September 1995.¹";
- 810 s[807] = "NARKIEWICZ M., RACKI G., WRZOLEK T. (1991).- Lithostratigraphy of the Devonian stromatoporoid-coral series in the Holy Cross Mountains.- Kwartalnik Geologiczny [Geological Quarterly] 34, 3: 433-456. [in Polish].- FC&P 21-1.1, p. 20, ID=3209Topic(s): stratigraphy, strom-coral limestones; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: Poland, Holy CrossKowala Formation is formally introduced for Givetian to Frasnian biogenic limestones of the western part of the Holy Cross Mts (Gory Swietokrzyskie), Poland.¹";
- 811 s[808] = "BOULVAIN F., COEN-AUBERT M. (1992).- Sedimentologie, diagenese et stratigraphie des biohermes de marbre rouge de la partie

- superieure du Frasnien belge.- Bulletin de la Societe belge de Geologie 100, 1/2: 3-55.- FC&P 21-2, p. 7, ID=3289Topic(s):reefs, sedimentology; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^A global view of the geology of "F2j" mud mounds from the upper part of the Belgian Frasnian is briefly presented. The paper deals successively with the stratigraphy and the sedimentology of the mounds and the paleogeographic evolution of the Frasnian ramp in relation with eustacy. Diagenetic evolution of buildups and enclosing rocks is also considered. A selection of sections from mound, peri-mound and off-mound environments is described in detail.^1";
- 812 s[809] = "BOULVAIN F., COEN-AUBERT M. (1992).- La carrière de marbre rouge de Beauchateau: aperçu paléontologique, stratigraphique et sédimentologique.- Annales de la Société géologique de Belgique 115, 1: 19-22.- FC&P 21-2, p. 7, ID=3290Topic(s): reefs, paleontology; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^^1";
- 813 s[810] = "HLADIL J., KREJCI Z., KALVODA J., GINTER M., GALLE A., BEROUSEK P. (1991).- Carbonate ramp environment of Kellwasser time-interval (Lesní Lom, Moravia, Czechoslovakia).- Bulletin de la Société belge de Géologie 100, 1-2: 57-119.- FC&P 21-2, p. 57, ID=3356Topic(s): carbonate platforms; carbonate ramp; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: Czech Republic, Moravia^The Frasnian-Famennian limestone sequence of Lesní Lom displays a series of significant gaps, especially at a stratigraphical level encompassing the final Late Pa. rhenana Zone and the Early Pa. triangularis Zone. Mixed nearshore and nektonic / pelagic faunas, as well as mixed allochthems derived from a large spectrum of facies belts, point to an inclined outer carbonate ramp depositional environment. The maximum water depth probably exceeded several tens of meters. However, extreme and short-term sea-level falls around the Frasnian-Famennian (F-F) transition might have stripped a substantial part of the sedimentary cover on this ramp. The presence of an increasing amount of unstable siliciclastic grains, followed by the influx of lateritic and ferruginized particles are typical for the Lesní Lom F-F sequence. This can be correlated with an oolitic ironstone level, which has been described from an 'inner ramp' sequence at 'V Habesi'. The latter iron-horizon, resembles the Famennian ironstones of Belgium, but it has also good analogues in the F-F sequences of the Russian Platform. Rebuilt corals and foraminifers seem to indicate different biotic and environmental controls, separately on the outer and/or inner ramp. Although more than twenty groups of taxa are discussed, only four of them - corals, fish remains, foraminifers and conodonts - have been described in detail. [original summary] The new coral species (Tabulata) Scoliopora tetralobata Hladil et Berousek sp.n., S. relictata Hladil et Berousek sp.n., Coenites otavai Hladil et Berousek sp.n., Alveolites tenuissimus junior Hladil et Berousek subsp. n., and (Rugosa) Phillipsastrea zerda Galle sp.n. have been established.^1";
- 814 s[811] = "SANDBERG C.A., ZIEGLER W., DREESEN R., BUTLER J.L. (1992).- Conodont Biochronology, Biofacies, Taxonomy and Event Stratigraphy around Middle Frasnian Lion Mud-mound (F2h), Frasnes, Belgium.- Courier Forschungsinstitut Senckenberg 150; 87 pp.- FC&P 22-1, p. 53, ID=3429Topic(s): biostratigraphy; conodont stratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes, Frasnian^In diesem Band wird auf der Grundlage der Conodontenbiofaziesanalyse ein Faziesmodell eines oberdevonischen Mudmound vorgestellt. Die Conodontenbiostratigraphie ermöglicht eine hohe Auflösung der zeitlichen Entwicklung eustatischer und lokaler Meeresspiegel-schwankungen sowie globaler Bio-Events. Darüber hinaus werden auch taxonomische Feinheiten diskutiert. [reviewed in Natur und Museum 123, 4 (1993)]^1";
- 815 s[812] = "RACKI G. (1993).- Evolution of the bank to reef complex in

the Devonian of the Holy Cross Mountains.- Acta Palaeontologica Polonica 37, 2-4: 87-182.- FC&P 22-2, p. 28, ID=3486^Topic(s): reef complexes, stratigraphy; reef complexes; Systematics: ; Stratigraphy: Devonian Giv Fra; Geography: Poland, Holy Cross^Givetian and Frasnian stromatoporoid-coral limestone of the Kowala Formation in the southern Holy Cross Mts is subdivided stratigraphically, and correlated with strata elsewhere on the basis of identified sea-level cyclicity, with support from conodonts and other selected benthic fossils. After the Eifelian hypersaline sabkha phase, an extensive two-step regional colonization of the Kielce Region carbonate platform took place during the Eifelian/Givetian passage interval and the Middle Givetian. At least four deepening pulses resulted in intermittent drowning of the vast carbonate platform and sequential replacement of the undifferentiated Stringocephalus biostromal bank by the Sitkówka bank complex and, subsequently, by the Dyminy reef complex. The reef developed in the central Dyminy belt as result of the early Frasnian accelerated sea-level rise after some period of biotic stagnation near the Givetian-Frasnian boundary. Final demise of the reef resulted from combined eustatic and tectonic movements during the late Frasnian major crisis interval. [original abstract]^1";

816 s[813] = "FLAJS G., HUSSNER H. (1996).- Lower Devonian Coral / Stromatoporoid Reefs in the Koneprusy Area (Czech Republic) - A Preliminary Report.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 45, ID=3616^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian L; Geography: Czech Republic, Barrandian^The middle Paleozoic reef community, which is characterized by stromatoporoids, tabulate and rugose corals, goes through a bottleneck in the Lower Devonian. The only European example of this reef community is found in the Koneprusy area. Quantitative analysis of thin sections shows more relationships to younger and older reefs, than to coeval mud mounds. The zonation of the organisms thus obtained, fits very well into a fore reef - reef - lagoon scheme.^1";

817 s[814] = "MALMSHEIMER K.W., FLAJS G., KOCH-FRUCHTL U. (1996).- Middle Devonian Initial Reef-Facies from the Rhenish Schiefergebirge (Sauerland and Eifel), Western Germany.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 46, ID=3619^Topic(s): reefs, reef growth; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^Initial stages of Givetian reefs in the Rhenish Schiefergebirge are characterized by short-term primary and/or secondary ecological successions. Complete sequences from the start of the substrate colonization to the end of the (first) domination stage do not exceed 75 cm. The guild composition of colonization, diversification and domination stages (sensu Miller 1991) depends on the paleogeographic situation, the water energy and in particular on the terrigenous input. High clastic influx led to numerous repetitions of the colonization stage without the development of diversification and domination stages. Good environmental conditions allowed the development of primary and/or secondary successions from the colonization stages to the diversification and domination stages. In such reef sequences the limestones, up to some 100 m thick, consist of repetitions of the diversification and/or domination stages.^1";

818 s[815] = "WELLER H. (1996).- Controls on the Origin and Composition of a Devonian Mud Mound (Frasnian of the Harz Mountains) with Special Respect to the Construction and Formation of Zebra-Limestones.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional

- Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.-
 FC&P 26-1, p. 47, ID=3621Topic(s): reefs, ecology,
 zebra limestones; reefs; Systematics: ; Stratigraphy:
 Devonian Fra; Geography: Germany, Harz^Mud mounds are
 special cases of local hill-shaped marine accumulations of
 stromatactis-bearing carbonate mud. In contrast to reefs, a rigid
 framework of bioconstructors is absent. The investigated Upper Devonian
 Ruebeland Mud Mound in the Harz Mountains is completely constructed by
 black and white micrites with stromatactis. Intercalated are
 stromatolites and zebra limestones. The carbonate mud buildup was
 essentially accumulated and early cemented by microbial activities.
 Within the sediments of the whole buildup a distinct rhythmicity
 between spreading of microbial mats respectively the formation of white
 mudstones and real sedimentation of microfossiliferous wackestones is
 indicated. Thrombolitic mudstones, spar layers and stromatolites are of
 microbial, mostly cyanobacterial, genesis. Main controlling factors on
 Ruebeland mud mound growth are endogenic block movements and the
 rhythmical exogenic efficiency of microbial colonies. Hexactinellid
 sponges are the only macrofossils. Their issues seem to play a second
 order role in formation of carbonate mud. Most important for micrite
 formation of the white mudstones are micritized and lithified,
 laterally extended cyanobacterian colonies (cf. Epiphyton sp.)
 representing about 40-50% of the whole mound matrix.^1";
- 819 s[816] = "FERNANDEZ L.P., FERNANDEZ-MARTINEZ E., GARCIA-RAMOS J.C.,
 MENDEZ-BEDIA I., SOTO F., (1997).- A sequential approach to the study
 of reefal facies in the Candas and Portilla Formations (Middle
 Devonian) of the Cantabrian Zone (NW Spain).- Boletín de la Real
 Sociedad Española de Historia Natural, Sección Geológica 92, 1/4:
 023-033.- FC&P 26-2, p. 21, ID=3699Topic(s):
 sequential stratigraphy; reefs; Systematics: ;
 Stratigraphy: Devonian M; Geography: Spain, Cantabrian
 Mts^The laterally equivalent Portilla and Candas Formations
 (Givetian-earliest Frasnian), a dominantly carbonate succession with
 reef-bearing intervals, was deposited in a carbonate ramp setting,
 zoned into a backreef lagoon, a reef tract and a calcarenite forereef
 belt distally grading to outer shelf marls and terrigenous mudstones.
 Sequential facies analysis of the reef-bearing intervals produced a
 model of ramp evolution. The succession is arranged in sequences up to
 several tens of metres thick. Each sequence has a sharp to rapidly
 transitional base and splits into a lower transgressive subsequence
 (commonly very thin or absent) and an upper regressive one. Reefs, when
 present, cap the regressive subsequence. [first fragment of extensive
 summary]^1";
- 820 s[817] = "HLADIKOVA J., HLADIL J., ZUSKOVA J. (1997).- Discrimination
 between facies and global controls in isotope composition of
 carbonates: carbon and oxygen isotopes at the Devonian reef margin in
 Moravia (HV-105 Krtiny borehole).- Journal Czech Geol. Soc. 42, 1-2:
 1-16.- FC&P 27-1, p. 117, ID=3877Topic(s): stable
 isotopes; stable isotopes; Systematics: ; Stratigraphy:
 Devonian; Geography: Czech Republic, Moravia^Relations among
 the isotope ratios, chemical composition, sedimentological features,
 eustatic fluctuations and diagenetical history have been documented
 from the reef / basin transition in the Moravian Karst (Krtiny
 HV-105 borehole). The δ13C and δ18O values of the Late
 Devonian limestones are within the ranges for the Late Devonian marine
 sedimentary environment. Nevertheless, the originally diverse isotopic
 compositions of the fossils and other rock components were changed in
 closed marine pore-water / rock systems, under conditions of
 rapidly decreased permeability. In the studied sequence δ13C
 values of 2 to 2,5‰ are characteristic for bioherms, parts of the
 fore-reef to off-reef slope, and offshore lagoons. The δ13C values
 close to 0 are characteristic for shallow-back-reef. The low δ13C
 values of reef margin developed during the occasional emergence of this

- facies. A significant anomaly in $\delta^{13}\text{C}$ values (up to +5.5‰) has been documented at the transition between the proximal and distal foreereef in the Pa. transitans Zone of the Early Frasnian, just before the maximum sea-level rise. This unusual positive excursion of the $\delta^{13}\text{C}$ values does not correspond to the global-event anomalies. The existence of this anomaly on the slope of the Moravian Karst is tentatively explained by a local IIIrd-category upwelling, a result of the diversion of the deeper contour and shallower wind-driven currents away from the shore. This anomaly corroborates the hypothesis of a strong facies control of the $\delta^{13}\text{C}$ content in carbonates.¹¹;
- 821 s[818] = "MAY A. (1997).- Sind die devonischen Riffe des Sauerlandes heutig Korallenriffe vergleichbar? .- Dortmunder Beitrage Landeskunde., Naturwissenschaft Mitteilungen 31: 127-135.- FC#038;P 28-1, p. 52, ID=3990Topic(s): reefs, modern vs fossil; reefs; Systematics: ; Stratigraphy: Devonian M U; Geography: Germany, Rhenish Mts, SauerlandIn this paper reasons are given why the Massenkalk reefs (Middle #038; Upper Devonian) of the Sauerland are not comparable to modern coral reefs. A new model is developed explaining the observed carbonate facies without contradiction. This model assumes that the #034;reef cores#034; of the Massenkalk reefs were no barrier, but the uppermost part of the basinward directed slope of the carbonate platform. The distribution of stromatoporoid - dominated facies on the reefs is considered.^11;
- 822 s[819] = "DUMOULIN V., MARION J.-M., BOULVAIN R., COEN-AUBERT M., COEN M. (1998).- Nouvelles donnees lithostratigraphiques sur le Frasnien de l#039;anticlinorium de Philippeville.- Annales de la Societe geologique du Nord 06: 79-85.- FC#038;P 28-1, p. 61, ID=4002Topic(s): lithostratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: ArdennesThe revision of the Sautour-Surice geological map revealed some important lateral facies variations in the Frasnian of the Philippeville anticlinorium. Two kinds of lithological successions have been observed, corresponding to the formations newly defined in the Philippeville anticlinorium (proximal facies) and on the southern border of the Dinant Synclinorium (distal facies). The geographic repartition of the two facies is schematically presented. A new section (distal facies) is described from the Hermeton valley (SE of the Philippeville anticlinorium). As a conclusion, the origin of the coexistence of the two facies types in the Philippeville anticlinorium is discussed.^11;
- 823 s[820] = "FERNANDEZ-MARTINEZ E., SOTO F., MENDEZ-BEDIA I. (1994).- An example of reef development in the Middle Devonian (Candas Fm., Givetian) in the Cantabrian Mountains (NW Spain).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 103-110.- FC#038;P 23-1.1, p. 16, ID=4068Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: Spain, Cantabrian MtsA well exposed section, showing three different types of reef carbonate units of the Candas Formation (Givetian) close to the locality of Coallaju (province of Asturias, NW Spain, Cantabrian Mountains), is described in detail. This formation consists of limestones with argillaceous intercalations, marls and dark lutites. These materials were deposited probably on a carbonate ramp with gentle slope and irregular bottom. The first type with a biohermal aspect, lithologically consists of limestones; its basal part overlies a crinoid-brachiopod packstone. This bioherm, small in size, is mainly built by tabular and hemispherical stromatoporoids and alveolitids associated with smaller numbers of other organisms. The second type, developed in argillaceous limestones, consists of a series of biostromes formed by branching coral bafflestones (Thamnopora and Smithiphyllum); within them an outstanding massive rugose coral framestone (Argutastrea and Endophyllum) occurs. The third type,

- biohermal in shape, is made up of massive grey limestones forming a sharp relief on the terrain. Recrystallization of the builders and bad exposure conditions prevented the study of the faunal content and, therefore the analysis of this reefal unit. A detailed analysis is made of the faunal composition, with special emphasis on the more common fossil assemblages in these reef units. Finally, on the basis of faunal and sedimentological data, a paleoecological interpretation is given.^1";
- 824 s[821] = "HLADIL J. (1994).- Moravian Middle and Late Devonian buildups: evolution in time and space with respect to Laurussian shelf.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 111-125.- FC&P 23-1.1, p. 16, ID=4069^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian M U; Geography: Czech Republic, Moravia^Maps of individual buildup facies from the prospected ME Moravia oil field (100 x 25 km) are presented. Considering reshuffle of the Devonian lithostrata and of the stratigraphic columns for the individual tectonic belts, the basinal analysis is suggested, including an expanded tentative model of the Frasnian configurations. Besides the global climatic factors, the Emsian-Frasnian tectonic changes within the Laurussian shelf favoured the giant growth of the Givetian-Frasnian buildups. ^1";
- 825 s[822] = "MENDEZ-BEDIA I., SOTO F., FERNANDEZ-MARTINEZ E. (1994).- Devonian reef types in the Cantabrian Mountains (NW Spain) and their faunal composition.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 161 -183.- FC&P 23-1.1, p. 17, ID=4073^Topic(s): classification; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Spain, Cantabrian Mts^In the Paleozoic series of the Cantabrian Mountains, reefal carbonates occur first in the Devonian. In this period, a sequence of terrigenous and carbonate sediments with varied reefal development was deposited on a shallow marine platform. The most widespread reef facies occurred at the end of the Lower Devonian and in the Middle-Upper Devonian, coinciding with the deposition of the Moniello-Santa Lucia (Upper Emsian-Lower Eifelian) and Candas-Portilla (Givetian, locally Givetian-Lower Frasnian) Formations. In addition, some reefal episodes of minor importance were developed at slightly older and younger stratigraphic levels (Rafieces-La Vid Group and Pineres-Nocedo Formation, respectively). Carbonate facies in the Moniello-Santa Lucia Formation are arranged in parallel strips with sublittoral facies towards the west and southwest and shallower water, lagoonal and peritidal deposits towards the north and east. In the more distal facies, biostromes and bioherms occur. The bioherms, developed in massive limestones, consist of large stromatoporoid and tabulate coral framestones with numerous encrusting growths, the stromatoporoids being the dominant reef building organisms. The biostromes are developed in the more argillaceous limestones. Seven types have been distinguished on the basis of their faunal composition and the morphology of the constituting organisms (mainly stromatoporoids and corals). The study, mainly paleontological, of the reef structures present in the Candas-Portilla Formation suggests a sedimentation model corresponding to a carbonate ramp, with a gentle slope towards the south and west and a slightly irregular bottom, where biostromes and occasional bioherms were developed. Bioherms are basically built by tabulate and massive rugose corals, although stromatoporoids more rarely occur as one of the main reef builders. Six types are differentiated on the basis of faunal composition and the morphology of the principal reef building organisms. On the basis of the faunal content and sedimentological observations of these reefs, different paleoecological interpretations are made of the most favourable environmental conditions for their development.^1";

- 826 s[823] = "KOCH-FRUCHTL U., FRUCHTL M. (1993).- Stratigraphie und Faziesanalyse einer mitteldevonischen Karbonatabfolge im Remscheid-Altenaer Sattel (Sauerland).- Geol. Palaont. Westf. 26: 47-75.- FC&P 23-1.1, p. 60, ID=4130^Topic(s): carbonates stratigraphy; stratigraphy, facies; Systematics: ; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts, Sauerland^^1";
- 827 s[824] = "OETKEN S., ZANKL H. (1993).- Sediment 93, Exkursion: Mittel-Oberdevonische Karbonate des zentralen und vorgelagerten Riffbereiches in der mittleren Lahnmulde.- Geologica et Palaeontologica 27: 324-331.- FC&P 23-1.1, p. 90, ID=4207^Topic(s): reef carbonates, excursion guide; reef carbonates; Systematics: ; Stratigraphy: Devonian M U; Geography: Germany, Rhenish Mts^^1";
- 828 s[825] = "SCHUDACK M.E. (1993).- Karbonatzyklen in Riff- und Lagunenbereichen des devonischen Massenkalkkomplexes von Asbeck (Hoennetal, Rheinisches Schiefergebirge).- Geol. Palaont. Westf. 26: 77-106. [in German, with English summary].- FC&P 23-1.1, p. 92, ID=4211^Topic(s): reef complexes, cyclicity; reef complex, cyclicity; Systematics: ; Stratigraphy: Devonian; Geography: Germany, Rhenish Mts^The carbonate sequence (600 m thickness) of the Asbeck quarry (Hoennetal, Rhenish massif) belongs to the Devonian Hagen - Iserlohn - Balve reef complex and consists of reef core, lagoonal, and inter-/supratidal deposits. The succession of the six principal facies types allows recognition of three orders of cycles. 1st order cycles subdivide the section into five formations. Complete 2nd order (decameter) and 3rd order (1-3 meters) cycles exhibit a subtidal (reef core > sublagoonal > lagoonal) > intertidal > supratidal succession. They represent the regressive pulses of relative sea-level changes following rapid nondepositional transgressions. These can eventually be explained by abrupt subsiding movements of the Lenne inversion structure at the northeast margin of which the depositional area was situated. During each of the following tectonically quiet phases, seaward shoreline progradation was combined with a progressive infilling of the lagoon behind the reef belt, finally resulting in tidal influences and subaerial exposure. Due to the biostratigraphical data, correlations with eustatic sea-level curves are impossible.^1";
- 829 s[826] = "SOTO F., MENDEZ-BEDIA I., FERNANDEZ-MARTINEZ E. (1994).- Construcciones Arrecifales del Devonico de la Cordillera Cantabrica (NO de Espana).- Revista Espanola de Paleontologia 9, 1: 29-36.- FC&P 23-1.1, p. 92, ID=4213^Topic(s): structures, ecology; reefs; Systematics: ; Stratigraphy: Devonian Ems - Giv; Geography: Spain, Cantabrian Mts^In the Asturian-Leonese area of the Cantabrian Zone, an important reef development took place during the Devonian. The most widely represented reef structures originated at the end of the Early Devonian (late Emsian) and during the Middle Devonian (Givetian), coinciding, respectively, with the deposition of the Moniello-Santa Lucia and Candas-Portilla limestone formations. Minor reef episodes occurred also at older stratigraphic level (Rafleces-La Vid Group, late Emsian) as well as younger ones (Pifleres-Nocedo Formation, Frasnian). Most frequently, the reef units correspond to biostromes. However, bioherms also occur. In the Moniello-Santa Lucia Formations, stromatoporoids are generally the main reef-building organisms; in all other formations, the most common reef builders are rugose and tabulate corals. A palaeoecological analysis has been combined with results of earlier sedimentological work in order to reach conclusions regarding the most favourable conditions for reef development as well as the role played by the different reef building organisms.^1";
- 830 s[827] = "BRICE D., MILHAU B., MISTIAEN B. (1994).- Affinites nord-americaines de taxons devoniens (Givetien-Frasnien) du Boulonnais, Nord de la France. Migrations et diachronismes.- Bulletin de la Societe

- geologique de France 165, 4: 291-306.- **FC&P 23-2.1**, p. 31, ID=4223^**Topic(s): biogeography; fossils; Systematics: ; Stratigraphy: Devonian; Geography: France, Boulonnais^Recent studies (Brice 1988a) show that most of the Devonian taxa in Boulonnais have Old World Realm affinities. Nevertheless about 5% of the benthic taxa in Tabulate Auloporida, brachiopods, crinoids, ostracods are very similar to eastern Americas Realm taxa and their occurrence, with references to the conodont zonation, comes later in Boulonnais than in North America. The distribution of these benthic taxa in different Givetian-Frasnian palaeogeographical reconstructions shows large discontinuities: we must assume some trans-oceanic migrations from North America to western Europe. To be successful, these trans-oceanic migrations need the combination of many different factors, including both biotic and non biotic ones. The uncertainties of the result can explain the observed diachronisms.^1";**
- 831 **s[828]** = "BRICE D., MILHAU B., MISTIAEN B., ROHART J.-C., WEYANT M. (1994).- Precisions stratigraphiques sur le Frasnien de Ferriere-la-Grande (Devonien Superieur; Avesnois, Nord, France).- Annales de la Societe Geologique du Nord 02 (2nd Ser): 91-104.- **FC&P 23-2.1**, p. 54, ID=4398^**Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: France, Nord^[An inventory of 5 fossil groups allows a correlation to be made between both sides of an anticline, to confirm the Frasnian (F2gh) age, and to emphasize the affinity of the fauna with that of the Ardennes and Boulonnais; details of the stratigraphic distribution of many species of stromatoporoids in these beds are given; most are species described by Lecompte from the Ardennes]^1";**
- 832 **s[829]** = "HLADIL J. (1994).- Microfacies of Devonian limestones in Moravia (Part I - Approaches in classification; Part II - Review of discerned microfacies).- Zemni plyn a nafta 38, 4: 291-335 **& 39, 1: 19-70.- FC&P 23-2.1**, p. 71, ID=4440^**Topic(s): carbonates; carbonates microfacies; Systematics: ; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^Devonian carbonates have been studied in many boreholes and surface outcrops in Moravia since 1973. The article gives short summary of the terminology, genetic classification, cyclicity, stratigraphy and facies analysis of Devonian limestones. It describes different bioclasts, lithoclasts and cements composing Devonian limestones and their textures. Different microfacies are described in detail.^1";**
- 833 **s[830]** = "GALLE A., HLADIL J., ISAACSON P.E. (1995).- Middle Devonian biogeography of closing South Laurussia-North Gondwana Variscides: Examples from the Bohemian Massif (Czech Republic), with emphasis on Horni Benesov.- Palaios 10: 221-239.- **FC&P 24-2**, p. 77, ID=4555^**Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Devonian M; Geography: Czech Republic, Bohemian Massif^Middle Devonian (Eifelian and early Givetian) brachiopod and coral faunas of the Bohemian Prague Basin and Moravian Celechovice and Horni Benesov regions, Czech Republic, are essentially dissimilar to each other, although the trilobites of the Prague Basin and Horni Benesov show some similarity. Apart from their mutually low similarity, expressed by the Otsuka Coefficient, each of the Czech faunas is comparable to faunas of other regions, particularly to the Rhenish Slate and/or Harz mountains. Although some of the differences among the respective Bohemian Massif faunas are mostly facies-controlled, they also appear to be a consequence of dispersal patterns of larvae by marine surface currents. Shallow water benthic communities show that oceanic circulation at this time could have been restricted by land masses, and perhaps by quite disjunct regions that have since been juxtaposed. As the Bohemian massif approached southern Laurussia, a progressive exchange of faunas from both shelves took place. It appears, moreover, that from late Emsian to the present there was not a significant separation between North Africa and Europe.^1";**
- 834 **s[831]** = "GISCHLER E. (1995).- Current and wind induced facies patterns

in a Devonian atoll: Iberg Reef, Harz Mts., Germany.- *Palaios* 10, 2: 180-189.- **FC&P 24-2**, p. 98, ID=4605^**Topic(s): reefs, facies pattern; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Germany, Harz^The Middle to Upper Devonian Iberg Reef was an oceanic atoll within the Rhenish Trough of the Variscan Geosyncline. It existed for at least 15 million years before it was drowned shortly before the turn of the Frasnian-Famennian. The spatial distribution of facies and early diagenetic features within these Frasnian reef limestones confirms the reefs paleogeographical location between the equator and 30° south. The southeastern, windward side of the atoll was dominated by massive stromatoporoids and bulbous corals as well as by encrusting and dendroid stromatoporoids. Reef-builders were rarely preserved in situ. Several generations of early fibrous cement form thick isopachous crusts on the limestone components, confirming early lithification. On the northwestern, leeward side, platy and branching stromatoporoids and corals predominated. They were mostly preserved in growth position. Fine-grained sediment forms a large portion of the limestone matrix. A leeward lagoon entrance was marked by large thickets of branching rugose corals and a mixture of back reef and fore reef faunal elements in the northwesternmost lagoonal limestones. A chain of stromatoporoid gravel cays formed inside the lagoon due to wave-refraction on the southern reef front.^1";**

835 s[832] = "GISCHLER E. (1995).- Guilds and cycles in Devonian fore reef limestones: a preliminary study (Iberg Reef, Harz Mts., Germany).- *Neues Jahrbuch fuer Geologie und Palaeontologie, Monatshefte* 1995, 5: 279-294.- **FC&P 24-2**, p. 99, ID=4606^**Topic(s): reefs, benthic guilds; fore reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Germany, Harz^Facies and organism guilds (constructor, binder, baffler, dweller, destroyer) were quantitatively investigated in 497 evenly spaced samples in the upper part (30-160m) of the borehole "Iberg 1" that penetrates 420m of Devonian reef limestones. The investigated section encompasses transians, punctata, hassi and parts of falsiovalis and jamieae conodont zones of the Frasnian which cover a time span of 2-2.5 Ma. The majority (72%) of the limestones are rudstones; 19% of the limestones are grainstones; only 9% of the core are stromatoporoid and coral boundstones. The first component obtained by principal component analysis of the time series can be assigned to the process of reef construction. A Fourier spectral analysis revealed cyclic fluctuations of the first component, although cyclic changes are not visible in the core. The relationships of the cycles to orbital cycles and sea level fluctuations are discussed.^1";**

836 s[833] = "TSIEN H.-H. (1971).- The Middle and Upper Devonian Reef-Complexes of Belgium.- *Petrol. Geol. of Taiwan* 8: 119-173.- **FC&P 1-2**, p. 19, ID=4667^**Topic(s): reef complexes, stratigraphy, ecology; reef complexes; Systematics: ; Stratigraphy: Devonian M U; Geography: Ardennes^The Middle and Upper Devonian (Frasnian) reef-complexes are well exposed in the Dinant, Namur and Vesdre basins. The Middle and Upper Devonian stratigraphy and sedimentation in Belgium are briefly described. Early work interpreted the red coloured *Phillipsastraea* facies as a time stratigraphic lithologic unit. However, from detailed field examination, detailed paleoecologic study and rugose corals study, this red coloured *Phillipsastraea* facies is in fact time-transgressive. The most common and important fossil organisms found in the reef complexes are illustrated. Their distribution in the reef complexes and their ecological significance are discussed. The variations in sedimentary facies within the reef complexes are described and related to factors which influenced the changes. The depositional history is outlined and divided into four phases: a. the transgressive phase, b. the relatively stable phase, c. the regressive phase and d. the transitional phase. Finally, the terminology and classification for the**

- various carbonate depositional environments of the different facies are suggested.¹";
- 837 s[834] = "COEN-AUBERT M. (1973).- Le Givétien et le Frasnien de la vallée du Hoyoux.- Service Géologique de Belgique, Professional Paper 6: 12 pp., 5 figs.- FC&P 4-1, p. 30, ID=5094Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian Giv Fra; Geography: Ardennes^Etude des différents niveaux récifaux. Remarques à propos de la découverte de Phillipsastrea bouchardi (M. E. & H.) à la base du Frasnien.¹";
- 838 s[835] = "TSIEN H.-H. (1974).- Paleoecology of Middle Devonian and Frasnian in Belgium.- [journal?] Symp. Namur 1974, publication 12.- FC&P 4-1, p. 39, ID=5142Topic(s): ecology; ecology; Systematics: ; Stratigraphy: Devonian M U; Geography: Ardennes^The paleogeographic patterns of the Middle Devonian and the Frasnian are first reconstructed and illustrated. Generally, the Couvinian and the lowermost Givetian beds become more and more sandy towards the north and east. This indicates clearly that the sediments came from the direction of the Brabant and Stavelot massifs. Evidence furnished by the facies distribution demonstrated the existence of the Rocroi and the Stavelot islands. In Middle Couvinian time, the continental regions were in the north. The Rocroi island was a very low almost featureless area, but the Stavelot island was still high land. It was only at Middle Givetian time that the Stavelot island became a nearly featureless region, and the Rocroi island subsided with the transgression of Gi2a and disappeared definitively during early Middle Givetian time. The Upper Givetian beds represent a regressive phase. The Gi3β is a period of relative stability during the regressive phase. The paleogeographic pattern of Frasnian time is quite different from those of the Middle Devonian. Consequently, the development of the reefs and the sedimentary facies distribution were in a manner totally different. * Then the most common and important fossil growth forms are described. Their ecological significance is discussed in detail. In the case of Lion reef, Stromatoporoids and Corals were the principal frame builders in the Devonian reefs. Algae were subordinate. In the case of Neuville reef, Algae were the principal reef builders. * The reefs grew in various environments with correspondingly different associations of reef-building organisms. * Finally the factors which controlled the vertical and lateral distribution of the various facies are discussed. Several major lithic-faunal associations are recognized during the different phases in the Middle Devonian and Frasnian rock sequence of Belgium. Five types of organic reefs can be distinguished in the Ardennes geosyncline. The reef development was mainly controlled by the paleo geographic pattern and the epeirogenic movements.¹";
- 839 s[836] = "ZUKALOVA V. (1974).- The Paleozoic basement of the Tertiary in the Nitkovic-2 borehole in the Carpathian foredeep in Moravia.- Bulletin Geol. Survey Prague 49, 4: 193-200.- FC&P 4-1, p. 41, ID=5156Topic(s): carbonates; carbonates, stroms forams; Systematics: ; Stratigraphy: Devonian Giv Fra; Geography: Czech Republic, Moravia^Paleozoic sediments in the Nitkovic-2 borehole are represented by the limestones of upper Middle Devonian age - the Givetian and of lower Upper Devonian age - the Frasnian. They have been evidenced paleontologically at a depth of 868 to 1707m. Their stratigraphy has been determined on the basis of abundant stromatoporoid fauna and tabulate corals. For precision of the stratigraphic conclusions the foraminiferal fauna has been studied.¹";
- 840 s[837] = "FLUGEL E., HOTZL H. (1975).- Paläoökologische und statistische Untersuchungen in mitteldevonischen Shelf-Kalken (Schwelmer Kalk, Givet; Rhenisches Schiefergebirge).- Abhandlungen Bayerischen Akad. Wissenschaft. 156; 66 pp.- FC&P 5-2, p. 12, ID=5455Topic(s): carbonates; petrology; Systematics: ; Stratigraphy: Devonian M; Geography: Germany, Rhenish Mts^A comparative investigation of various statistical methods to determine their suitability for facies studies and the characterization

- of Devonian shallow water communities. Twelve species of stromatoporoids are used in the statistical analysis.¹¹;
- 841 s[838] = "SCRUTTON C.T. (1977).- Reef facies in the Devonian of eastern South Devon, England.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et récifs coralliens fossiles; Paris, 1975]: 125-135.- FC&P 6-1, p. 21, ID=5503Topic(s): reef facies; reef facies; Systematics: ; Stratigraphy: Devonian M; Geography: Britain, Devonshire[geographical and stratigraphical distribution of major facies types associated with Middle Devonian stromatoporoid reefs]^11";
- 842 s[839] = "BRICE D., BULTYNCK J.P., COLBEAUX F., LETHIERS F., MISTIAEN B., ROHART J.-C., BIGEY F. (1976).- Une nouvelle coupe dans le Devonien de Ferques (Boulonnais, France).- Annales de la Societe geologique du Nord 96: 135-155.- FC&P 6-1, p. 19, ID=5508Topic(s): geology, fossils; geology, paleontology; Systematics: ; Stratigraphy: Devonian; Geography: France, Boulonnais[includes comments on the stratigraphic distribution of the Rugosa]^11";
- 843 s[840] = "CROUSILLES M., DIXSAUT C., LAFUSTE J. (1978).- Donnees nouvelles sur les calcaires du Devonien inferieur de la province de Cordoue (Espagne).- C. R. Ac. Sci. Paris 286: 507-509.- FC&P 7-1, p. 8, ID=5560Topic(s): carbonates; carbonates reefs; Systematics: ; Stratigraphy: Devonian L; Geography: Spain, CordobaLa détermination spécifique de deux Tabulés (Michelinia et Parastriatopora) a permis d'attribuer un âge précis, Gédinnien supérieur, à des calcaires jusqu'ici considérés comme paléozoïques; non précisés.^11";
- 844 s[841] = "TSIEN H.-H. (1976).- L'activite recifale au cours du Devonien moyen et du Frasnien en Europe occidentale et ses particularites en Belgique.- Annales de la Societe geologique du Nord 97: 57-66.- FC&P 7-2, p. 21, ID=5639Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian Eif - Fra; Geography: Ardennes[description of the development of the Belgian Devonian reefs including generalised observations on distribution of corals]^11";
- 845 s[842] = "SCHNEIDER W. (1977).- Diagenese devonischer Karbonatkomplexe Mitteleuropas.- Geol. Jahrbuch, Reihe D, 21: 1-107.- FC&P 7-2, p. 26, ID=5667Topic(s): carbonates; carbonates diagenesis; Systematics: ; Stratigraphy: Devonian; Geography: Europe, Central[diagenesis of Devonian carbonate complexes of Middle Europe]^11";
- 846 s[843] = "PLUSQUELLEC Y. (coord.) (1980).- Les schistes et calcaires de l'Armorique (Dévonien inférieur, Massif Armoricaïn). Sédimentologie, Paléontologie, Stratigraphie.- Mém. Soc. Geol. Minér. Bretagne 23: 310 pp., 15 tabl., 71 figs, 42 pls.- FC&P 9-1, p. 15, ID=5767Topic(s): geology; geology; Systematics: ; Stratigraphy: Devonian L; Geography: France, Armorique^11";
- 847 s[844] = "PELHATE A., PLUSQUELLEC Y. (1980).- Le milieu récifal.- Mém. Soc. Géol. Minér. Bretagne 23 [Y. Plusquellec (coord.): Les schistes et calcaires de l'Armorique (Dévonien inférieur, Massif Armoricaïn). Sédimentologie, Paléontologie, Stratigraphie]: 8 pp., 4 figs.- FC&P 9-1, p. 15, ID=5768Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian L; Geography: France, Armorique^11";
- 848 s[845] = "TSIEN H.-H. (1980).- Les régimes récifaux dévoniens en Ardenne.- Bulletin de la Société belge de Géologie 89, 2: 71-102.- FC&P 9-2, p. 10, ID=5852Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Ardennes10 types of reefs are described. These are barrier reef (R1), patch reef (R2), bioherm complexes (R3A, R3B), biostromes (R4I, R4II, R4III, R4IV), and mud mounds (R5A, R5B). Most of them (R1, R2, R3 and R4) have developed during relatively stable phases (tectonically calm periods). Other reefs (R5A, R5B) of different types developed

- during the transgressive phases. * The growth forms of most common and important reef building organisms are described. Their ecological significance is discussed. The environmental distribution of the reef building organisms and their ecological adaptations in the different facies are shown.^1";
- 849 s[846] = "TSIEN H.-H., MOURAVIEFF A.N., MOUNJOY E.W. (1980).- Devonian Reefs in Belgium.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 17-33.- FC#038;P 9-2, p. 13, ID=5860^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Ardennes^1";
- 850 s[847] = "RACKI G. (1980).- Importance of conodonts to the biostratigraphy of stromatoporoid-coral limestones in the Holy Cross Mountains.- Przegląd Geologiczny 28: 215-219.- FC#038;P 10-1, p. 60, ID=6021^Topic(s): stratigraphy, strom-coral limestones; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: Poland, Holy Cross^1";
- 851 s[848] = "TOURNEUR F. (1981).- L'étude des Récifs rouges F2j en Belgique (jusqu'en 1970).- Bulletin de la Société belge de Géologie 90, 3: 157-173.- FC#038;P 11-1, p. 59, ID=6138^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^1";
- 852 s[849] = "HLADIL J. (1983).- Cyklická sedimentace v devonských karbonátech Macoskenko souvrstvi. [cyclic sedimentation of the Devonian Macocha carbonates; in Czech, with English summary].- Zemní plyn a nafta 28: 1-14.- FC#038;P 12-2, p. 43, ID=6240^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Devonian; Geography: Czech Republic, Moravia^1) At the cumulation of the facial and stratigraphical sections trough the Devonian reef complex of Macocha - formation defined by Zukalova - Chlupac (1982) a cyclic pattern of carbonate sedimentation has been observed. The cycles of various order have been documented. In the present paper four composite cycles of the greatest magnitude are defined. Starting from the base they are the Celechovice-cycle, the Byci-cycle, the Ochoz-cycle, and the Mokra-cycle. (2) The range zone of the defined cycles are marked by clastic intercalations, break and erosion levels, laminite, breccia or limestone with many intraclasts, nodular textures, intensive dolomitization or occasionally by silification. The development of low magnitude and complex cycles of the greatest magnitude generally obtain the Kassi's phasis succession. Progressively, the dark micritic carbonate sediments go over the Amphipora limestones to predominantly light-grey biostromal and biohermal limestones. Succession may be modified by local factors, but ranges of major cycles are remarkably fast in all cases. (3) The cycles mentioned above are more restricted to some time-scale intervals than members which are used usually in mapping. Therefore, these cycles make possible to correlate borehole cores in inner structures of the Macocha Formation. Each of the cycles has particularly modified its lithological succession and biozone sequence, essential in low taxons at least, in context to development of the whole reef complex (see Hladil 1983). Application of cycles defined concerns the oil wells drilled in Bohemian massive slopes, in the South region. [original summary]^1";
- 853 s[850] = "TSIEN H.-H. (1984).- Récifs dévoniens des Ardennes: paléocéologie et structure.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 7.1-7.31.- FC#038;P 13-1, p. 11, ID=6320^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Ardennes^1) étude des récifs anciens représente un intérêt capital car elle constitue un cas particulièrement spectaculaire de paléocéologie, elle détient la clef de problèmes touchants la sédimentation marine calcaire (calcaire construit, origine de micrite dans les mud mounds, origine de Stromatactis etc.), en plus, plus de 30 % d'hydrocarbures se

- trouvent dans les complexes récifaux; la plupart des gisements de nombreux métaux se sont formés en milieux récifaux, et encore, beaucoup de marbres; qui peuvent être employés dans la décoration ou de l'ameublement sont liés aux récifs; récifs rouges; en Belgique). [fragment of an introduction]^1";
- 854 s[851] = "MACHADO G., HLADIL J., SLAVIK L., KOPTIKOVA L., MOREIRA N., FONSECA M. & FONSECA P. (2011).- An Emsian-Eifelian Calciturbidite sequence and the possible correlatable pattern of the Basal Chotec event in Western Ossa-Morena Zone, Portugal (Odivelas Limestone).- *Geologica Belgica* 13, 4: 431-446. [see FC&P 36: 37 - without abstract]- FC&P 36, 037, ID=6404^Topic(s): carbonates, volcanoclastics, reef fauna; Systematics: Stratigraphy: Devonian L-M, Emsian, Eifelian, Odivelas Limestone; Geography: Portugal, Ossa Morena Zone^This study explores a genetic link between modern Atlantic coral mounds and ancient, sponge-rich carbonate mudmounds based on Ca-carbonate authigenesis driven by induced-and-supported organomineralization (ISOM). The potential for ISOM in Atlantic coral mounds is tracked by peak patterns of fluorescent dissolved organic matter (FDOM) present in pore waters down to 3 m of sediment depth (Gamma mound, Beta mound, Pen Duick escarpment, offshore Morocco). The modern coral-rich mound system, which by itself appears diverse and with a variety of controlling factors, maintains an excellent potential to drive ISOM and to share a crucial process of early diagenesis with Phanerozoic sponge rich carbonate mudmounds.^1";
- 855 s[852] = "GOURVENNEC R., PLUSQUELLEC Y., PEREIRA Z., PICARRA J.M., le MENN J., OLIVEIRA J.T., RAMAO J., ROBARDET M. (2008).- A reassessment of the Lochkovian (Lower Devonian) benthic faunas and palynomorphs from the Dornes region (southern Central Iberian Zone, Portugal).- *Communicas Geologicas* 95: 5-25.<http://repositorio.lneg.pt/handle/10400.9/881>.- FC&P 36, p. 75, ID=6479^Topic(s): paleontology; Systematics: Stratigraphy: Devonian Lochk; Geography: Portugal^A revision of benthic faunas and palynomorphs previously described from Dornes Syncline, southern Central Iberian Zone, Portugal, complemented with recent research, shows that the Serra de Luacao Formation is of Lochkovian age. The systematics of the benthic fauna, with clear Gondwana affinities, are described in detail. [original abstract; among other fossils described is the tabulate coral *Ligulodictum ligulatum* (Plusquellec 1965)]^1";
- 856 s[853] = "FERNANDEZ-MARTINEZ E., FERNANDEZ L.P., MENDEZ-BEDIA I., SOTO F., MISTIAEN B. (2010).- Earliest Pragian (Early Devonian) corals and stromatoporoids from reefal settings in the Cantabrian Zone (N Spain).- *Geologica Acta* 8, 3: 301-323.- FC&P 36, p. 78, ID=6484^Topic(s): reefal benthos; reefal benthos; Systematics: Stratigraphy: Devonian Prag; Geography: Spain^The oldest reefal episode in the Cantabrian Zone (earliest Pragian) consists of small biostromal patch reefs, mainly built by corals and stromatoporoids, and developed on a storm-dominated ramp. Four outcrops provide the stratigraphic framework in which these reef facies developed, and these permitted an interpretation of their depositional setting in terms of a relatively distal or protected shelf. Six species of stromatoporoids are described: *Labechiella* sp. 1; *Labechiella* sp. 2; *Intexodictyon perplexum* Yavorsky, 1963; *Plectostroma salairicum* (Yavorsky, 1930); *Habrostroma centrotum* (Girty, 1995); and *Parallelostroma foveolatum* (Girty, 1995). [extracted from the abstract]^1";
- 857 s[854] = "HLADIL J., KOPTIKOVA L., GALLE A., SEDLACEK V., PRUNER P., SCHNABL P., LANGROVA A., BABEK O., FRANA J., HLADIKOVA J., OTAVA J., GERSL M. (2009).- Early middle Frasnian (E-MF) platform reef strata in the Moravian Karst interpreted as recording the atmospheric dust changes: the key to understanding perturbations in the punctata conodont zone.- *Bulletin of Geosciences* 84: 75-106.- FC&P

- 36, p. 114, ID=6552^Topic(s): reef complexes, paleoclimates; reef complexes; Systematics: ; Stratigraphy: Devonian Fra; Geography: Czech Republic, Moravia^The early middle Frasnian (Upper Devonian) punctata Zone interval of Moravia, Czech Republic, was chosen, because a pure limestone lacking an obvious siliciclastic component is present, and because the authors had access to voluminous surface and subsurface stratigraphic data. Research methodology included [quotations from abstract, p. 75]: "... biostratigraphy and facies analysis, magnetic susceptibility (MS), gamma-ray spectrometry (GRS), instrumental neutron activation analysis (INAA), and finally, separation and assessment of rare non-carbonate particles." ... "The most significant disturbance was found near the mid-punctata Zone level." They conclude that the exotic nature of the grains may be due to the Alamo Impact Event in Nevada, USA [see Au1 2010 & Au1 et al. 2010], but feel that a single event does not explain all their findings.^1";
- 858 s [855] = "MACHADO G., HLADIL J., KOPTIKOVA L., FONSECA P.E., ROCHA F.T., GALLE A. (2009).- The Odivelas Limestone: evidence for a Middle Devonian reef system in western Ossa-Morena Zone (Portugal).- *Geologica Carpathica* 60, 2: 121-137.- FC&P 36, p. 116, ID=6556^Topic(s): reef system; reef system; Systematics: ; Stratigraphy: Devonian M; Geography: Portugal^The Odivelas Limestone constitutes one of the few records of Middle Devonian sedimentation in the western Ossa-Morena Zone. Although deformed and metamorphosed the limestones have an abundant fossil content which allows their positioning as late Eifelian/early Givetian in age and to relate the reef fauna with the typical Rhenish facies for the same time period. Magnetic susceptibility analysis was attempted and is in agreement with the biostratigraphy, but the limited extent of sections and the metamorphism precludes firm correlations. The field evidence, petrographic and geochemical analysis point to a close paleogeographical relation and dependence of the reef system on volcanic structures which are included in the Beja Igneous Complex. The age of part of the volcanic and sub-volcanic suite of this complex is thus constrained. [original abstract]^1";
- 859 s [856] = "RODRIGUEZ S., FERNANDEZ-MARTINEZ E., COZAR P., VALENZUELA-RIOS J.I., PARDO ALONSO M.V., LIAO J.-C., MAY A. (2010).- Stratigraphic succession, facies and depositional environment of Emsian reefal carbonates in the Ossa-Morena Zone (SW Spain).- *Neues Jahrbuch fur Geologie und Palaontologie Abhandlungen* 257, 1: 69-83.- FC&P 36, p. 121, ID=6564^Topic(s): reefs carbonates; reefs, carbonates; Systematics: ; Stratigraphy: Devonian Ems; Geography: Spain SW^The Devonian succession between the Gadiana and Guadalquivir valleys in the Obejo-Valsequillo Domain comprises more than 600m of shale and sandstone with some interbedded limestone and marl. The most complete reefal sequences of the region are exposed in the Guadamez-2 section, which is located on the western bank of the Guadamez River, near Zalamea de la Serena. It consists mainly of shale and calcareous shale in its lower part and shaly, skeletal and reefal limestone in its upper part. Conodont and brachiopod data indicate that this section spans the interval from the Lochkovian to at least the upper Emsian. Eight microfacies types have been identified in the calcareous facies: (A) brachiopod-echinoderm wackestone/packstone; (B1) echinoderm grainstone; (B2) echinoderm-bryozoan grainstone/packstone; (C) echinoderm packstone; (D) tabulate coral rudstone; (E) brachiopod wackestone/packstone; (F) brachiopod grainstone/packstone; and (G) stromatoporoid and tabulate coral boundstone/rudstone. Microfacies A, B1, C, E and F represent a sequence of environments from middle platform (A) to tidal flat (F), including shoals (B1) and shallow platform facies. Microfacies B2, D and G represent the development of patch-reefs superimposed on the shoals. [original abstract]^1";
- 860 s [857] = "FRANKE C. (2010).- Marine Fauna der wiltz-Schichten

(Ober-Emsium, Unter-Devon) der Mulde von Wiltz und der Daleider Mulden-Gruppe (Luxemburg, Deutschland): Teil 1.- Ferrantia 58: 5-62.- FC&P 36, p. 125, ID=6577^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Devonian Ems; Geography: Luxemburg, Germany^A multitude of new finds permit a fundamental revision of the fossil contents of the Wiltz layers. For this purpose, approx. 5,700 proofs of finds were evaluated. Due to the numerous finds, the study will be published in several parts. It turns out that the species-diversity is very much greater than assumed to date. The presence of many of genera and species known from other sedimentation areas have now been proved for the Wiltz-layers in the Wiltz-basin and Daleiden Synclinal Group. This publication includes plant fossils, Rhabdopora sp. cf. Rhabdopora lonsdalei, Cornulites sp. and Pterygotoidea fam., gen. et sp. indet. The trilobite Leonaspis grafi n.sp. is described. * Finally, the area examined can be defined as an extensive long-lived deposit region of a shallow water situation extending from close to and far from the coast of the Ardennes-Rhenish continental shelf with multifold faunistic correspondences to other regions in the Variscan sea during the upper Emsian. [original abstract]^1";

861 s[858] = "HLADIL J. (1995).- Basic information about the sedimentology and diagenesis of the Koneprusy Reef (Lower Devonian, Pragian, SW segment of the Central Barrandian Synform).- FC&P 24, 1: 26-41.- FC&P 24-1, p. 26, ID=6859^Topic(s): reefs sedimentology, bibliography; reefs, sedimentology; Systematics: ; Stratigraphy: Devonian Prag; Geography: Czech Republic, Barrandian^The Koneprusy reef is a unique bioclastic complex of Pragian age that can be compared only with few places in the world (Carnic Alps, Ufimia Amphitheater of Urals, Rocky Mountains of Canada). This reef possess a long history of investigation. Rich paleontological material of the Koneprusy sites is deposited in prominent museums and universities of the world. There is only roughly estimated that 500 species have been already distinguished by variety of authors. Probable number of fossil organic species can be limited by 800. Uncovered complex is situated within the classic area used for the standard Devonian stratigraphical settings. Discernment of the diagenetical history can contribute also to the knowledge about the Variscan history of the Central Europe. [introduction to a short note; major part of the note is a list of publications, pertaining to the Koneprusy limestone]^1";

862 s[859] = "BOULVAIN F., BULTYNCK P., COEN M., COEN-AUBERT M., LACROIX D., LALOUX M., CASIER J.-G., DEJONGHE L., DUMOULIN V., GHYSEL P., GODEFROID J., HELSEN S., MOURAVIEFF N.A., SARTENAER P., TOURNEUR F., VANGUESTAIN M. (1999).- Les Formations du Frasnien de la Belgique.- Mem. Geol. Surv. Belgium 44: 126 pp., 60 figs.- FC&P 29-1, p. 48, ID=7041^Topic(s): geology, lithostratigraphy; lithostratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: Ardennes^This memoir on the Frasnian formations of Belgium is the result of meetings and field trips of the National Subcommittee on Devonian Stratigraphy. It was prepared in collaboration with geologists involved in the new mapping program of Wallonia at scale 1/25 000. Seventeen formations are described. Six of them (Aisemont, Barvaux, Bovesse, Franc-Waret, Matagne en Rhisnes) are well known from literature. The eleven others (Grands Breux, Huccorgne, Lambermont, Lustin, Moulin Lienaux, Neuville, Philippeville, Pont de la Folle, Presles and Valisettes) were introduced during the last twenty five years. All these formations are revised and presented in files giving a brief historical account, location of the reference sections, lithology, limits and thickness at the stratotype or the reference sections, lateral variations, ages and eventual uses. Furthermore, each formation is documented by the location of the outcrops on a portion of the relevant topographic map (scale 1/10 000) and by a cross-section or a stratigraphic log of the stratotype or other reference sections.

- Lastly, the tables in the opening section provide information on the historical subdivisions of the Frasnian in Belgium, the stratigraphic correlation between the Frasnian formations from different structural units recognized in this work and the stratigraphic distribution of the taxa of the fossil groups cited in the text. [original summary]^1";
- 863 s[860] = "BARTZSCH K., WEYER D. (1986).- Biostratigraphie der Devon/Karbon Grenze im Bohlen-Profil bei Saalfeld (Thuringen, DDR).- Zeitschrift der geologischen Wissenschaften 14: 147-152.- FC&P 15-2, p. 29, ID=0651^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: Germany, Thuringia^^1";
- 864 s[861] = "POTY E., TOURNEUR F., JAVAUX E. (1991).- The uppermost Devonian and the Lower Carboniferous coral faunas of Belgium.- Excursion A1, VI International Symposium on Fossil Cnidaria and Porifera, Muenster, 101 pp.- FC&P 20-2, p. 49, ID=2912^Topic(s): excursion guide; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Fam / Carboniferous Tour; Geography: Ardennes^^1";
- 865 s[862] = "GISCHLER E. (1996).- Late Devonian - Early Carboniferous deep-water coral assemblages and sedimentation on a Devonian seamount: Iberg Reef, Harz Mts., Germany.- Palaeogeography, Palaeoclimatology, Palaeoecology 123, 1-4: 297-322.- FC&P 25-2, p. 67, ID=3170^Topic(s): reefs, biocoenoses; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian U / Carboniferous L; Geography: Germany, Harz^Growth of the Middle Late Devonian Iberg Reef, a small atoll in the Variscan Geosyncline of central Europe, ceased towards the end of the Frasnian. During the Famennian and Dinantian, the reef continuously subsided relative to sea level. In the latest Dinantian the reef was covered by clastics. Five deep-water organism assemblages colonized the Famennian-Dinantian seamount successively. They are well comparable to recent organism communities on deepwater coral banks. In the Famennian, abundant crinoids and ancillary rugose corals and brachiopods colonized the reef top. During the Late Tournaisian, a coral-crinoid assemblage established on the reef. It developed into a varied fauna of corals, crinoids, trilobites, brachiopods, bivalves, gastropods, and goniatites in the Early and Middle Visean. The Late Visean assemblage was dominated by goniatites and pseudoplanktonic bivalves. In the latest Visean, a monospecific brachiopod fauna and small microbial buildups thrived in extreme environmental conditions on the reef top. The skeletal debris of the organisms was eroded post-mortem and only accumulated in current-protected depressions of the reef surface, along with carbonate mud. Local depressions include hollows on the reef top, neptunian dikes, and pore space of a breccia that formed due to intensive shattering of the reef top during nearby volcanic activity. During most of the Famennian and Tournaisian, there is a hiatus caused by non-deposition. Only reworked Famennian and Tournaisian conodonts recovered from Upper Tournaisian-Middle Visean limestones give evidence of marine conditions on top of the reef. The sedimentary environment on the drowned atoll compares well to that on recent guyots, including hiatuses, slow and patchy sedimentation, erosion and redeposition. Both the aftermath of the Frasnian / Famennian extinction that drastically reduced metazoan reef builders and a trend towards lower temperatures in the Famennian and Dinantian are believed to have produced the reestablishment of a shallow water reef on the drowning Devonian atoll.^1";
- 866 s[863] = "CONIL R., GROESSENS E., CARPENTIER-LEJEUNE M., PEL J., TSIEN H.-H. (1975).- Dévonien et Carbonifère (Coraux et formations récifales) du Nord de la France et Belgique.- Second Symposium Intern. sur les Coraux et Récifs coralliens fossiles, Livret-Guide, Excursion C, Paris 1975. Serv. Géol. Belgique, Bruxelles: 90 pp., 48 figs, 5 pls, 1 dépl.- FC&P 4-2, p. 56, ID=5261^Topic(s): excursion guide; Anthozoa reefs; Systematics: Cnidaria; Anthozoa;

- Stratigraphy: Devonian, Carboniferous; Geography: France N, Ardennes^^1";
- 867 s[864] = "POTY E. (1985).- Rugose corals at the Devonian-Carboniferous boundary in western Europe.- Tenth International Congress of Carboniferous Stratigraphy and Geology, Comptes Rendus 4: 147.- FC&P 15-2, p. 32, ID=0688^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: Europe W^^1";
- 868 s[865] = "GALLE A. (1984).- Rugosni korali a biostratigrafie paleozoika ve vrtu Ostravice jizne od Ostravy [Rugosa and biostratigraphy of Palaeozoic in Ostravice borehole, south of Ostrava].- Acta Universitatis Carolinae Geologica 3: 237-249.- FC&P 15-1.2, p. 25, ID=0863^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian, Carboniferous; Geography: Czech Republic, Silesia^^1";
- 869 s[866] = "RODRIGUEZ S. (1985).- Aportaciones de los corales rugosos a la datacion del Devonico y Carbonifero de Ossa Morena.- 5a Reunion del Grupo de Ossa Morena, Temas Geologico Mineros 7: 2-6; Instituto Geologico y Minero de Espana.- FC&P 15-1.2, p. 25, ID=0876^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian, Carboniferous; Geography: Spain, Ossa Morena^^1";
- 870 s[867] = "CHWIEDUK E. (2005).- Late Devonian and Early Carboniferous Rugosa from Western Pomerania, northern Poland.- Acta Geologica Polonica 55, 4: 393-443.- FC&P 34, p. 30, ID=1226^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: Poland NW^The taxonomic description of the Late Devonian and Early Carboniferous Rugosa from the boundary area of the Precambrian East European Craton and the Palaeozoic platform of Central Europe is presented. Palaeontological analysis and the stratigraphical distribution of the corals in Western Pomerania enabled recognition of several faunistic events, which reflect evolutionary trends in rugose corals. The pre-crisis Frasnian coral fauna, dominated by colonial forms both massive [Disphyllia laxa (Gürich, 1896), Hexagonaria hexagona kowalae wrzolek, 1992, ?Frechastreaea] and branching [Disphyllum kweihsiense Yoh, 1937, Peneckiella ?fascicularis (Soshkina, 1952), Thamnophyllum monozonatum (Soshkina, 1939), Peneckiella szulczewskii Rózkowska, 1979], developed on the carbonate platform extending along the edge of the East European Craton. The similarity of these faunas to Rugosa faunas from southern Poland is significant. The coral fauna was reduced significantly after the Kellwasser crisis. Colonial corals disappeared altogether and solitary dissepimented forms were markedly reduced. The subsequent Late Famennian radiation caused a significant quantitative and qualitative differentiation of the coral faunas. In addition to the well-known 'Cyathoxonia fauna';, warm and shallow-water solitary corals appeared in the latest Famennian. The stratigraphically important taxa of the latest Famennian include: Campophyllum Milne-Edwards & Haime, 1850, ?Palaeosmia aquisgranense (Frech, 1885), Bounophyllum pomeranicum sp.nov. and Guerichiphyllum kowalense Rózkowska, 1969. The latest Famennian regression caused subdivision of the Pomeranian area into at least two sedimentary basins, separated by shallows, with peculiar ecological conditions, and the appearance of numerous endemic taxa. This regressive interval contains, however, numerous levels yielding less restricted faunas, which suggest the intermittent appearance of more open-sea conditions.^1";
- 871 s[868] = "WEYER D. (1981).- Korallen der Devon/Karbon-Grenze aus hemipelagischer Cephalopoden-Fazies im mitteleuropaischen variszischen Gebirge - Bathyalva n.g., Thuriantha n.g. (Rugosa).- Freiburger Forschungsheft C363: 111-125.- FC&P 10-2, p. 65, ID=1798^Topic(s): pelagic facies; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian /

- Carboniferous; **Geography:** Europe, Central Devonian / Carboniferous boundary beds of cephalopod facies type within the central European Variscan Mountains contain mostly unknown coral faunas including new genera, two of which are described from the reference sections of Bohlen near Saalfeld and of Hoennetal railroad cut at Oberroedinghausen. *Bathybalva* n.g. is classified as a primitive member of *Metriophyllinae*, similar to the Silurian *Asthenophyllum* Grubbs 1939, but with apomorphic lamellar septal microstructure; one species *Bathybalva crassa* n.sp. has been found in the lower Tournaisian *Gattendorfia*-Stufe (lower part, *Siphonodella sulcata* and *Siphonodella duplicata* zone) of Rhenish and Thuringian Mountains. *Thuriantha* n.g., with monotypic type species *Thuriantha muelleri* n.sp., occurs in the upper *Gattendorfia*-Stufe (*Gattendorfia crassa* zone) of Thuringia and is a *Scleractinia*-like descendant from *Laccophyllum* Simpson 1900 (? *Petraïinae*). [original summary]^1";
- 872 s[869] = "FEDOROWSKI J. (1973).- Rugose Corals Polycoelaceae and Tachylasmatina subord. n. from Dalnia in the Holy Cross Mts.- *Acta Geologica Polonica* 23, 1: 89-133.- FC&P 2-2, p. 15, ID=4793^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian ? Carboniferous; Geography: Poland, Holy Cross^Fourteen new species of tetracorals have been described from the neptunian dykes on Dalnia Hill (Wocklumeria or *Gattendorfia* Stage) in the Holy Cross Mts, and assigned to nine genera (three new ones) and four families (one new family and one new subfamily). Corals with the pentaphylloid type of septal insertion have been separated to form a new suborder Tachylasmatina, their separation from the superfamily Polycoelaceae being based on their different ontogeny.^1";
- 873 s[870] = "POTY E., DEVUYST F.-X., HANCE L. (2006).- Upper Devonian and Mississippian foraminiferal and rugose coral zonations of Belgium and northern France: a tool for Eurasian correlations.- *Geological Magazine* 143, 6: 829-857.- FC&P 35, p. 56, ID=2345^Topic(s): biozonation; Rugosa, forams, stratigraphy; Systematics: Cnidaria Foraminifera; Rugosa; Stratigraphy: Devonian U / Carboniferous L; Geography: Ardennes, France N^The radiation of early Carboniferous foraminifers and rugose corals following the Devonian-Carboniferous crisis offers the best tool for high-resolution correlations in the Mississippian, together with the conodonts in the Tournaisian, notable in the Namur-Dinant Basin. However, some of the guides are facies-controlled and an integrated approach combining biostratigraphy, sedimentology and sequence stratigraphy is critical to identify delayed entries, potential stratigraphic gaps and to avoid diachronous correlations. The main difficulty is in correlating shallow and deeper water facies at any given time. In existing zonations, the Viséan part of the scheme is always more detailed, reflecting the widespread development of shallow-water platforms in the early Viséan which created conditions more suitable for foraminifers and rugose corals over larger areas. In contrast, the Tournaisian zones, less well documented, reflect unfavourable environmental conditions in the lower ramp (Dinant Sedimentation Area) and pervasive dolomitization of the inner ramp (Condroz and Namur Sedimentation Area). Recent progress in understanding the Belgian early Carboniferous sequence stratigraphy and lithostratigraphy, and revision of the biostratigraphy of the key sections, strongly modify former biostratigraphic interpretations. Improvements mainly concern the latest Devonian, the late Tournaisian and the early Viséan. The late Devonian and the Tournaisian are equated with foraminifer zones DFZ1 to DFZ8 and MFZ1 to MFZ8 respectively. The Viséan correlates with zones MFZ9 to MFZ14. Zone MFZ15 straddles the Viséan- Namurian boundary and Zone MFZ16 is the youngest Mississippian zone. The rugose corals allow the recognition of the zones, RC0 to RC9, covering the Strunian (late Famennian) to Serpukhovian interval. Discrepancies with former zonations are discussed. The Moliniacian

- Stage is emended to restore the coincidence between the base and that of the Viséan.¹";
- 874 s[871] = "SEMENOFF-TIAN-CHANSKY P. (1988).- Corals from the Devonian-Carboniferous Boundary at La Serre (Montagne-Noire, France).- Courier Forschungsinstitut Senckenberg 100: 129-138.- FC&P 18-1, p. 26, ID=2221^Topic(s): ; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Devonian / Carboniferous; Geography: France, Montagne Noire^Preliminary description of a small coral fauna from the Devonian Carboniferous boundary section at La Serre, near Cabrieres, Hérault (selected as Global Boundary Stratotype to be submitted to the International Commission of Stratigraphy, Washington 1989). * This faunule consists of small solitary rugose corals, with tabulates and heterocorals (Sutherlandia, Heterophyllia) partly related to the "Cyathaxonia fauna" from the cephalopod facies of northern Europe, particularly the Holy Cross Mountains. Succeeding the Famennian metriophyllids of the basal unit (upper Palmatolepis expansa Zone) and after an interval of beds nearly devoid of corals, an obvious change coincides apparently with the boundary as defined by conodonts. It is characterized by the appearance of Carboniferous genera with dominant plerophyllids and some forms indicative of the Lowermost Tournaisian. The very beginning of this Carboniferous fauna occurs at the base of the Siphonodella sulcata Zone. * [Listed are] 11 genera, [with] 13 species of which most are new and provisionally described under open nomenclature.¹";
- 875 s[872] = "BLESS M.J.M., BRAUCKMANN C., CONIL R., HERBIG H.-G., POTY E., RIBBERT K.-H., STREEL M., WEBER H.M. (1998).- Ein Devon / Karbon-Grenzprofil im Untergrund der Niederrheinischen Bucht bei Krefeld.- Fortschritte in der Geologie von Rheinland und Westfalen 37: 55-79.- FC&P 29-1, p. 48, ID=7039^Topic(s): geology; geology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian / Carboniferous; Geography: Germany, Krefeld area^[stromatoporooids were identified in a deep borehole through the Strunian (Tournai la) interval in the Krefeld area; Amphipora aff. pervesiculata Lecompte is identified and illustrated from these beds and Atelodictyon ratingense is identified from the basal limestones]¹";
- 876 s[873] = "STASINSKA A. (1973).- Tabulate corals from Dalnia in the Holy Cross Mountains.- Acta Geologica Polonica 23, 1: 83-88.- FC&P 6-2, p. 23, ID=0165^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian U / Carboniferous L; Geography: Poland, Holy Cross^Four new species of tabulate corals have been described from the neptunian dykes on Dalnia Hill (Wocklumeria or Gattendorfia Stage) in the Holy Cross Mts. These species, viz. Emmonsia dalniae sp.n., Michelinopora sulczewkii sp. n., Acaciapora infracarbonica sp.n. and Kueichowpora~polonica sp.n. are indicative of Lower Carboniferous age of the deposits they are contained in. [original summary]¹";
- 877 s[874] = "NOWINSKI A. (1976).- Tabulata and Chaetetida from the Devonian and Carboniferous of Southern Poland.- Palaeontologia Polonica 35: 125 pp., 21 figs, 27 pls.- FC&P 6-1, p. 23, ID=5513^Topic(s): ; Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian, Carboniferous; Geography: Poland S^The results of studies on Tabulata and Chaetetida from the Givetian, Frasnian and Viséan of the Cracow-Silesian Upland (Cracow Region) and from the Viséan of south-western part of the Holy Cross Mountains (Galezice) are presented. Forty-one species of Tabulata (orders: Favositida, Syringoporida, Auloporida) including eighteen new species, and six species of Chaetetida (family Chaetetidae) including three new species are described. Following new species are designated: Squameofavosites megasquamatus sp.n., S. (Dictyofavosites) pachyfavositoides sp.n., Emmonsia czarnieckii sp.n., Michelinia aseptata sp.n., Palaeacis orlei

sp.n., *Thamnopora striatoporoides* sp.n., *Alveolitella rarispinosa* sp.n., *Crassialveolites polonicus* sp.n., *Natalophyllum dubiensis* sp.n., *Tyrganolites frasnianus* sp.n., *Syringopora sinusoidea* sp.n., *S. subreticulata* sp.n., *S. tenuithecata* sp.n., *S. pachysiphonata* sp.n., *Multithecopora polonica* sp.n., *M. spinosa* sp.n., *Syringoporella longituba* sp.n., *Sinopora polonica* sp.n., *Cyclochaetetes tuberculosus* sp.n., *Chaetetella* (*Chaetetiporella*) *heterozoa* sp.n., *Ch. (Chaetetiporella) rotaiformis* sp.n. * It has been stated here that only two types of asexual reproduction occur in Tabulata: (1) intracalicular budding, and (2) longitudinal division. Three variants of intracalicular budding have been studied in detail: (a) intravisceral budding realized by wall outgrowths or invaginations in the wall of parent calices; (b) mural budding, and (c) extravisceral budding. The comparison of described Tabulata and Chaetetida assemblages with contemporaneous assemblages of Europe and Asia indicates that: (1) the Givetian assemblage of Debnik anticline is mixed and rather poor in species; (2) the Frasnian assemblage of Debnik anticline displays great similarity to West-European tabulate corals, (3) the Visean assemblage from the Holy Cross Mountains (Galezice), except of a few local components, is close to the West-European assemblages. The assemblages of Chaetetida from the Visean of the Holy Cross Mountains (Galezice) have many species common with East-European assemblages (Moscow Basin). [original abstract]^1";

- 878 s[875] = "BLIECK A., BRICE D., COURVILLE P., CRONIER C., DERYCKE C., HUBERT B., MISTIAEN B., NICOLLIN J.-P., ZAPALSKI M.K. (2006).- La Vie en Ardenne occidentale au Paléozoïque supérieur (Dévonien-Carbonifère, 416 a 299 Ma): paléobiodiversité, événements paléobiologiques, paléoenvironnements, paléobiogéographie.- Géologie de la France 2006, 1-2: 21-27.- FC&P 34, p. 93, ID=1349^Topic(s): paleontology; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: Devonian, Carboniferous; Geography: Ardenne^The Ardenne Massif is part of a complex of Palaeozoic outcrops between the Channel in the west and the Rhine river and beyond in the east. It has registered both the Caledonian and the Hercynian orogenies. Originally part of a terrane located north of the Gondwana supercontinent (Avalonia), it became an element of the southern margin of the Old Red Sandstone Continent (ORSC, also called Euramerica, Laureuropa, or Laurussia) in the Devonian and Carboniferous, when it suffered the effects of the Hercynian orogeny by collision of the ORSC and Gondwana. These global tectonic events, linked to climatic changes due to continental drift, had profound consequences on the living organisms of the Ardenne Massif. Here we focus on some aspects of a series of animal groups of western Ardenne, being elements of either the benthos (brachiopods, trilobites), or the reefal environments (tabulate corals, stromatopores), or the nekton (vertebrates, including the first tetrapods). When vertebrates ("fishes") and brachiopods were quite abundant as early as the base of the Devonian, mostly in siliciclastic facies, reefal organisms appear only in the Emsian, and become abundant in the Eifelian, with the development of a carbonate platform. Reefs or reef-like buildings occur up to the Early Carboniferous, where new fish assemblages are known. Trilobites occur often with brachiopod-bearing communities. The trilobite-rich locality of the "Mur des Douaniers"; at the former French/Belgian boundary, is an example of an early Eifelian Fossil-Lagerstätte, now protected as a Nature Reserve. [original abstract]^1";
- 879 s[876] = "ARETZ M., CHEVALIER E. (2007).- After the collapse of stromatopore-coral reefs - the Famennian and Dinantian reefs of Belgium: much more than waulsortian mounds.- Geological Society, London, Special Publications 275 [Alvaro J.J., Aretz M., Boulvain F., Munnecke A., Vachard D. & Vennin E. (eds): Palaeozoic Reefs and Bioaccumulations: Climatic and Evolutionary Controls]: 163-188.- FC&P 35, p. 90, ID=2411^Topic(s): reefs, extinctions; reefs; Systematics: ; Stratigraphy: Devonian

Fam / Carboniferous Tour; Geography: Ardennes^Reef development in the Famennian and Carboniferous successions of Belgium is more common than previously thought, and 10 broad time intervals of reef development can be differentiated. Reef formation is due to a variety of reef fabrics. Microbial communities are important for most reef frameworks, and often crucial for formation and stabilization of frameworks. Larger skeletal frameworks are rare. However, the interaction of skeletal bioconstructors and microbial communities is common, and results in successful reef building. However, microbial communities are still the backbone of these reefs. The majority of reefs are small, and a significant number formed in environments of restricted marine facies. Large reefs developed only in the late Tournaisian and late Viséan. Their initiation and formation was controlled by the geometry of the shelf. Three hierarchical levels, discussed below under the headings palaeobiology, local environment, and regional and global environment, controlled reef formation. Important limiting factors were relative water depth, sea-level oscillations, climate, shelf geometry and the needs of the individual bioconstructor. In general, Belgian reef diversity reflects the global picture, but significant differences can be recognized in the different time slices. In particular, the abundance of middle Viséan reefs is a unique feature. The onset of the Variscian orogeny terminated all reef development in Belgium, and reefs younger than late Viséan are unknown.^1";

- 880 s[877] = "GISCHLER E. (1992).- Das devonische Atoll von Iberg und Winterberg im Harz nach Ende des Riffwachstums.- Geol. Jb. A 129: 5-193.- FC&P 21-2, p. 57, ID=3357^Topic(s): reefs, post-reefal deposits; reefs; Systematics: ; Stratigraphy: Devonian Fam / Carboniferous Tour; Geography: Germany, Harz^Growth of the Devonian (Middle to Upper) atoll of Iberg and Winterberg in the Harz Mts. ceased towards the end of the Frasnian. After the death of the last reef-building organisms, from Famennian to Gattendorfia Stage (cul), the reef persisted in the shallow water environment. During this time there is a hiatus caused by nondeposition. Only conodonts accumulated in hollows on the old reef. Reworked conodonts in Dinantian limestones provide evidence for marine conditions during the Famennian and the time of the Gattendorfia Stage. An exception are neptunian dikes that opened during the Upper marginifera Zone (do II/III) and were filled with crinoidal limestones. [first fragment of extensive summary]^1";
- 881 s[878] = "ZAGORA I., ZAGORA K. (1999).- Zur Biostratigraphie des Oberdevons und Unterkarbons der Forschungsbohrung Pudagla 1/86 auf der Insel Usedom (NE-Deutschland).- Greifswalder Geowissenschaftliche Beiträge 6: 347-365; Greifswald.- FC&P 31-2, p. 31, ID=7129^Topic(s): geology; geology; Systematics: ; Stratigraphy: Devonian U - Carboniferous L; Geography: Germany NE^The borehole Pudagla 1/86 on the isle of Usedom is the most northwesterly situated deep well in Germany. This borehole is 7550m deep. Below younger deposits the Lower Carboniferous, the Upper Devonian and partially the Middle Devonian were pierced. The authors examined biostratigraphically the Lower Carboniferous and the Upper Devonian beds. The most important results of this work are published in this paper. The work involves investigations concerning foraminifers, tentacilites and calcareous algae. Contrary to the isle of Rügen, the Lower Carboniferous contains volcanic rocks. The age of volcanic activity is determinable by fossils biostratigraphically. [original abstract]^1";
- 882 s[879] = "KACHANOV E.I. (1975).- O svyazi periodichnosti razvitiya rannekamennougol'nykh korallov s osnovnymi podrazdeleniyami niznego karbona Urala [link between the periodicity in the development of the Early Carboniferous corals and the main stratigraphic units of the lower Carboniferous of the Urals].- Akademiya Nauk SSSR, Ural'skiy Nauchnyy Tsent, Inst. Geol. Geokhimii Trudy / 25:

- 94-109 / Smirnov, G. A. and Papulov, G. N., ed_s., Kamennougolnye otlozheniya na Urale /Carboniferous deposits of. the Urals.- FC&P 6-1, p. 26, ID=0056^Topic(s): phylogeny, biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Russia, Urals^Role of corals in identifying time-stratigraphic units^1";
- 883 s[880] = "KACHANOV E.I. (1976).- Granitsa mezhdru Turneyskim i Vizeyskim yarusami na Urale po korallam [boundary between Tournaisian and Visean in the Urals according to the corals].- Sovetskaya Geologiya 10: 68-77.- FC&P 6-1, p. 26, ID=0057^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Tour / Vise; Geography: Russia, Urals^^1";
- 884 s[881] = "KACHANOV E.I. (1976).- Korally nizhnego Namyura Urala v svyazi s problemoy Namyurskogo Yarusy [corals of the Lower Namurian deposits of the Urals in connection with the problem of the Namurian Stage].- Sovetskaya Geologiya 04: 118-124.- FC&P 6-2, p. 16, ID=0129^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Nam; Geography: Russia, Urals^^1";
- 885 s[882] = "WEYER D. (1975).- Korallen aus dem Obertournai der Insel Hiddensee.- Zeitschrift der geologischen Wissenschaften 3 (1975): 927-949.- FC&P 9-1, p. 37, ID=0271^Topic(s): taxonomy, new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Tour; Geography: Germany, Hidden Isl^Few small Tabulata and Rugosa corals of a "Zaphrentis phase" (Cyathaxonia facies) occur in Upper Tournaisian dark calcareous shales of boring Ruegen 2 in the North of Hiddensee island. The fauna has strong affinities to similar communities of the Lower Visean of Yorkshire. The genera Sutherlandia, Cladochonus, Pentaphyllum, Ufimia. Zaphrentites, Saleelasma?, Rylstonia and Cyathaxonia are recorded with new species Pentaphyllum hithis n.sp. Pentaphyllum hibernicum balticum n. subsp., and Rylstonia smythi n.sp.^1";
- 886 s[883] = "GORSKIY I.I. (1978).- Korally Srednego Karbona zapadnogo sklona Urala [Middle Carboniferous corals of the western slope of the Urals].- Korally srednego Karbona zapadnogo sklona Urala; Nauka, Moskva: 224 pp., 43 figs, 3 tab., 23 pls.- FC&P 8-2, p. 31, ID=0311^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Russia, Urals^The book deals with all Middle Carboniferous tabulate and rugose corals known from the western slope of the Ural mountains. The first chapter gives a brief history of investigation on Middle Carboniferous corals. The second chapter contains descriptions of the stratigraphical units and their position, together with the fossil assemblages (corals and others). Theme of the third chapter is the correlation of the coral faunas and also the stratigraphy with those from other regions of the USSR, Western Europe and China. The main part of the book contains descriptions of 65 species and subspecies. 43 are new ones together with one subgenus - Lophophyllum (Koninckophylloides) n.sub.-gen. [described are: Chaetetes, Multithe?????, Cladochonus, Amplexus, Hapsiphyllum, "Zaphrentis"; Caninia, Pseudotimania, Bothrophyllum, Campophyllum, Lophophyllidium, Lophophyllum (Lophophyllum), L. (Koninckophyllum), L. (Arachnolasma), L. (Pischerina), Lithostrotion, Orionastraea, Lithostrotionella, Lytvophyllum, Corwenia, Kionophyllum, Cravenia, Dibunophyllum; new subgenus: Lophophyllum (Koninckophylloides), with type species L. (K.) uralicum from the Middle Carboniferous of Bashkiria: p. 132, pl. 18: 2, 3]^1";
- 887 s[884] = "KACHANOV E.I. (1978).- Rasprostraneniye i Stratigraficheskoe znachenie rannenamyurskikh korallor na Urale [distribution and stratigraphic significance of the early Namurian corals of the Urals].- Akademiya Nauk SSSR, Ministerstvo Geologii SSSR, Mezhdvedomstvenny

- Stratigraficheskiy SSSR Trudy 6: 196-198.- FC&P 9-2, p. 40, ID=0315^Topic(s): distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Nam; Geography: Russia, Urals^1";
- 888 s[885] = "KACHANOV E.I. (1979).- Obyom i granitsy stratigraficheskikh podrazdeleniy Nizhnego Karbona Urala po korallum [intervals and boundaries of stratigraphic subdivisions of the Lower Carboniferous of the Urals based on corals].- Paleontologicheskaya kharakteristika osnovnykh podrazdeleniy karbona: 263-267; Nauka, Moskva.- FC&P 9-1, p. 40, ID=0316^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Russia, Urals^1";
- 889 s[886] = "RODRIGUEZ S. (1984).- Carboniferous corals from eastern Cantabrian Mountains: paleogeographic implications.- Palaeontographica Americana 54: 433-436 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 50, ID=1001^Topic(s): geography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Spain, Cantabrian Mts^1";
- 890 s[887] = "WEYER D. (2001).- Korallen im Unterkarbon Deutschlands.- Abhandlungen und Berichte für Naturkunde 23: 57-91.- FC&P 30-1, p. 28, ID=1541^Topic(s): distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Germany^Coral faunas (Rugosa, Heterocorallia, Tabulata) from the German Lower Carboniferous are summarized in a biostratigraphical-facial review based on literature, historical collections and unpublished materials.^1";
- 891 s[888] = "ARETZ M. (2001).- The Upper Viséan coral bearing horizons of Royseux - the development of an unusual facies in Belgian Early Carboniferous.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 86-095.- FC&P 30-1, p. 30, ID=1551^Topic(s): facies; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: Ardennes^Two coral horizons in the Anhé Formation (Upper Viséan) of Roseux are an unusual development for the Early Carboniferous of Belgium. The first horizon is found at the base, the second one at the top of the sequence +2. Only this sequence reflects a deepening-upward and a shallowing-upward trend, in contrast to the other sequences, which display a shallowing-upward trend only. Three evolutionary stages (stabilization, colonization, diversification) can be recognised in a biostrome forming the first coral horizon. A second biostrome principally constructed by Siphonodendron junceum forms the base of the complex second coral-horizon. This horizon is followed by pebbly rudstones and a coral thicket of Siphonodendron martini. Changes in the coral-fauna are connected with changes in the paleoenvironment, caused by sea level fluctuations and/or changes in the geometry of the seafloor. Corals of the genus Siphonodendron seem to have high ecological variability and distribution.^1";
- 892 s[889] = "POTY E. (1981).- The stratigraphy and paleobiogeography of Belgian Viséan corals.- Acta Palaeontologica Polonica 25, 3-4: 587-595.- FC&P 11-1, p. 47, ID=1761^Topic(s): stratigraphy, biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: Ardennes^Rugose coral assemblages may be used to characterize Belgian Viséan strata but there are some differences between contemporary coral assemblages from the Namur-Dinant basin and from the Vise area (Campine-Brabant basin). The Namur-Dinant basin was a relatively closed environment usually separated from the Vise area by some kind of barrier. Corals could have migrated into it from Ireland or are endemic. In contrast, the Vise area was an open environment with corals showing affinities with those of the British Central Province,

- the USSR and Africa.^1";
- 893 s[890] = "POTY E. (1981).- Corals [in: Bless M. J. M. et al. (eds): Preliminary report on Lower Tertiary-Upper Cretaceous and Dinantian-Famennian rocks in the boreholes Heugem-1/1a and Kastanjelaan-2 (Maastricht, the Netherlands)].- Mededelingen Rijks Geologische Dienst 35, 15: 345-351.- FC&P 11-1, p. 53, ID=1792^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Netherlands^1";
- 894 s[891] = "CONIL R., GROESSENS E., LALOUX M., POTY E., TOURNEUR F. (1990).- Carboniferous guide Foraminifera, Corals and Conodonts in the Franco-Belgian and in the Campine Basins. Their potentiality for widespread correlations.- Courier Forschungsinstitut Senckenberg 130: 15-30.- FC&P 20-1.1, p. 13, ID=2787^Topic(s): biostratigraphy; stratigraphy, zonations; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Ardennes, France N^In Belgium and adjacent areas, 38 biozones (including 43 subzones) can be distinguished in the interval ranging from the base of the Strunian to the top of Yeadonian. These are illustrated on three range charts. The subdivisions of the Dinantian are based essentially on conodonts, foraminifera and rugose corals. The Namurian stages (with the exception of the Pendleian) are recognized by means of goniatites and, from some limestone layers, of conodonts and foraminifera. The most of the biozones can be traced in Western Europe and a large number of them along the Eurasian province. The conodonts, foraminifera and rugose corals which can be used for widespread correlations in the Lower Carboniferous have been checked.^1";
- 895 s[892] = "RODRIGUEZ S., FALCES S., COZAR P. (1996).- Excursion A1. Cuenca Carbonifera de Los Santos de Mainiona.- In: T. Palacios & R. Gozalo (eds) Comunicaciones XII Jornadas de Paleontologia: 129-147. Universidad de Extremadura.- FC&P 27-1, p. 14, ID=3788^Topic(s): geology, excursion guide; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Spain SW^1";
- 896 s[893] = "RODRIGUEZ S. (1996).- Development of coral reef-facies during the Visean at Los Santos de Maimona, SW Spain.- Geological Society Special Publication 107 [Strogen P., Somerville I.D. & Jones G.L. (eds): Recent advances in Carboniferous geology]: 145-152.- FC&P 27-1, p. 14, ID=3789^Topic(s): coral reefs facies; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: Spain SW^1";
- 897 s[894] = "RODRIGUEZ S., FALCES S. (1994).- Coral distribution patterns in the Los Santos de Maimona Lower Carboniferous Basin (Badajoz, SW Spain).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 193-202.- FC&P 23-1.1, p. 18, ID=4075^Topic(s): distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Spain SW^The Los Santos de Maimona Basin comprises more than 1000 m of Upper Visean rocks of varying lithology, divided into 8 lithostratigraphic units, from 0 to 7. Clastic sediments and volcanic rocks are dominant in units 0, 2, 5 and 7; carbonate sediments are common in units 1, 3, 4 and 6, and scarce in units 2 and 5. The varied environments of the different units provide an excellent way of comparing the coral distribution effect of ecological factors. In addition, the order of appearance of lithostrotionids, similar to that in Belgium, allows precise dating of the units containing colonial Rugosa. Corals are common in all carbonate units. Unit 1 yielded abundant fasciculate (both rugose and tabulate), and solitary corals, mainly dissepimented. Massive and fasciculate colonial corals are common in Unit 3, in which solitary corals are scarce. In Units 4-6 solitary undissepimented corals are dominant; some colonial corals also occur.^1";

- 898 s[895] = "WEYER D. (1994).- Korallen im Untertournai-Profil von Drewer (Rheinisches Schiefergebirge).- Geol. Palaeont. westf. 29: 177-221. [in German, with English summary].- FC&P 23-2.1, p. 39, ID=4235^Topic(s): taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Tour; Geography: Germany, Rhenish Mts^Drewer (Rhenish Massif) and Saalfeld (Thuringian Massif) are the two most important German localities yielding corals of top Upper Famennian and basal Lower Tournaisian times, between the Hangenberg and the crenulata events (Upper praesulcata Zone to sandbergi Zone). The Anthozoan community of Drewer is reviewed (both Tabulata and Rugosa), and the following taxa are described: Cyathaxonia n.sp. A, n.gen. n.sp. (aff. Kabakovitchiella), Hebukophyllum priscum (Muenster 1840), Drewerelasma schindewolfi weyer 1973, Pentaphyllum walliseri n.sp., Commutia schmidti n.sp., Commutia longiseptata Fedorowski 1973. ^1";
- 899 s[896] = "KACHANOV E.I. (1970).- Corals and historical development of the Lower Carboniferous sea on the eastern slope of southern Urals.- In Voprosy geologii i magmatizma Urala [edited by AN SSSR, Uralskiy filiyal]: 54-57.- FC&P 2-1, p. 23, ID=4735^Topic(s): geography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Russia, Urals^^1";
- 900 s[897] = "ALTMARK M.S. (1973).- New Carboniferous corals from Tataria.- Paleontologicheskii Zhurnal 1973, 2: 41-45.- FC&P 2-2, p. 13, ID=4782^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Tataria^^1";
- 901 s[898] = "DEGTYAREV D.D. (1968).- Nouvelles espèces de Coraux du Carbonifère inférieur et supérieur de l'Oural Sud [New species of Corals from lower and upper Carboniferous of Southern Urals].- Trud. Sverdlovskogo ordena trudovogo Krasnogo znamenii gornogo Instituta im. V.V. Vakhrusheva 53: 40-50.- FC&P 2-2, p. 14, ID=4785^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Urals^^1";
- 902 s[899] = "DEGTYAREV D.D. (1973).- Main Steps in evolution of Carboniferous Corals from Urals.- Trud. Sverdlovskogo ordena trudovogo Krasnogo znamenii gornogo Instituta im. V.V. Vakhrusheva 93: 79-92.- FC&P 2-2, p. 14, ID=4786^Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Urals^^1";
- 903 s[900] = "DEGTYAREV D.D. (1973).- New species of Corals from the productive layers of Carboniferous of western Ural.- Trud. Inst. Geol. i geokh. AN SSSR, Ural&skij nauchnyj tsentr 82: 191-230.- FC&P 2-2, p. 14, ID=4787^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Urals^^1";
- 904 s[901] = "DEGTYAREV D.D. (1973).- Nouvelles espèces de Coraux de l'Ouralien occidental (Carbonifère) de l'Oural. [en russe] .- Trudy Inst. Geol. Geokhim. Sverdlovsk 82: 191-205.- FC&P 3-2, p. 37, ID=4943^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Urals^^1";
- 905 s[902] = "ALTMARK M.S. (1975).- Nouveaux coraux du Carbonifère de Tatarie.- Paleontologicheskii Zhurnal 1975, 2: 41-45.- FC&P 4-2, p. 55, ID=5253^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Russia, Tataria^[chaetetid Moskovia elabugensis Altmak sp.nov., Carcinophyllidae Gangamophyllum dobrolyubovae n.sp., Lithostrotionidae Stylostrophia porfirjevi n.sp., Lonsdaleiidae Lonsdaleia scharonovi n.sp.]^1";
- 906 s[903] = "ALTMARK M.S. (1975).- Ekologicheskiye osobennosti i usloviya sushchestvovaniya korallor v Rannekamennougol&nom bassejne

- Tatarii. [ecological particularities and living conditions of corals in the Early Carboniferous basin of Tataria; in Russian] .- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 37-48.- FC&P 5-1, p. 28, ID=5344^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Russia, Tataria^[distinguishes 3 ecological groups of corals and relates them to paleogeographic zones]^1";
- 907 s[904] = "HOFFMAN N., LINDERT W., WEYER D., ILLERS K.-H. (1975).- Zum Unterkarbon-Vorkommen auf den Inseln Rügen und Hiddensee.- Zeitschrift der geologischen Wissenschaften 03, 7: 851-873.- FC&P 5-1, p. 29, ID=5352^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Germany, Rügen^[stratigraphic distribution of coral genera and species; illustrates 3 species]^1";
- 908 s[905] = "DEGTJAREV D.D. (1975).- Fauna korallov i nekotorye voprosy stratigrafii srednego karbona Urala. [corals and some stratigraphical questions of the Middle Carboniferous of the Urals; in Russian].- Trudy Inst. Geol. Geokhim. AN SSSR, Ural. Nauch. Centr. 121, Sbornik po voprosam stratigrafii 25 [G.A. Smirnov & G.N. Papulov (eds): Kamennougolnye otlozheniya na Urale]: 138-149.- FC&P 6-1, p. 25, ID=5519^Topic(s): biostratigraphy; corals, stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Russia, Urals^[summary of geographic and stratigraphic distribution and usefulness of corals for identifying time-stratigraphic units]^1";
- 909 s[906] = "RODRIGUEZ S., MORENO-EIRIS E. (1987).- Microbiofacies de algas y corales del Kasimoviense del norte de los Picos de Europa, N de Espana.- Acta Geologica Hispanica 21-22: 521-527.- FC&P 21-1.1, p. 47, ID=3236^Topic(s): microfacies; microfacies; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Carboniferous Kas; Geography: Spain, Cantabrian Mts^^1";
- 910 s[907] = "POTY E. (1977).- Donnees nouvelles sur les heterocoralliaires du Dinantien Belge.- Annales de la Societe geologique de Belgique 100: 233-243.- FC&P 8-1, p. 53, ID=0227^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: Ardennes^^1";
- 911 s[908] = "POTY E. (1978).- La croissance de Heterophyllia ornata: un modele pur l'ontogenie des heterocoralliaires.- [Bulletin] Academie des Sciences de Paris 287: 687-688.- FC&P 8-1, p. 53, ID=0228^Topic(s): growth mode; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous; Geography: Ardennes^^1";
- 912 s[909] = "MONTENARI M., LEPPIG U., WEYER D. (2002).- Heterocorallia from the Early Carboniferous of the Moldanubian Southern Vosges Mountains (Alsace, France).- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 224, 2: 223-254.- FC&P 31-2, p. 40, ID=1677^Topic(s): taxonomy, ecology; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: France, Vosges^within the Mid European Variscian Belt, Heterocorallia have been described from the Rhenohercynian, the Saxothuringian and Upper Austro-Alpine. A section from the Early Carboniferous of the Moldanubian Southern Vosges Mountains has yielded Heterocorallia, which are here described for the first time: Hexaphyllia sp. 1, Hexaphyllia sp. 2, Heterophyllia sp. and Heterophyllia aff. ornata M'Coy, 1849. Their occurrence in calciblastic turbidites is an evidence for a Moldanubian carbonate platform. The fragile character of heterocoral polypars in general might be an indication for low water energy environments within the platform. A comparison from Rhenohercynian, Saxothuringian and Moldanubian Heterocorallia results in good correspondence concerning occurring taxa. Together with smaller benthic forminifera it is possible to date the Heterocorallia bearing sediments from the Southern Vosges as Arundian (Viséan).^1";

- 913 s[910] = "RODRIGUEZ S., COMAS-RENGIFO M.J. (1989).- Los Heterocorales del Carbonifero de los Santos de Maimona (Badajoz, SW de Espana).- Coloquios de Paleontologia [COL-PA] 42: 61-81. [in Spanish, with English summary].- FC&P 19-1.1, p. 47, ID=2656Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous; Geography: Spain SWHeterocorals found in several sections of the Carboniferous from Los Santos de Maimona area yield always at the same stratigraphic level. The abundant specimens from Sierra Cabrera outcrops correspond to a population with a high morphological variability. Fourtyfour percent of the specimens have more than 6 septa (7-9) and consequently they cannot be included definitively into Hexaphyllia. However, most of the characteristics of the specimens are similar to Hexaphyllia mirabilis. The validity of this genus is questionable.^1";
- 914 s[911] = "CONIL R., GROESSENS E., LALOUX M., POTY E. (1989).- La limite Tournaisien / Viseen dans la Region-Type.- Annales de la Societe geologique de Belgique 112, 1: 177-189.- FC&P 18-2, p. 31, ID=2473Topic(s): geology; geology, stratigraphy; Systematics: Foraminifera Cnidaria Chordata; Rugosa; Stratigraphy: Carboniferous Tour / Vise; Geography: ArdenneThe distribution of Foraminifera, Conodonts and Rugose Corals are schematized and briefly described for the Tournaisian and the lower part of the Visean in Belgium, in order to give some details about the stratigraphy around the Tournaisian-Visean boundary. The different positions of this one are specified.^1";
- 915 s[912] = "WEYER D. (1980).- Zwei Ufimia-Arten aus dem Erdbacher Kalk im Rheinischen Schiefergebirge (Anthozoa, Rugosa; Unterkarbon).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 2: 3-25.- FC&P 9-2, p. 43, ID=0339Topic(s): new taxa; Rugosa, Ufima; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Germany, Rhenish Mts^^1";
- 916 s[913] = "FONTAINE H. (1980).- Sychnoelasma urbanowitschi Stuckenber, espece corallienne du Carbonifere de Normandie, de la Sarthe et du Morvan.- Bulletin Societe Histoire naturelle d'Autun 95: 19-26.- FC&P 9-2, p. 43, ID=0346Topic(s): ; Rugosa, Sychnoelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: France, ArmoriqueMany samples of sychnoelasma urbanowitschi have been collected from Carboniferous limestone in Normandy, Sarthe and Morvan, showing the wealth of this species in the Lower Visean of the northern half of France.^1";
- 917 s[914] = "POTY E. (1982).- Les tetracoralliaires du calcaire de Vinalmont.- Bulletin de la Societe belge de Geologie 91, 3: 153-156.- FC&P 13-1, p. 40, ID=0477Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Ardenne^^1";
- 918 s[915] = "POTY E. (1982).- Deux nouvelles especes de Tetracoralliaire du sondage de Kastanjelaan-2 a Maastricht, Pays-Bas.- Natuur-historisch Maandblad 71, 3: 54-58.- FC&P 15-2, p. 32, ID=0687Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Netherlands, Maastricht^^1";
- 919 s[916] = "RODRIGUEZ S. (1983).- Caracteres microestructurales de los corales rugosos del Carbonifero de la Cordillera Cantabrica.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 81, 1-2: 85-98.- FC&P 15-2, p. 32, ID=0692Topic(s): microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Spain, Cantabrian Mts^^1";
- 920 s[917] = "VUILLEMIN C. (1985).- Delepinella anastomosa nov. gen., nov. sp., Rugosa (Tetracoralliaire) du Tournaisien superieur du Massif Armoricain (France).- Geologica et Palaeontologica 19: 39-49.- FC&P 15-1.2, p. 31, ID=0813Topic(s): new taxa;

- Rugosa, Delepinella; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: France, Armorique^The rugose coral Delepinella anastomosa nov. gen., nov. sp., is described from the Upper Tournaisian limestones of the Laval Synclinorium (Armorican Massif - France). Delepinella shows many morphological features in common with genera of the family Aulophyllidae. Belonging to the "Caniniid-Clisiophyllid" fauna (D. Hill 1938), D. anastomosa probably indicates a shallow water environment. A part of the Tournaisian corals fauna from the Laval Synclinorium seems to be endemic.^1";
- 921 s[918] = "RODRIGUEZ S. (1985).- Bioestratigrafia de los corales rugosos de Asturias.- Tenth International Congress of Carboniferous Stratigraphy and Geology, Compte Rendu 1: 327-332.- FC&P 15-1.2, p. 28, ID=0882^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Spain, Cantabrian Mts^Detailed studies on Rugose Corals of the Carboniferous from Cantabrian Mountains is making evident these fossils can be very useful in biostratigraphy. Several coral associations characterising some steps from Serpukhovian, Upper Bashkirian-Lower Vereyan, Upper Kashirian-Lower Podolskian, Upper Podolskian and Kasimovian. Further, several species can be considered characteristic because their broad geographic and restricted stratigraphic distributions. These species must be the basis of the biozonation with corals of the Carboniferous from Cantabrian Mountains.^1";
- 922 s[919] = "BOLL F.-C. (1985).- Rugose Korallen aus der Flachwasser-Fazies im Oberkarbon des Kantabrischen Gebirges (Nordspanien).- Palaeontographica A190: 1-81.- FC&P 14-2, p. 31, ID=0945^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Spain, Cantabrian Mts^(Rugose corals of the shallow-water-facies in the Upper Carboniferous of the Cantabrian Mountains (N. Spain)On several expeditions (1975-78) to the Carboniferous in the Cantabrian Mountains, the author collected many rugose corals of the shallow-water-facies (corals with dissepiments). This collection has been completed by material from our team F 10 of the "Sonderforschungsbereich 53". In the palaeontological part 48 species and subspecies of 20 genera are described. Almost half of the forms belong to new species. Altogether one genus and 22 species and subspecies have been established: Kullmannophyllum n.gen. with the typespecies K. triolloense n.sp. and species and subspecies of the following genera. Namurian A: Lithostrotion, Dorlodotia, Kullmatmophyllum n.gen., Lonsdaleia, Gangamophyllum; Namurian B/C: Dorlodotia, Caninia, westphalian A: Caninia, Skolekophyllum, Kionophyllum; westphalian C/D: Dorlodotia, Koninckophyllum, Caninia, Bothrophyllum, Ivanovia, Kionophyllum; Lower Stephanian: Corwenia, Kionophyllum. Also problems of coral taxonomy, evolutionary trends and the significance of environmental influences are discussed.^1";
- 923 s[920] = "RODRIGUEZ S. (2004).- Taphonomic alterations in upper Viséan dissepimented rugose corals from the Sierra del Castillo unit (Carboniferous, Córdoba, Spain).- Palaeogeography, Palaeoclimatology, Palaeoecology 214, 1-2: 135-153.- FC&P 33-2, p. 12, ID=1104^Topic(s): taphonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Spain SW^Dissepimented rugose corals are common in the Sierra del Castillo Unit (upper Viséan from SW Spain). A complete taphonomic study has been made of the corals from three localities, each representing different environmental conditions: Antolín rocks are interpreted as mid-ramp and contains mainly reworked corals from reefs, Sierra del Castillo rocks are regarded as originating on a shallow-water platform, and Sierra de la Estrella rocks are typical of the middle to outer platform. The occurrence and distribution of taphonomic features are different at each outcrop and even in each bed, but a general

temporal scheme with the timing of all processes is proposed. Borings, encrustations, fragmentation, abrasion, recrystallization, compression, stylolitization, silicification, cleavage, dissolution, and ferruginization are documented. Some processes which are generally regarded as biostratinomic (borings and encrustations) and even as fossil diagenetic (cementation) began before the death of the polyps. Other processes occurred only during the biostratinomic phase (abrasion) or during the fossil diagenetic phase (silicification, stylolitization, cleavage), but many processes occurred during both the biostratinomic and fossil diagenetic phases (fragmentation, cementation).¹¹;

- 924 s[921] = "GOMEZ-HERGUEDAS A., RODRIGUEZ S. (2005).- Serpukhovian (Mississippian) rugose corals with dissepiments from the La Cornuda section (Córdoba, Spain).- *Coloquios de Paleontología* 55: 51-101.- FC&P 34, p. 32, ID=1232^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Serp; Geography: Spain, Cordoba^This paper deals with the dissepimented rugose corals from La Cornuda (Córdoba, Spain). The section is composed of terrigenous and carbonate sediments, Serpukhovian in age (Early Namurian). Rugose corals have been identified only in units 1 and 7; 23 species that correspond to 13 genera belonging to 4 suborders, have been identified. A new genus and two new species included in the subfamily Amygdalopyllinae are described here: *Amygdalophyllum cornudensis* sp.nov. and *Guadialtia pseudocoloniae* gen. nov., sp.nov. Two endemic genera belonging to the Lithostrotionidae and the Axophyllidae are maintained in open nomenclature owing to the scarcity of the material.¹¹;
- 925 s[922] = "RODRIGUEZ S., HERNANDO J.M., RODRIGUEZ-CURT L. (2004).- Study on the upper Viséan cyathopsids (Rugosa) from the Sierra del Castillo Unit (Córdoba, Spain).- *Coloquios de Paleontología* 54: 69-82.- FC&P 34, p. 35, ID=1239^Topic(s): dissepimentate, taxonomy; Rugosa dissepimented; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Spain, Cordoba^Dissepimented rugose corals are frequent in the Sierra del Castillo Unit (Guadiato Area, Ossa Morena) which is composed mainly of Viséan limestones. Cyathopsid corals from Sierra del Castillo, Sierra de la Estrella (both near Espiel, Córdoba) and Antolín (near Penarroja, Córdoba) have been studied. Seven species belonging to the genera *Siphonophyllia*, *Caninia*, *Pseudozaphrentoides*, *Haplolasma* and *Caninophyllum* have been described.¹¹;
- 926 s[923] = "ARETZ M. (2002).- Rugose corals and associated carbonate microfossils from Brigantian (Mississippian) of Castelsec (Montagne Noire, Southern France).- *Geobios* 35, 2: 187-200.- FC&P 31-2, p. 42, ID=1683^Topic(s): microfossils, taxonomy; Rugosa, microfossils; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: France, Montagne Noire^The disused quarry east of Castelsec offers a view of shallow-marine carbonates of the poorly known Uppermost Mississippian of the Montagne Noire. At Castelsec, sections are studied in two characteristic facies types (bioclastic wackestone and microbial dominated boundstone) of the Upper Mississippian. The succession is rich in rugose corals and carbonate microfossils. Six genera with seven species belonging to a rugose coral fauna consisting of at least eight genera with several species are described herein; *Dibunophyllum castelsecensis* sp.nov. is described as new. Twenty-seven carbonate microfossils of different groups have been identified. The Castelsec succession is Brigantian in age, based on the stratigraphic occurrence of rugose corals, foraminifers, and calcareous algae observed in both sections. The rugose coral fauna shows relationships with the well-known fauna of northwestern Europe and the Ouralian-Asian Province. Typical elements of northwestern Europe are missing at Castelsec and vice versa. The differentiation between north and south is interpreted as responses to different palaeolatitudes and tectonic

- settings.^1";
- 927 s[924] = "ARETZ M. (2002).- Habitatanalyse und Riffbildungspotential kolonialer rugoser Korallen im Unterkarbon (Mississippian) von Westeuropa.- Kölner Forum für Geologie und Paläontologie 10: 1-155.- FC&P 31-2, p. 51, ID=1684^Topic(s): ecology, reefs; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Europe W^The habitats of colonial rugose corals - reef coral fauna of Hill 1938 - are investigated in the upper Lower Carboniferous (Mississippian) of Western Europe. The studied area consists of two geotectonic realms, the stable southern shelf of Laurussia (Belgium, Great Britain, Ireland) and the southern shelf of Armorica (Southern France), which has been reworked during the Variscan orogeny. Based of the diversity and frequency of colonial taxa, the distances of the colonies, the lateral and vertical dimensions of the single corals occurrences, and their facies setting, six gradually intermerging ecotypes are differentiated: A: level-bottom communities, B: coral meadows, C: biostromes, D: mound-dwelling communities, E: bioherms, divided into the subtypes corals-microbe reefs (E1) and coral reefs (E2) and F: reef complexes. This division is applicable to coral-bearing bioconstructions on a world-wide scale.The analysis of the habitats shows that colonial rugose corals actively contributed to reef-formation in bioherms and reef complexes, and partly in biostroms. Coral-dominated bioconstrcutions are more frequent than hitherto and occur in all shallow-water carbonate systems studied. Colonial rugose corals are dwellers in various microbial shallow-water mounds.The potential of rugose corals to form bioconstructions is mostly limited to frame-building due to their inability to encrust substrates. Only exceptionally intergrowing cerioid rugose corals actively stabilized certain bioconstructions. Normally, encrusting and binding was achieved by associations of microbes, algae, and bryozoans. This fundamental functional difference provide the differentiation of coral-microbe reefs and coral reefs.Generally, Mississippian coral-dominated bioconstructions consist only of a pioneer stage; a true diversification is never observed and domination stages developed rarely. The bioconstrcutions had been limited to one 4th or 5th order sequence. Their growth was restricted by a complex system of limiting factors. High-frequency eustatic sea-level fluctuations and/or siliciclastic input and biotic competition are the most important factors on a local scale. Rapidly varying, they caused only briefly ecological niches resulting in small and undifferentiated biotic buildups. The faunal turnover at the Mid-Mississippian Boundary caused final collapse of the coral-dominated Late Mississippian bioconstructions.The study of coral-dominated bioconstructions also supplied new litho- and biostratigraphic data in the western Europe Asbian to Serpukhovian. The monography also includes a taxonomic description of the important rugose corals in late Lower Carboniferous bioconstructions.^1";
- 928 s[925] = "RODRIGUEZ S., HERNANDO J.M., SAID I. (2001).- Estudio de los corales con aulos del Viseense (Carbonífero) de la Unidad de la Sierra del Castillo (Área del Guadiato, SO de Espana).- Coloquios de Paleontología 52: 85-94.- FC&P 31-2, p. 45, ID=1690^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Spain SW^Viséan rugose corals with aulos are studied in this paper. Corals are recorded in four localities from three areas (Sierra de Castillo, Sierra de la Estrella and Peñ arroya) at the Guadiato Area (Ossa Morena). Three species belonging to two genera have been identified and described in detail: solenodendron furcatum, solenodendron horsfieldi and Aulokoninckophyllum carinatum. Aulokoninckophyllum carinatum and solenodendron horsfieldi are recorded for the first time in Spain. Microstructural features of solenodendron are described for the first time. solenodendron possesses septa with fibrous (water-jet)

- microstructure. On the contrary, *Aulokoninckophyllum* shows trabecular microstructure of the septa in the dissepimentarium. The trabeculae are disposed as a fan system. When the septa reach the tabularium the trabeculae are substituted by fibrous microstructure with water-jet disposition. Microstructural differences between *Solenodendron* and *Aulokoninckophyllum* allow to propose evolutive origin for these two genera. ^1";
- 929 s[926] = "FEDOROWSKI J. (2001).- Subclass *Rugosa* Milne-Edwards et Haime, 1850. [in Polish].- *Geology of Poland*, Vol. 3: Atlas of index and charactersitic fossils: Pt 1c, fasc. 1 [L. Malinowska (ed.)]: Upper Paleozoic - Carboniferous fauna: pp 93-136, pls 28-61. ISBN 83-86986-58-1.- FC&P 32-1, p. 25, ID=1724^Topic(s): atlas of fossils; *Rugosa*; Systematics: *Cnidaria*; *Rugosa*; Stratigraphy: *Carboniferous*; Geography: *Poland*^1";
- 930 s[927] = "FEDOROWSKI J. (2001).- Subclass *Dividocorallia* Fedorowski, 1991. [in Polish].- *Geology of Poland*, Vol. 3: Atlas of index and charactersitic fossils: Pt 1c, fasc. 1 [L. Malinowska (ed.)]: Upper Paleozoic - Carboniferous fauna: pp 136-138, pls 62, 63. ISBN 83-86986-58-1.- FC&P 32-1, p. 25, ID=1725^Topic(s): atlas of fossils; *Rugosa*; Systematics: *Cnidaria*; *Rugosa*; Stratigraphy: *Carboniferous*; Geography: *Poland*^1";
- 931 s[928] = "RODRIGUEZ S. (2001).- Life strategies of solitary undissepimented rugose corals from the upper member of the Picos de Europa Formation (Moscovian, Carboniferous, Cantabrian Mountains, NW Spain).- *Lethaia* 34, 3: 203-214.- FC&P 32-1, p. 26, ID=1728^Topic(s): life strategies; *Rugosa*; Systematics: *Cnidaria*; *Rugosa*; Stratigraphy: *Carboniferous Mos*; Geography: *Spain, Cantabrian Mts*^Rugose corals belonging to the orders *Metriophyllina*, *Stereolasmitina* and *Plerophyllina* have been identified in the upper member of the Picos de Europa Formation (Moscovian). Corals occur in crinoidal limestones containing common bryozoans. The coral assemblage shows a high diversity. Mode of preservation and spatial distribution of corals demonstrate close relationships with biogenic components such as crinoids, bryozoans, brachiopods and bivalves. The morphology of corals provides valuable data for identifying their life strategies, for which have been identified: *liberosessile* with straight growth, *liberosessile* with curved growth, *fixosessile* with straight growth and *fixosessile* with curved growth. Most corals from the Picos de Europa Formation appear to have been *fixosessile* with straight growth; they attached themselves to bioclasts and subsequently developed radiceform processes (mainly talons) to remain straight.^1";
- 932 s[929] = "RODRIGUEZ S., HERNANDO J.M., RODRIGUEZ-CURT L. (2002).- Estudio de los corales *Lithostrotionidos* del *Viseense* (*Misisipiense*) de la Unidad de la Sierra del Castillo (Córdoba, España).- *Revista Española de Paleontología* 17, 1: 13-36.- FC&P 32-1, p. 26, ID=1729^Topic(s): ; *Rugosa*; Systematics: *Cnidaria*; *Rugosa*; Stratigraphy: *Carboniferous Vise*; Geography: *Spain, Cordoba*^Viséan rugose corals belonging to the family *Lithostrotionidae* are studied in this paper. Corals were recorded at seven localities from three different areas (Sierra del Castillo, Sierra de la Estrella and Antolín; Cordoba) at the Guadiato Area (Ossa Morena). Ten species belonging to two genera have been identified and described in detail: *Lithostrotion vorticale* (Parkinson, 1808), *Lithostrotion araneum* (McCoy, 1844), *Siphonodendron junceum* (Fleming, 1828), *Siphonodendron pauciradiale* (McCoy, 1844), *Siphonodendron irregulare* (Phillips, 1836), *Siphonodendron intermedium* Poty, 1981, *Siphonodendron martini* (Milne-Edwards & Haime, 1851), *Siphonodendron sociale* (Phillips, 1836), *Siphonodendron scalebreense* Nudds & Somerville, 1987 and *Siphonodendron aff. martini*. The latter represents an ecological variety of the nominal species adapted to reefal environment. Microstructural features of all species are described in detail. *Siphonodendron scalebreense* is recorded for the

- first time out from British Islands.^1";
- 933 s[930] = "HERBIG H.-J., MAMET B. (1983).- Stratigraphy of the Limestone Boulders, Marbella Formation (Betic Cordillera, Southern Spain).- C.R. 10eme Int. Strat. Geol. Carbonifere, Madrid, 1983, 1: 199-212.- FC&P 16-1, p. 60, ID=1962^Topic(s): biostratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Spain, Betic Cordillera^The following rugose corals are mentioned: Actinocyathus sp., A. floriformis crassiconus (McCoy), Axophyllum sp., A. densum (Ryder), A. latevesiculosum (Salee) [figured], A. aff. A. pseudokirsopianum Semenoff-Tian-Chansky, Clisiophyllum garwoodi (Salee) [figured], Dibunophyllum bipartitum (McCoy), Gangamophyllum boreale Gorsky [figured], Kizilia concavitabulata Degtyarev [figured], Koninckophyllum interruptum Thomson & Nicholson [figured], Lonsdaleia corbariensis Semenoff-Tian-Chansky & Ovtracht [figured], Palaeosmia murchisoni E. & H. forma stutchburyi E. & H., Pseudozaphrentoides juddi (Thomson) [figured], Siphonodendron "irregulare" (Phillips) and S. pauciradiale (McCoy) [figured].^1";
- 934 s[931] = "RODRIGUEZ S., SANDO W.J., KULLMANN J. (1986).- Utility of corals for biostratigraphic and zoogeographic analyses of the Carboniferous in the Cantabrian Mountains, Northern Spain.- Trab. Geol. Univ. Oviedo 16: 37-60.- FC&P 16-1, p. 62, ID=1966^Topic(s): biostratigraphy, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Spain, Cantabrian Mts^Systematic studies of Carboniferous corals in the Cantabrian Mountains of northern Spain have progressed to the point where they are quite useful for biostratigraphic and zoogeographic analyses. This report presents a distribution analysis based on 1369 specimens assigned to 163 species representing 56 genera of rugose corals. A preliminary biostratigraphic zonation based on generic ranges is useful to identify series or stages of Carboniferous in the area studied. Twenty-nine genera are known only from one series or stage, 25 genera are not known to occur below a particular series or stage, and 16 genera are not known to occur above a particular series or stage. Future studies should be directed toward construction of a time scale independent series of stage boundaries. Coral abundance, frequency of occurrence, generic and specific diversity, influx of new genera, and morphotype diversity, all known maxima in Namurian A-B, Westphalian A, and Westphalian D, and intervening minima in Visean, Namurian C, Westphalian B, and Cantabrian-Stephanian A. Because most of the rugose coral genera originated outside the area studied, these maxima and minima seem to represent invasions and retreats of the coral fauna related with changes in coral habitats. Although there is a general correlation of increased abundance and diversity with regression of the sea through Late Carboniferous time in northern Spain, smaller cyclical variations in abundance and diversity are related to increases in habitat size (ecospace) and habitat diversification. A general migration of corals from deep-water environments to generally shallow water environments through late Carboniferous time is similar to pattern seen in the Lower Carboniferous of the western conterminous USA and may be related to larger regional events. Zoogeographic comparisons with North America and the Donetz Basin of the USSR by means of similarity index (SI) suggest that a sea way along the juncture of the African, South American, and North American plate provided a communication route for coral gene flow between Spain and North America during the entire Late Carboniferous.^1";
- 935 s[932] = "VUILLEMIN C. (1986).- Les Tetracoralliaires (Rugosa) du Carbonifere inferieur du Massif Armoricaain (France).- Rennes Univ. I Diss. [in French; unpublished?].- FC&P 16-2, p. 20, ID=2047^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: France, Armorique^Après avoir defini le cadre geologique et la lithologie au

Carbonifere inferieur, la terminologie et la classification utilisees pour les Tetracoralliaires sont precisees. L'etude systematique porte sur des nombreux specimens, dont les caracteres externes et internes sont decrits et figures. Des methodes d'analyse biometrique ont ete utilisees. Les taxons etudies appartiennent a l'ordre Stauriida et se repartissent dans huit sous-ordres, quatorze familles: Stauriina (Famille Amplexidae), Metriophyllina (Famille Cyathaxoniidae), Stereolasmatina (Familles Antiphyllidae, Hapsiphyllidae, Zaphrentoididae), Plerophyllina (Familles Verbeekiellidae, Lophophyllidiidae, Hexalasmataidae), Caniniina (Familles Cyathopsidae, Uralinidae), Lonsdaleiina (Famille Axophyllidae), Aulophyllina (Familles Palaeosmiliidae, Aulophyllidae), Lithostrotionina (Famille Lithostrotionidae) et sous-ordre et famille incertains; vingt-neuf genres dont quatre nouveaux (Nominoephyllum, Delepinella, Solemnophyllum, Sabolia). ainsi que quarante-cinq especes dont douze nouvelles. Ce chapitre comporte egalement des donnees sur l'insertion septale chez Delepinella anastomose et sur quelques tendances evolutives relatives aux genres Siphonophyllia et Aulokoninckophyllum. La partie biostratigraphique est consacree a la repartition verticale des genres et des especes. Un essai de biozonation a ete tente pour les especes d'age tournaisien superieur a viseen moyen. Enfin, divers aspects de la paleoecologie des Tetracoralliaires ont etes traites. L'environnement sedimentaire regit la repartition des differentes especes. L'analyse paleoautoecologique montre que suivant leurs formes externes et leurs caracteres internes, certains polypiers peuvent caracteriser un environnement particulier. Differentes associations a Tetracoralliaires ont ete reconnues, semblant se repartir en fonction d'un gradient bathymetrique; les differences observees aux niveaux generique et specifique resulteraient de l'influence des facteurs de l'environnement (turbulence de caux, nature des sediments). Dans le meme chapitre, des comparaisons sont tentees avec les faunes d'autres regions (Europe occidentale, Nord de l'Afrique, Europe orientale, Asie). De fortes similitudes au niveau specifique et generique apparaissent entre le domaine armoricain, l'Europe occidentale, le Nord de l'Afrique et meme la Siberie (Bassin de Kuznetsk).¹¹;

- 936 s[933] = "WEYER D. (1987).- *Richrathina* gen. nov. (Anthozoa, Rugosa) aus dem Unterkarbon des Rheinischen Schiefergebirges.- *Abhandlungen und Berichte für Naturkunde und Vorgeschichte* 13: 69-76.- **FC#038;P 16-2**, p. 22, ID=2049^Topic(s): new taxa; Rugosa, *Richrathina*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Germany, Rhenish Mts^The proposed new genus of Antiphyllidae, with type species *Richrathina pauli* sp.nov., is close to *Claviphyllum* and occurs in a *Cyathaxonia* facies community of basal Lower Visean age (Richrath Limestone) near Sondern (Velbert Anticline).¹¹;
- 937 s[934] = "WEYER D. (2006).- *Cyathoclisia* Dingwall 1926 (Anthozoa, Rugosa) im Unterkarbon des Rheinischen Schiefergebirges.- *Abhandlungen und Berichte für Naturkunde* 29: 23-71.- **FC#038;P 35**, p. 60, ID=2357^Topic(s): Rugosa, *Cyathoclisia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Germany, Rhenish Mts^The Late Tournaisian (Early Chadian, *Levitusia humerosa* Zone, Cromford Formation) of Ratingen (Velbert Anticline, Rhenohercynian Zone of Variscides) yields *Cyathoclisia* (*Cyathoclisia*) *modavensis* (Salée 1913). There are only two further localities of this common index coral in Germany: an olistolith of Carboniferous limestones within the Bavarian facies of Culm measures in Upper Franconia (Saxothuringian Zone of Variscides), and a borehole on the Baltic Sea island of Rügen (carbonate ramp, southern margin of Baltoscandia).The amygdalophyllid genus widely distributed in the late Early Tournaisian (late Hastarian) and in the Late Tournaisian (Ivorian, Early Chadian) of Europe and Asia is provisionally subdivided

into two subgenera: *Clisaxophyllum* Grabau in Chi 1931 (minor septa short, never contracline) and *Cyathoclisia* Dingwall 1926 (minor septa long and contracline, with biform tabulae, sometimes with diplosepta arising in maturity), but the actual obsolete taxonomy of the genus and the 27 named species requires much additional revisions. The rare German materials and a comparative English sample from Clitheroe (Lancashire) give first doubts about the current, since 1981 accepted synonymy of *Cyathoclisia tabernaculum* Dingwall 1926 and *Cyathoclisia modavensis* (Salée 1913). Emended future diagnosis of specific taxa are in strong need of studied populations and revised type specimens, especially of the extremely rich Russian *Cyathoclisia* communities; here the classical collection of Ludwig (1862) from the Ural Mountains is well preserved in the university of Göttingen. ^1";

- 938 s[935] = "POTY E. (1989).- Distribution and palaeogeographic affinities of Belgian Tournaisian rugose corals.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 267-273.- FC&P 20-1.1, p. 14, ID=2544^Topic(s): distribution, geography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: Ardennes^New research in the Tournaisian of Belgium and adjacent areas has yielded rugose coral faunas that are generally more diversified than those from the classical Tournai area. These faunas permit definition of three Tournaisian coral zones. The oldest one, whose base coincides with the Devonian-Carboniferous boundary, includes *Melanophyllum*, *Caninia tregaensis*, *Saleelasma*, *Siphonophyllia*, and *Cyathaxonia*. Some of the corals of this zone show affinities with those of Sando & Bamber's Zone I in the Western Interior Province of North America and also with corals from the lower Tournaisian of the USSR. The second zone is characterized by an abundant but low diversity fauna including *Lophophyllum* and *Siphonophyllia*. The youngest coral zone has the most diverse fauna with *Caninophyllum*, *Uralinia*, *Siphonophyllia*, *Cyathoclisia* and *Solenodendron*. Corals of this zone are known in the upper Tournaisian of Asia (USSR and China). ^1";
- 939 s[936] = "VUILLEMIN C., SEMENOFF-TIAN-CHANSKY P. (1987).- Description des types de *Caninia gigantea* Michelin, Tetracoralliaires du Carbonifere du Massif Armoricain.- Bulletin du Museum national d'histoire naturelle, ser. 4, 9, 1987, sec. C, 3: 257-289.- FC&P 19-1.1, p. 43, ID=2617^Topic(s): type material redescribed; Rugosa, *Caninia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: France, Armorique^1";
- 940 s[937] = "RODRIGUEZ S., FALCES S. (1992).- Corales rugosos.- Coloquios de Paleontologia 44 [Rodriguez S. et al. (eds) - Analisis Paleontologico y Sedimentologo de la Cuenca Carbonifere de Los Santos Maimona (Badajoz)]: 159-218.- FC&P 22-2, p. 82, ID=3510^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Spain SW^Rugose corals occur in all the calcareous units. Thirty six species are described. Colonial and solitary corals show distributions clearly related to the original environment represented by each unit. Nevertheless, the appearance patterns of the colonial corals are similar to those described by Poty (1984, 1985) for western Europe, providing higher biostratigraphic resolution than other fossil groups. Colonial rugose corals built biostromes in unit 1. Dominant species is *Siphonodendron martini*, but more than 15 other colonial and solitary species also occur in that unit. Massive corals are common in unit 3, where first appearance of *Diphyphyllum furcatum* is recorded. Units 4 to 6 yielded mainly undissepimented solitary corals, with high abundance of *Zaphrentites* and *Uflmia*. Some colonial specimens of the species *Lithostrotion decipiens* and *Siphonodendron* aff. *pauciradiale* also occur. ^1";

- 941 s[938] = "RODRIGUEZ S., FALCES S., COZAR P. (1997).- Development of dissepimented rugose corals in Moscovian soft bottom environments at Ribadesella (Asturias, NW Spain).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 209-223.- FC&P 26-2, p. 29, ID=3714Topic(s): dissepimentate, soft bottom habitats; Rugosa dissepimented; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Mos; Geography: Spain, AsturiasSolitary dissepimented rugose corals occur in muddy limestones and marls at Ribadesella quarry (Lower Moscovian, Eastern Asturias, NW Spain). Diversity is low and most corals belong to the families Aulophyllidae and Cyathopsidae. Geyerophyllidae, which are dominant in most Moscovian coral localities from the Eastern Cantabrian Mountains, are scarce in this outcrop. The taxonomic features of this assemblage are described in detail. These corals inhabited soft-bottom environments, probably below the wave-base, and periodically subject to notable water movements. They developed diverse adaptations to these conditions, and many of them were able to change their growth direction several times. Additionally, they provided a substratum for development of bryozoans, auloporoids and chaetetids, which also grew on brachiopod shells. Most specimens are covered by algal crusts containing up to three kinds of algae; borings and other kinds of postmortem disturbances are not common.^1";
- 942 s[939] = "RODRIGUEZ S., KULLMANN J. (1999).- Rugose corals from the upper member of the Picos de Europa Formation (Moscovian, Cantabrian Mountains, NW Spain).- Palaeontographica A252: 23-92.- FC&P 28-1, p. 34, ID=3967Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Mos; Geography: Spain, Cantabrian MtsThe "Picos de Europa" Formation consists mainly of massive, white to light grey limestones. In its upper member, beds of red to pink, marly, crinoidal limestones contain a rich rugose coral fauna. Its age is Upper Carboniferous (Kashirian to Myachkovian, middle and upper Moscovian, = westphalian C, Bolsovian, and Westphalian D). Rugose corals of the suborders Cyathaxoniina Spasskiy (Metriophyllina sensu Hill, tentatively including the superfamily Duplocariniidae Fedorowski), Zaphrentoidina Schoupe & Stacul (Stereoplasmatina sensu Hill) and Plerophyllina Sokolov are described. Thirty-one species belong to 18 genera are identified; 9 species are new (Cyathaxonia pinguis, Neaxon ? multitabulatus, Trochophyllum ? variabile, Kabakovitchiella triformis, Lophotichium ? espinerense, Ufimia accelerata, Lophophyllidium picoensis, wannerophyllum carbonicum and wannerophyllum incertum); 11 species are described in open nomenclature.^1";
- 943 s[940] = "JVAUX E. (1994).- Paleoecology of rugose corals in the Neffe Formation (Middle Visean) of Belgium.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 127-139.- FC&P 23-1.1, p. 16, ID=4070Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: ArdennesIn Belgium and Northern France, the middle part of the Visean is composed of massive open-marine limestones (Neffe Formation, "V2a") which laterally contain two different rugose coral assemblages. The first one yields abundant Dorlodotia briarti, Siphonodendron undulosum, Palaeosmia murchisoni and few Caninophyllum cf. patulum and Axophyllum mendipense. This assemblage occurs mainly in very turbulent shallow-water grainstones. The second one includes numerous Axophyllum mendipense, Siphonodendron undulosum and Palaeosmia murchisoni, but other species are lacking; this assemblage occurs mainly in shallow-water bioclastic packstones and grainstones. These two assemblages are considered as corresponding to different bathymetric environments. Dorlodotia briarti lived in a shallower-water environment as Axophyllum mendipense, whereas the species common in both assemblages (S. undulosum and P. murchisoni) can show more or less

important differences in their morphological characteristics which allow recognition of ecotypes. The results are compared with an assemblage from England (Orton, Ravenstonedale) which is composed of similar species than the assemblage with *D. briarti* (additionally with *Siphonodendron sociale*) and occurs in a quiet shallow-water environment. A model of the bathymetric and hydrodynamic influences on the morphology of these corals is suggested.¹";

- 944 s[941] = "RODRIGUEZ S., ARRIBAS M.E., FALCES S., MORENO-ERIS E., DE LA PENA J.A., (1994).- The Siphonodendron Limestone of the Los Santos de Maimona Basin: development of an extensive reef-flat during the Visean in Ossa Morena, SW Spain.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 203-214.- FC&P 23-1.1, p. 18, ID=4076^Topic(s): Siphonodendron limestone; reefs, reef flat; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Spain SW^The Los Santos de Maimona Basin in Ossa Morena (SW Spain) includes 8 lithostratigraphic units numbered from 0 to 7. Unit 1, which constitutes the subject of the present contribution, is composed of marls and limestones with interbedded volcanic rocks of basaltic composition. Limestones and marls contain abundant colonies of the rugose genus *Siphonodendron*. Large brachiopods, algae and tabulate corals participate in the framework. Solitary corals, gastropods, bryozoans, ostracodes and foraminifers are also common. The Siphonodendron Limestone shows a vertical lithologic evolution from marls at the base to limestones at the top. Facies are ordered into five associations which correspond to reef-flat sequences and storm episodes. This unit, interpreted as a reef-flat, extends over the whole basin, although the thickness, the development of the framework and the distribution of organic components vary from SE (seaward) to NW (landward). The main environmental factors controlling the development of the organic framework are the tidal regime, minor subsidence pulses and periodical storms.¹";
- 945 s[942] = "WEYER D. (1993).- Korallen aus dem Obertournai und Untervise der Inseln Hiddensee und Rügen.- Abhandlungen und Berichte für Naturkunde 16: 31-69.- FC&P 23-1.1, p. 66, ID=4143^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Germany, Hiddensee & Rügen^Some corals of cyathaxoniid biofacies are described from boreholes drilled in the Carboniferous Limestone district of the Baltic Sea island of Rügen and Hiddensee. Small communities of Upper Tournaisian (Ivorian) and basal Lower Visean (Chadian) include *Sutherlandia*, *Rotiphyllum*, and representatives of the rare genera *Drewerelasma*, *Saleelasma*, and *Lophophyllum*, together with common *Cyathaxonia*, *Rylstonia*, and *Palaeacis*. Additional records of Upper Hastarian *Keyserlingophyllum* and of Chadian *Cyathodisia* and *Pleurosiphonella* are given for the caniniid/clisiophyllid biofacies.¹";
- 946 s[943] = "POTY E. (1994).- Nouvelles précisions sur les corrélations stratigraphiques du Dinantien du Boulonnais et de la Belgique: application de la biozotation corallienne [New precisions about the stratigraphic correlations of the Dinantian of the Boulonnais (France) and Belgium: application of the Rugose Coral biozotation].- Comptes rendus de l'Académie des Sciences de Paris 319, serie II: 467-473.- FC&P 23-2.1, p. 17, ID=4217^Topic(s): biozotation; stratigraphy, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: France, Boulonnais, Ardennes^The stratigraphic distribution of the Rugosa enables to do correlations with Belgium. Several Belgian formations can be formally recognized in the Boulonnais. The facies in the Ferques autochthonous tectonic unit may be compared with those known in the northern part of the Namur synclinorium, and the facies in the Haut-Banc allochthonous tectonic unit with those known in the southern part of the Namur synclinorium (or in the Dinant synclinorium). The

- lithological units are isochronous.¹¹";
- 947 s[944] = "FALCES S., RODRIGUEZ S. (1993).- Analisis tafonomico de los corales solitarios sin dissepimentos de la cuenca Carbonifera de los Santos de Maimona (Badajoz, SO de Espana).- Revista Espanola de Paleontologia, numero extraordinario: 109-117.- FC&P 24-2, p. 82, ID=4247^Topic(s): taphonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Spain SE^The taphonomic analysis of the solitary undissepimented corals from the calcareous units at the "Los Santos des Maimona" Lower Carboniferous Basin is carried out. Two kinds of taphonomic observations are made: 1. Areal distribution of the specimens at each outcrop and relationship between them. 2. Preservational phenomena for each specimen (microborings, colonizations, fractures, recrystallization, cementation and infilling, diagenetic compression and abrasion). All these phenomena are analysed to identify the original environment in which the corals lived, and their diagenetic history.¹¹";
- 948 s[945] = "WEYER D. (1994).- Dorlodotia Salee 1920 (Anthozoa, Rugosa) im deutschen Unterkarbon.- Archaeologie im Ruhrgebiet; Geologie, Palaeontologie und Vor- und Fruehgeschichte zwischen Lippe und Wupper 2 [C. Hackler, A.Heinrich & E.-B. Krause (eds)]: : 151-172.- FC&P 24-1, p. 63, ID=4479^Topic(s): ; Rugosa, Dorlodotia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Germany^German lower Visean (Arundian) records of Dorlodotia (Dorlodotia) briarti Salee 1920 are: 1. Busbach near Aachen (Ardennes, Rhenohercynian Variscan Zone); 2. drillhole Loissin 1/1970 (near Greifswald, Mecklenburg-Vorpommern, SW margin of the East European Platform; with biostratigraphic data for the Lower Carboniferous sequence of Brigantian-Asbian Culm Measures and Arundian Carboniferous Limestone). Notes on taxonomy and Eurasian Chadian-Arundian species of Dorlodotia Salee 1920 (including subgenus Pseudodorlodotia Minato 1955) are followed by a stratigraphic review of index fossils (W Europe, NW and S China): Dorlodotia (Pseudodorlodotia) pseudovermicularis (M'Coy 1849), Dorlodotia (Dorlodotia) briarti Salee 1920, Dorlodotia (Dorlodotia) mui Luo in Luo & Zhao 1962, Dorlodotia (Dorlodotia) asiatica (Yu 1934) and similar so-called "Thysanophyllum" / Thysanophylloides species. Upper Carboniferous Dorlodotia-like taxa are classified within Lytvophyllum Dobrolyubova in Soshkina, Dobrolyubova & Porfir'ev 1941; Visean species of N America are members of Acrocyathus d'Orbigny 1849.¹¹";
- 949 s[946] = "SEMENOFF-TIAN-CHANSKY P., PLUSQUELLEC Y. (1994).- Presence de Aulokoninckophyllum dans le conglomeraat de Caouennet, Carbonifere du Bassin de Chateaulin (Massif Armoricaen, France.- Annales de la Societe geologique du Nord 37, 2: 133-139. [in French, with English abstract].- FC&P 24-2, p. 84, ID=4575^Topic(s): ; Rugosa, Aulokoninckophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: France, Armorique^The very scarcity of the corals in the Chateaulin basin is emphasized and the only specimen of Rugosa collected in the Caouennet conglomeraat is accurately described (structure and microstructure). It is assigned to Aulokoninckophyllum sp. aff. carinatum (Carruthers 1909), despite the somewhat uncertain identity of the specimen, the age given by the microfauna is precised and the pebbles of conglomerate dated as the upper Visean.¹¹";
- 950 s[947] = "KACHANOV E.I. (1971).- Corals of the genera Lytvophyllum and Thysanophyllum from lower and middle Carboniferous of Urals.- Zapiski Leningradskogo ordenov Lenina i trudovogo Krasnogo Znameni Gornogo Instituta im. G.V. Plekhanova 59, 2, Paleontology (1971): 65-75.- FC&P 2-1, p. 23, ID=4741^Topic(s): ; Rugosa, Lytvophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L/M; Geography: Russia, Urals^11";
- 951 s[948] = "GROOT G.E.de (1971).- Note on Leonardophyllum leonense nov.

- sp. in winkler Prins C. F.: The road section East of Valdeteja with its continuation along the arroyo de Barcaliente (Curueno Valley, Leon). The Carboniferous of Northwest Spain.- Trabajos de Geologia Fac. Ci. Univ. Oviedo 4: 683-686.- FC&P 2-2, p. 16, ID=4798^Topic(s): new taxa; Rugosa, Leonardophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Spain NW^The corals collected by winkler Prins from the Cladochonus Band in the type section of the Valdeteja Formation include two specimens of Leonardophyllum, a genus previously known only from the Pennsylvanian and Permian of North America. The specimens are deposited in the Rijksmuseum van Geologie en Mineralogie of the Netherlands (Leiden). These fossils are probably of Bashkirian age.^1";
- 952 s[949] = "WEYER D. (1972).- Korallenfunde aus dem Kohlenkalk des Morvan (Zentralfrankreich).- Jb. Geol, 4: 465-475.- FC&P 3-1, p. 31, ID=4900^Topic(s): ; Rugosa, Sychnoelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: France, Morvan^Corals from the Upper Middle Visean Carboniferous limestone of the Morvan mountains are identified as Sychnoelasma urbanowitschi (StuckenberG 1895). This species occurs in western, central, and eastern European regions and has a rather long time range from Lower Lower Visean to Upper Middle Visean strata.^1";
- 953 s[950] = "WEYER D. (1973).- Drewerelasma, ein neues Rugosa-Genus aus der Gattendorfia-Stufe (Unterkarbon) des Rheinischen Schiefergebirges.- Zeitschrift der geologischen Wissenschaften 1973, 1, 8: 975-980.- FC&P 3-2, p. 43, ID=4967^Topic(s): new taxa; Rugosa, Drewerelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: Germany, Rhenish Mts^^1";
- 954 s[951] = "WEYER D. (1974).- Das Rugosa Genus Antiphyllum Schindewolf 1952 (Unternamur, Oberschlesisches Steinkohlenbecken).- Gas. Mineral. Geol. 19, 4: 545-564.- FC&P 4-2, p. 63, ID=5300^Topic(s): ; Rugosa, Antiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Nam; Geography: Poland, Silesia Upper^Die Revision der Gattung Antiphyllum Schindewolf zeigte, dass Antiphyllum ein juengeres Synonym von Claviphyllum Hudson 1942 ist. Einige morphologische Merkmale der Rugosa (biforme Kleinsepten reduktion, Septen formeln) werden diskutiert und der neue morphologische Terminus biforme Marginarium wird eingefuehrt. Die Rugosa-Fauna der Ostrauer Schichten wird kritisch betrachtet.^1";
- 955 s[952] = "FEDOROWSKI J. (1975).- Lower Carboniferous tetracoral fauna in Poland.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 170-179.- FC&P 5-1, p. 28, ID=5348^Topic(s): distribution; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Poland^[stratigraphic, geographic, ecologic distribution and taxonomy of coral species]^1";
- 956 s[953] = "POTY E. (1976).- Contribution a l'etude des genres Lithostrotion et Siphonodendron du Viseen moyen Belge.- Annales de la Societe geologique de Belgique 98: 75-90.- FC&P 5-1, p. 29, ID=5360^Topic(s): ; Rugosa, Lithostrotion; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ardenne^[stratigraphic and geographic distribution of 2 species of Siphonodendron and 1 species of Lithostrotion; taxa are described and illustrated]^1";
- 957 s[954] = "POTY E. (1976).- Contribution a l'etude du genre Dorlodotia et sa repartition stratigraphique dans le Viséen du bord oriental de bassin de Namur.- Bulletin de la Societe belge de Geologie 98: 91-110.- FC&P 5-1, p. 30, ID=5361^Topic(s): biostratigraphy; Rugosa, Dorlodotia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ardenne^[detailed description and illustrations of type species of Dorlodotia]^1";
- 958 s[955] = "POTY E. (1976).- Un nouveau tetracoraliaire du Viséen moyen

- de la Belgique: *Corphalia mosae* gen. et sp.nov.- Annales de la Societe geologique de Belgique 98: 111-121.- FC&P 5-1, p. 30, ID=5362^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Ardennes^1";
- 959 s[956] = "GORSKIY I.I., DEGTAREV D.D., KACHANOV E.I., RAKSHIN P.P., SUMAKOVA M.A., (1975).- Tetracoralla. In D.L. Stepanov (ed.): Paleontologicheskii Atlas Kamennougol'nyjch otlozheniy Urala. [Paleontologic atlas of Carboniferous deposit of the Urals] .- Trudy Vses. Neft. Nauchno-issled. Geologoraz. Inst. 383: 73-89.- FC&P 5-2, p. 8, ID=5425^Topic(s): atlas of fossils; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Russia, Urals^Describes and illustrates 43 species, 3 of them new.^1";
- 960 s[957] = "SAYUTINA T.A. (1976).- O rode Sychnoelasma iz Nizhnekamennougol'nykh otlozheniy Severnogo Urala. [on genus Sychnoelasma from Lower Carboniferous deposits of the northern Urals] .- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii 51, 1: 111-123.- FC&P 5-2, p. 9, ID=5434^Topic(s): ; Rugosa, Sychnoelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Urals^Discusses world distribution of genus composed of 4 species only. Describes and illustrates 2 species, including type, from the Soviet Union.^1";
- 961 s[958] = "WEYER D. (1977).- Review of the rugose coral faunas of the Lower Namurian Ostrava Formation (Upper Silesian Coal Basin).- In: V.M. Holub & R.H. Wagner (eds): Symposium on Carboniferous Stratigraphy: 459-468.- FC&P 7-2, p. 23, ID=5652^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Nam; Geography: Poland, Upper Silesia^1";
- 962 s[959] = "SIMAKOVA M.A., DEGTAREV D.D., RAKSHIN P.P. (1978).- Rugozy. [Rugosa; in Russian].- Opornye razrezy i fauna vizeyskogo i namyurskogo yarusov Srednego i Yuzhonogo Urala: 65-74; Nauka, Leningrad.- FC&P 8-2, p. 32, ID=5697^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Urals^[Nemistium, Caninia, Siphonophyllia, Kizilia, Uralinia, Keyserlingophyllum, Palaeosmia, Sychnoelasma, Clisiophyllum, Cyathoclisia, Dibunophyllum, Aulophyllum, Koninckophyllum, Carcinophyllum, Gangamophyllum, Arachnolasma, Spirophyllum, Kazachiphyllum, Turbinatocania, Lithostrotion, Diphyphyllum, Aulina, Tschernowiphyllum, Paralithostrotion, "Campophyllum", Lonsdaleia]^1";
- 963 s[960] = "DEGTAREV D.D. (1979).- Korally. [in Russian].- Atlas fauny i flory srednego-pozdnego karbona Bashkirii [O.L. Einor (ed.)]: 41-54, pls 44-53; Nedra, Moskva.- FC&P 9-1, p. 39, ID=5791^Topic(s): ; corals, atlas of fossils; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Russia, Bashkiria^[Caninia, Caninophyllum, Botbrophyllum, Cyathaxonia, Monophyllum, Bradyphyllum, Hapsiphyllum, Lophophyllum, Koninckophyllum, Koninckophylloides, Neokoninckophyllum, "Lithostrotion", "Fischerina", Lytvophyllum, Darvasophyllum, Petalaxis, "Corwenia", Campophyllum]^1";
- 964 s[961] = "BARTZSCH K., WEYER D. (1981).- Zur Stratigraphie des Untertournaier (Gattendorfia-Stufe) von Saalfeld im Thuringischen Schiefergebirge.- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 4: 3-54.- FC&P 12-1, p. 42, ID=6181^Topic(s): geology; geology, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: Germany, Thuringia^Für die bathyalen Tonschiefer der Gattendorfia-Stufe in der engeren südlichen Umgebung Saalfelds, den etwa 8 m mächtigen Horizont der Obersten Kalkknollenschiefer, werden detaillierte Profilaufnahmen vorgelegt […] An Korallen werden

- Bathybalva crassa Weyer 1981 und Guerichiphyllum priscum (Munster 1840) erwähnt, die sowohl im rheinischen als auch im thuringischen Schiefergebirge in der Gattendorfia-Stufe auftreten. [first and last fragments of extensive summary]^1";
- 965 s[962] = "BOLL F.-C. (1983).- Der Wandel der Rugosen Korallenfaunen der Flach-Wasser Fazies im Karbon des Kantabrischen Gebirge (Nordspanien).- Eberhardt-Karls-Universität Tübingen; unpublished Ph.D. Thesis; 275 pp.- FC&P 12-2, p. 33, ID=6213^Topic(s): bathymetry; Rugosa, bathymetry; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Spain, Cantabrian Mts^[Ph.D. Thesis; unpublished]^1";
- 966 s[963] = "RODRIGUEZ S. (1984).- Corales rugosos del Carbonífero del Este de Asturias.- Universidad Complutense de Madrid, Collect. Tesis Doctorales 109: 528 pp., 266 figs, 2 tabs, 32 pls.- FC&P 13-2, p. 35, ID=6373^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Spain, Asturias^^1";
- 967 s[964] = "ARETZ M. (2010).- Habitats of colonial rugose corals: the Mississippian of western Europe as example for a general classification.- Lethaia 43, 4: 558-572.- FC&P 36, p. 49, ID=6429^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Europe W^Colonial rugose corals are a major constituent of shallow-water marine benthic communities in Mississippian times. The study of western European rugose coral habitats from the base of the Tournaisian stage to the Serpukhovian stage allows the recognition of four basic habitat types, which can be divided into a total of 11 subtypes. The classification is mainly based on field data, and thus rapidly applicable. Level-bottom communities in which large colony distances are characteristic (type A) represent the most basic community type; polyspecific (subtype A1) and monospecific (subtype A2) subtypes occur. Reduced colony distances result in the formation of coral meadows (type B), which either show homogeneous coral distribution (subtype B1) or the development of patches (subtype B2). Coral biostromes (type C) represent a spectrum between hydrodynamically controlled biostromes (nothing in place, subtype C1) and biologically constructed and controlled biostromes (subtype C2). The bulk of the biostromes represent mixtures of these two subtypes (subtype C3). Colonial rugose corals are widely encountered in Mississippian bioherms where they are dwellers (subtype D1), form capping beds (subtype D2), support framework building along with other organisms (subtype D3) and form coral framework (subtype D4). The latter is probably the most uncommon of all subtypes in Mississippian times. The classification is widely applicable to other groups. [original abstract]^1";
- 968 s[965] = "GOMEZ-HERGUEDAS A., RODRIGUEZ S. (2008).- Paleoenvironmental analysis based on rugose corals and microfacies: a case study at La Cornuda section (early Serpukhovian, Guadiato Area, SW Spain).- Lethaia 42, 1: 39-54.- FC&P 36, p. 127, ID=6579^Topic(s): microfacies analysis; ecology; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Serp; Geography: Spain SW^Combined analysis of microfacies and rugose coral features provides a useful tool for palaeoenvironmental studies in areas where outcrops are not appropriate for field observations. A detailed study of Serpukhovian rugose corals from La Cornuda section (Guadiato Area, SW Spain) by means of thin sections allowed the identification of environments where they lived. All corals were collected in unit 1 of the section where three different but intimately connected environments have been identified. Corals developed mainly in small mounds built jointly by microbial communities, algae and corals. Some corals also lived in calcareous shoals mainly composed of echinoderm plates. Finally, some corals occur in oncoidal limestone that represents a shallow ramp, but they were mainly transported from shoals and mounds. [original abstract]^1";

- 969 s[966] = "OEKENTORP K. (2006).- Waldemar Weissermel.- FC&P 34: 120-123.- FC&P 34, p. 120, ID=7256Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[list of coral papers by Weissermel; attached is his portrait and a list of his biographical notes]^1";
- 970 s[967] = "FEDOROWSKI J. (1985).- The Lower Visean Rugosans from Cantabria (Spain).- FC&P 14, 2: 26. [short note] - FC&P 14-2, p. 26, ID=6714Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Spain, Cantabrian Mts^Horn corals from the Lower Visean of Northern Spain, e.g. the "Marbre Griotte facies"; of the Cantabrian Mountains, are subject of a recent investigation program together with J. Kullmann, Tübingen. Corals are rather rare in this facies, but their taxonomy is surprisingly diversified. In addition to the earlier description by Kullmann (1966) it was possible to distinguish some new species of *Ufimia* Stuckenberg 1895, as well as other not fully identified plerophyllids and polycoeliids, several new species of *Rylstonia* Hudson & Platt 1927; *Rotiphyllum* Hudson 1942; *Weyerelasma* Kullmann & Liao 1985 and some forms of *Zaphrentites* Hudson 1941; *Cyathaxonia* Michelin 1846; "Permian" Stuckenberg 1895, and another aulate coral similar to *Neaxon* Kullmann 1965, as well as corals showing close similarity to *Metriophyllum* Milne-Edwards & Haime 1851. A new genus similar to *Claviphyllum* Hudson 1942, was already distinguished, but possessing the alar septa equal to other major septa and a kind of the key-hole counter pseudofossula developed. There are also some forms represented by single corallites showing morphology so strange that we decided to postpone the detailed description of them to the time of collecting additional material. The fauna being investigated can by now be compared only to the Lower and Middle Visean faunas described from Great Britain in the series of papers by Hudson (1936 to 1945) and to the Upper Tournaisian fauna described by Weyer (1975) from the Island Hiddensee. Some elements of that fauna can also be found in Thuringia (Weyer 1984) and other regions of Europe in which the corals-bearing cephalopod facies of the Lower Carboniferous is developed. [paleontological note]^1";
- 971 s[968] = "FALCES S., RODRIGUEZ S. (2002).- Occurrence of reworked specimens of the rugose coral genus *Sychnoelasma* in the Guadiato valley (Serpukhovian, SW Spain).- Coral Research Bulletin 7: 047-052. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 33, ID=7099Topic(s): redeposited; Rugosa *Sychnoelasma*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Spain SW^Four reworked specimens of *Sychnoelasma* Sando 1961 have been collected from Serpukhovian olistolithic beds of Guadiato Valley (SW Spain). No strata of the usual age of *Sychnoelasma* (Tournaisian to Lower Visean) occur in Guadiato Valley. Several factors, including evidence of reworking, the age of associated fossils, and the biostratigraphic distribution of *Sychnoelasma* at other localities, suggest that the corals were derived from older strata, subsequently exhumed by erosion, and deposited in younger beds. Morphological and microstructural analyses of the Guadiato Valley specimens show the presence of fossular crests which are conspicuous only in specimens with deep calices. These observations suggest a close relation between *Sychnoelasma* and the genus *Ankelasma*. [original summary]^1";
- 972 s[969] = "ARETZ M., HERBIG H.-G. (2003).- Contribution of rugose corals to Late Viséan and Serpukhovian bioconstructions in the Montagne Noire (Southern France).- SEPM Special Publications 78 / AAPG Memoir 83 (Permo-Carboniferous carbonate platforms and reefs): 119-132.- FC&P 33-1, p. 47, ID=7204Topic(s): coral reefs, geohistory; Rugosa, reefs; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Vise Serp; Geography: France, Montagne Noire^Coral-bearing bioconstructions are described

for the first time from upper Lower Carboniferous (Upper Mississippian) shallow-water limestone olistoliths of the southern Montagne Noire (Mont Peyroux Nappe), southern France. Microbial-induced wackestones and microbial boundstones dominate major parts of the Brigantian Roque Redonde Formation and Serpukhovian Roc de Murviel Formation, which follows on top of a paleokarst. Further subtidal facies are intercalated. The short-lived bioconstructions consist of thin monospecific and polyspecific coral biostromes, coral bioherms (patch reefs) growing in high-energy turbulent environments, and a single example of a large shallow-water microbial buildup that formed below fair-weather wave base in dimmed light. The contribution of rugose corals to the bioconstructions varies from active framebuilding in the biostromes and bioherms to passive dwelling of sparse fauna in the microbial buildup. Microbial structures are of special importance within polyspecific biostromes and patch reefs. In a delicate balanced system they are responsible for growth or suffocation of the coral-dominated bioconstructions. That co-occurrence of coral boundstones and microbial boundstones appears to be a widespread characteristic of small reefs in Late Viséan and Early Serpukhovian time. Factors limiting the growth of the bioconstructions in southern France include rapid sea-level variations, tectonic instability of the shelf, and intrinsic paleobiological features of the rugose corals, like their fragility and inability to encrust mobile substrates. Comparable upper Lower Carboniferous coral-bearing bioconstructions of the Paleotethys realm and the epeiric seas of northwestern Europe are discussed. [original abstract]^1";

- 973 s[970] = "RODRIGUEZ S., SANCHEZ-CHICO F. (1994).- Bioconstrucciones de corales rugosos y algas calcareas de la section del Torreon (Viseense, Badajoz) [Rugose coral and algal buildups of the Torreon section (Viséan, Badajoz)].- Coloquios de Paleontologia 46: 61-75. [in Spanish, with English abstract].- FC&P 24-2, p. 104, ID=4618^Topic(s): ; reefs, biostromes; Systematics: Cnidaria algae; Rugosa; Stratigraphy: Carboniferous Visé; Geography: Spain SW^The Torreon section comprising biostromal marls and limestones of Upper Viséan age is described. Vertical variations of Rugose corals and calcareous algae assemblages are detailed. Building structures by corals and algae are described in basis to some selected examples from three beds. The sediments were originated in a reef-flat with tectonic subsidence and storm events.^1";
- 974 s[971] = "SAYUTINA T.A. (1973).- Lower Carboniferous Corals from the Northern Urals. Suborder Acrophyllina.- Trudy Paleontologicheskogo Instituta 140: 1-168.- FC&P 2-2, p. 20, ID=4812^Topic(s): ; Rugosa, Acrophyllina; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Urals^Description of Carboniferous Corals (Acrophyllina) from the Northern Urals. Revision of numerous genera, with synonymy and indications of their importance. Three assemblages of Acrophyllina are recognised, characteristic of Tournaisian, Viséan and Namurian. Considering the species distribution, the Acrophyllina confirm the communications of the Carboniferous Basin of the Urals with the Basins of Donetz, Novaya Zemlya and Central Kazakhstan. This paper is of great interest for geologists and stratigraphers as well as paleontologists.^1";
- 975 s[972] = "RODRIGUEZ S., RODRIGUEZ-CURT L., HERNANDO J.M. (2001).- Estudio de los Aulophyllidae (Rugosa) de la Sierra del Castillo Unit (Córdoba, Espana).- Coloquios de Paleontología 52: 47-78.- FC&P 31-2, p. 44, ID=1689^Topic(s): ; Rugosa, Aulophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Spain SW^Dissepimental rugose corals are frequent in the Sierra del Castillo Unit (Guadiato Area, Ossa Morena) which is composed mainly of Viséan limestones. Aulophyllid corals from Sierra del Castillo, Sierra de la Estrella (both near Espiel, Córdoba) and Antolín (near Peñ arroya, Córdoba) have been

studied. Ten species belonging to the genera *Aulophyllum*, *Auloclisia*, *Clisiophyllum*, *Axoclisia*, *Dibunophyllum*, *Arachnolasma*, *Koninckophyllum* and *Amygdalophyllum* have been described. The genus *Axoclisia* is for the first time described in Europe. The microstructure of all species is described in detail.¹¹;

- 976 s[973] = "BOLAND K. (1997).- Caninoid Rugose Corals of the Lower Tournaisian (Hastarian) of Belgium: systematics and evolution.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 73-084.- FC&P 26-2, p. 10, ID=3673^Topic(s):systematics; Rugosa, Caninoid; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: Ardennes^The revision of the caninoid rugose corals of the Lower Tournaisian (Hastarian) of Belgium and the comparison with species from others regions allow recognition of 4 species and 9 subspecies belonging to 3 genera: *Siphonophyllia*, *Uralinia* and *Coniophyllum* and to establish some of their phylogenetic relationships. *Coniophyllum* is first represented by a small opportunist species (*Coniophyllum priscum* (Muenster), which colonized the deep water and platform areas just after the Devonian / Carboniferous boundary crisis (top of the *Siphonodella praesulcata* conodont biozone). It gave rise through a process of hypermorphosis to *Coniophyllum streeli*, a species which seems to be adapted to the shelf facies. *Siphonophyllia cylindrica hasteriensis* appears near the base of the Tournaisian and gave rise to *Siphonophyllia rivagensis* through a process of acceleration. Morphotypes of *Coniophyllum streeli* show morphological characters which are similar to these observed in the genus *Siphonophyllia* and suggest a homeomorphic trend. The relationships between the genus *Uralinia* and *Siphonophyllia* are defined on the basis of their ontogeny. The latter probably gave rise to the former. The stratigraphic distributions of all these species are defined.¹¹;
- 977 s[974] = "POTY E., BOLAND K. (1996).- Revision des Tetracoraliaires caninomorphes de l''Hastarien (Tournaisien) belge.- Annales de la Société géologique de Belgique 117, 1: 201-225.- FC&P 25-2, p. 47, ID=3135^Topic(s):revision; Rugosa caninomorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: Ardennes^The caninoid Rugosa from the Belgian Hastarian have been revised from specimens found in some sections of the Namur-Dinant Basin and the Vise-Maastricht area (Campine Basin), and from the original material of Salee (1913). This author has described two species: *Siphonophyllia* ("*Caninia*") *cylindrica hasteriensis* Salee and *Caninia dorlodoti* Salee. The second one has been defined from specimens which are assigned here to *Siphonophyllia cylindrica hasteriensis*, and other ones considered as being Hastarian, but coming in fact from the Strunian (*Campophyllum flexuosum* Goldfuss). So, that species, and in the same way *Endophyllum transitorium* Groeber 1910, are considered as not valid. Four other species, including three new ones, and a new genus are described: *Coniophyllum streeli* nov. gen. nov. sp. from the subzone RC1P, *Siphonophyllia rivagensis* nov. sp., from the zone RC2, and *Uralinia lobata* nov. sp. from the subzone RC1, and the zone RC2.¹¹;
- 978 s[975] = "KULLMANN J., RODRIGUEZ S. (1986).- Hornformige Einzelkorallen (Rugosa) aus fruhoberkarbonischen Flachwasser-Sedimenten im Kantabrischen Gebirge (Nordspanien).- Neues Jahrbuch für Geologie und Paläontologie, Monatshefte 1986, 6: 293-306.- FC&P 15-2, p. 28, ID=0650^Topic(s): Rugosa, *Cyathaxonia* fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Spain, Cantabrian Mts^Shallow marine sediments of the San Emiliano Fm. (Westphalian A) yielded a "*Cyathaxonia* fauna" containing the variable species *Cliviphyllum emilianum* n.sp. The ecologic significance of its characteristics, especially the relatively high number of septa and tabulae is discussed.¹¹;
- 979 s[976] = "RODRIGUEZ S., KULLMANN J. (1990).- Hornformige Einzelkorallen

(Rugosa) aus spaetoberkarbonischen Flachwasser-Ablagerungen des Kantabrischen Gebirges (Nordspanien).- Palaeontographica A210, 1-3: 19-40.- FC&P 19-1.1, p. 47, ID=26577Topic(s): ; Rugosa, Cyathaxonia fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Mos; Geography: Spain, Cantabrian Mts^Upper Carboniferous (Westphalian) solitary corals (Rugosa) of the type "Cyathaxonia fauna"; are described from the Ojosa formation of Casavegas in the eastern part of the Cantabrian Mountains (North Spain) belonging in the Upper westphalian D (corresponding to the upper "Myachkovian";, uppermost Moscovian). The described coral fauna comprises 7 species belonging to the genera Cyathaxonia, Amplexocarinia?, Zaphrentis, Calophyllum, Sochkineophyllum, Ufimia and Lophophyllidium. Two species are new: Amplexocarinia? palentina n.sp. and Sochkineophyllum accelerans n.sp. The characteristic composition of the Casavega fauna with representatives of Cyathaxonia, Zaphrentites and Polyoceles (s. l.) is only known from four Cantabrian localities ranging from middle westphalian D till Cantabrian (lower Stephanian A); no other coeval faunas of comparable composition seem to exist. The Casavegas fauna seems to be restricted to still water facies of slightly greater water depth; it marks the highest point within the sea-level changes at the end of the westphalian. Regional tectonic unrest hindered the spreading of this fauna.^1";

980 s[977] = "KULLMANN J., RODRIGUEZ S. (1994).- Biostratigraphic range and biogeographic relationships of the undissected solitary corals from the Picos de Europa Formation (Moscovian, Cantabrian Mountains, NW Spain).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 15-22.- FC&P 23-1.1, p. 13, ID=40597Topic(s): biostratigraphy, biogeography; Rugosa, Cyathaxonia fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Mos; Geography: Spain, Cantabrian Mts^The "Picos de Europa"; Formation consists mainly of massive, white to light grey limestone. Its upper member contains some beds of red to pink, marly crinoidal limestone with a rich rugose coral fauna. Laccophyllidae, Cyathaxoniidae, Lophophyllidiidae and Lophotichiidae are predominant. The environmental conditions of these beds seem to be those of a shallow shelf. The fauna is unquestionably of Moscovian age, determined by the presence of Fusulinella, and it is similar to uppermost Carboniferous and lower Permian coral assemblages from North America and the Carnic Alps. The presence of some elements characteristic of uppermost Carboniferous and lower Permian (e.g. wannerophyllum) suggests that the "Picos de Europa"; fauna is a precursor of Permian coral faunas. The affinities of the "Mediterranean"; Picos de Europa fauna with corals of the North American realm suggest a close connection between these regions during the Late Carboniferous.^1";

981 s[978] = "WEYER D. (1981).- Korallenfunde im Kohlenkalk des Iberg-Winterberger-Riff-massivs (Oberharz).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 4: 55-64.- FC&P 12-1, p. 33, ID=19047Topic(s): ; Rugosa, Hapsiphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Germany, Harz^Rare hapsiphyllid Rugosa determined as Rotiphyllum sp. aff. costatum (M'Coy 1849) are recorded from high upper Visian cephalopod limestones yielding ammonoids of Goniaticrenistria to Goniaticrenistria falcatus zones (upper Asbian and lower Brigantian age).^1";

982 s[979] = "POTY E. (1984).- An evolutionary pattern for the western European Lithostrotionidae.- Palaeontographica Americana 54: 465-469 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 50, ID=10027Topic(s): phylogeny; Rugosa, Lithostrotionidae;

- Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Europe w^^1";
- 983 s[980] = "NGUYEN DUC KHOA (1977).- Carboniferous Rugosa and Heterocorallia from boreholes in the Lublin region.- Acta Palaeontologica Polonica 22, 4: 301-404.- FC&P 9-2, p. 41, ID=0320^Topic(s): ; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Carboniferous; Geography: Poland, Lublin area^^1";
- 984 s[981] = "POTY E. (1983).- Distribution stratigraphique des tetracoralliaires et des heterocoralliaires dans le Viseen de la Belgique.- Annales de la Societe geologique de Belgique 106, 1: 57-68.- FC&P 13-1, p. 40, ID=0478^Topic(s): biostratigraphy; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Carboniferous Vise; Geography: Ardennes^^1";
- 985 s[982] = "POTY E. (1981).- Recherches sur les Tetracoralliaires et les Heterocoralliaires du Viseen de la Belgique.- Mededelingen Rijks Geologische Dienst 35, 1: 1-161.- FC&P 11-1, p. 47, ID=1762^Topic(s): ; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Carboniferous Vise; Geography: Ardennes^Des recherches effectuees sur les coraux du viseen beige ont abouti a l'identification de 72 especes de Tetracoralliaires, dont 63 (parmi lesquelles 19 sont nouvelles) sont decrites ici, et de 4 especes de Heterocoralliaires, dont 3 sont egalement decrites. Des variations morphologiques observees dans certaines de ces especes, comme par exemple la presence ou l'absence de processus de connexion chez les Siphonodendron, ou encore le developpement temporairement fascicule de certaines colonies de Lithostrotion deeipiens, ont par-fois pu etre mises en relation avec des conditions particulieres de l'environnement. Par centre, d'autres variations paraissent etre la manifestation de tendances evolutives et ont permis de preciser les relations phyletiques probables existant entre les especes des genres Lithostrotion, Siphonodendron et Diphyphyllum reconnues en Belgique et en Grande-Bretagne, eellesexistant entre le genre Bothrophyllum et le genre Caninophyllum ou, encore qui semblent lier les genres Lonsdaleia, Dorlodotia, Corphalia et Thysanophyllum. Les coraux presents dans chacune des deux grandes aires paleo-geographiques reconnues en Belgique - le bassin de Namur-Dinant et le bassin de Campine-Brabant -- peuvent etre distincts ou posseder des repartitions stratigraphiques differentes qui suggerent l'absence relative de communications entre ces aires. Les coraux du bassin de Namur-Dinant ne montrent que de faibles affinites avec ceux connus en Angleterre dans la province du Sud-Ouest et en Irlande, ce qui suppose l'existence de relations etroites entre ces regions. Ceux du bassin de Campine-Brabant possedent par contre de nombreuses affinites avec ceux du centre et du Nord de l'Angleterre, d'Afrique du Nord et d'U.R.S.S.; ce bassin etait donc apparemment plus ouvert aux influences exterieures que le bassin de Namur-Dinant. Une zonation du Viseen basee sur les coraux est proposee pour le bassin de Namur-Dinant. ^1";
- 986 s[983] = "HERBIG H.-G. (1986).- Rugosa und Heterocorallia aus Obervise-Geroellen der Marbella-Formation (Betische Kordillere, Suedspanien).- Paläontologische Zeitschrift 60, 3-4: 189-225.- FC&P 16-1, p. 60, ID=1961^Topic(s): redeposited; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Carboniferous Vise; Geography: Spain, Betic Cordillera^Limestone pebbles of the post-lower Bashkirian Harbella Formation (Malaguides, internal Zone of the Betic Cordillera) yielded sixteen species of rugose corals belonging to eleven genera and two species of heterocorals belonging to two genera. The fauna is uppermost Visean age (V3b-V3c). Its paleogeographic significance within the western Mediterranean is discussed. Lonsdaleia

corbariensis, known up to now only from debris flow deposits of the Mouthoumet massif (Southern France), covers approximately half of the total fauna. Hexaphyllia mirabilis is shown to have juvenile stages with five septa.¹¹;

- 987 s[984] = "POTY E., HANNAY D. (1994).- Stratigraphy of rugose corals in the Dinantian of the Boulonnais (France).- Memoires de l'Institut Geologique de l'Universite Catholique de Louvain 35: 51-82.- FC;P 24-2, p. 83, ID=4572Topic(s): biostratigraphy; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Carboniferous L; Geography: France, Boulonnais^35 species of Rugosa and 2 species of Heterocorallia have been recognized in the Dinantian of the Boulonnais. Their stratigraphic distribution and new information about the lithostratigraphy support, and in some cases improve the accuracy of, correlations with Belgium proposed in earlier studies. Several formations defined in the Belgian Namur-Dinant Basin can be formally recognized in the Boulonnais. The Hure Dolomite equates with the Namur Formation as it is known in the south part of the Namur Synclinorium. It yields two Coral assemblages belonging to the RC3 Zone (Ivorian) and to the RC4a Zone (Lower Moliniacian). The Haut-Banc Limestone comprises three units: the Terwagne Formation, the Neffe Formation and the members α and β of the Lives Formation. The Neffe Formation contains the guide corals of the Dorlodotia briarti and Corphalia mosae RC5 Subzones (Upper Moliniacian); member β includes at its base the Lithostrotion araneum horizon, which marks the base of the RC6 Zone, and, in the overlying beds, the same coral ecozone as in Belgium. Another ecozone defined in the sequence n°+1 of the member α of the Lives Formation characterizes the same sequence in the Siphonodendron martini Dolomite. The Lunel and Napoleon Limestones are respectively equivalent to the Seilles and Grands Malades Formations. The Joinville Limestone includes three units: the Thon-Samson Formation, a stromatolitic unit similar to the Poilvache Formation, and an upper unit rich in Gigantoproductids and Rugose Corals. The latter are distributed in two assemblages corresponding to the RC7β Subzone ("v3bγ") and the RC8 Zone ("v3c"). The Joinville Limestone is capped by beds which have yielded coral species known in the "Rylstonia shale" in Yorkshire. Differences in the lithology of the upper part of the Neffe Formation and in the member a of the Lives Formation have been observed between the Ferques autochthonous tectonic unit and the Haut-Banc allochthonous tectonic unit: the facies of the first may be compared with those known in the northern part of the Namur syncline, and that of the second with those known in the southern part. The "Banc d'or de Bachant", which is between the Neffe and Lives Formations, and the Lunel, Napoleon and Joinville Limestones are considered as isochronous rather than diachronous units, as suggested in recent publications.¹¹;
- 988 s[985] = "FLUGEL E., FLUGEL-KAHLER E. (1975).- Stromatoporen aus dem Unteren Kohlenkalk (Tn 1b, Strunium) von Aachen (Stromatoporen aus dem deutschen Palaeozoicum 2).- N. Jb. f. Geol. Palaeont. Abh. 149, 1: 1-58.- FC;P 4-2, p. 63, ID=5302Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Carboniferous L; Geography: Germany, Aachen^The youngest Central European stromatoporoids are described from Lower Tournaisian (Tn 1b, Crinoiden - Kalk von Aachen) biostromes near Kornelimuenster, Aachen. Morphological transitions within "species" and "genera" can be recognized according to shape and distribution of skeletal elements. Most species belong to genera which dominate during Middle and Lower Upper Devonian. There is no clear explanation for the "extinction" of the Paleozoic stromatoporoids at the Devonian / Carboniferous boundary.¹¹;
- 989 s[986] = "WEYER D. (1976).- Eine bemerkenswerte Cladochonus-Kolonie (Anthozoa, Tabulata) aus dem Kulm-Tonschiefer (Unterkarbon, Obervise) von Aprath im Rheinischen Schiefergebirge.- Zeitschrift der

- geologischen Wissenschaften 11, 4: 1515-1530.- FC&P 9-1, p. 48, ID=0288Topic(s): ; Tabulata, Cladochonus; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Vise; Geography: Germany, Rhenish MtsThe Tabulata genera Sutherlandia, Cladochonus. Rossopora? and Smythina and some few solitary Rugosa of a Zaphrentis phase constitute the coral fauna of the culm shales from Aprath. Growing on crinoid columns, Cladochonus colonies extend to considerable size and may comprise about 100 corallites. Apart from the autochthonous findings, some allochthonous corals of Carboniferous limestone facies origin occur in Culm facies sediments of the Rhenish Mountains.^1";
- 990 s[987] = "TOURNEUR F., LAFUSTE J. (1989).- Donnes nouvelles sur le genre Groessensia Termier & Termier 1975 (Tabulata, Tournaisien de la Belgique).- Geologica et Palaeontologica 22: 43-53.- FC&P 17-2, p. 32, ID=0843Topic(s): revision; Tabulata, Groessensia; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: ArdennesThe type specimen of Groessensia ambigua is redescribed on the base of new thin and ultra-thin sections, this approach modifies the original interpretation of the structure and microstructure of the species. The systematic position of the genus Groessensia is discussed and a rapprochement with Roemeriidae is proposed. The genus Thecostegites and the family Thecostegitidae are evocated for comparison.^1";
- 991 s[988] = "NOWINSKI A., ZAPALSKI M.K. (1999).- New tabulate coral from the Tournaisian of the Debnik Anticline, Poland.- Geological Quarterly 43, 4: 547-552.- FC&P 31-2, p. 47, ID=1696Topic(s): ; Tabulata, Verolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: Poland SVerolites polonicus sp. n. (Tabulata, Syringoporida) from the Lower Carboniferous (Upper Tournaisian, Lower Caninia Z) of the Silesia-Cracow Upland (Debnik Anticline, Czatkowice Quarry) is described and illustrated. This is the third species of poorly known genus Verolites Tchudinova. The new species differs from the type species (V. rarus Tchudinova) in subcerioidal structure of corallum, composed of prismatic corallites with smaller and undifferentiated diameters, greater number of connecting pores of smaller diameters, very rare connecting tubes, lack of connecting platforms and more strongly developed spines of tabulae.^1";
- 992 s[989] = "ZAPALSKI M.K. (2002).- New tabulate corals from the Tournaisian of the Cracow Area, Poland.- Acta Geologica Polonica 52, 4: 497-500.- FC&P 31-2, p. 47, ID=1698Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: Poland SThe paper presents the results of investigations of Tabulate corals from the Lower Carboniferous (Upper Tournaisian, Gnathodus cuneiformis Zone) from several exposures in the Debnik Anticline (Silesia-Cracow Upland, southern Poland). Two taxa representing the Favositida, Roemeripora nowinskii sp.nov. and Roemeripora sp., and one species representing the Syringoporida, Pleurosiphonella cf. virginica (Nelson), are described. The presence of Michelinia tenuisepta (Phillips) is noted. The genus Pleurosiphonella Tchudinova is recognised in the Carboniferous of Europe for the first time.^1";
- 993 s[990] = "LAFUSTE J., PLUSQUELLEC Y. (1988).- Rhizopora tubaria de Koninck 1872; Tabulata du Carbonifere. Donnees nouvelles sur la structure et la microstructure.- Bulletin de la Societe geologique de France 8, 4, 6: 1015-1020.- FC&P 18-1, p. 42, ID=2278Topic(s): microstructures; Tabulata, Rhizopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: ArdennesSpecimens of Rhizopora tubaria de Koninck from the Tournaisian of Belgium are incompletely silicified and confirm the presence of mural pores. The position of the pores suggests a new mode of budding characterized by a "screened" stage and the microlamellar constitution of the

- parietal sclerenchyme can be demonstrated.^1";
- 994 s[991] = "TOURNEUR F. (1989).- Presence du Tabule Verolites Tchudinova 1975 dans le Viséen de Vise (Carbonifere de la Belgique).- Bulletin de la Societe belge de Geologie 98, 1: 37-45.- FC&P 19-1.1, p. 21, ID=2578^Topic(s): biogeography; Tabulata, Verolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Vise; Geography: Ardennes^A specimen from the P. Destinez collection presently stored at the Palaeontology Lab. Catholic University of Louvain (UCL) has been assigned to the genus Verolites Tchudinova 1975, hitherto only known by its type species V. ranis Tchudinova 1975, from the Tournaisian of Kazakhstan. The presence of this Asian genus in the coral faunas of Vise confirms their affinity with the U.S.S.R. faunas, as already been shown for the rugose corals.^1";
- 995 s[992] = "GROESSENS E., TERMIER H., TERMIER G. (1975).- A propos d'un Syringoporldae nouveau du Tn 1b de la region de Dinant.- Mem. Expl. Cartes Geologiques et Minieres de la Belgique ???.- FC&P 7-1, p. 25, ID=0190^Topic(s): Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: Ardennes^^1";
- 996 s[993] = "RODRIGUEZ S., RAMIREZ C. (1987).- Los sirringoporidos de la seccion de la Playa de la Huelga (Carbonifero, Asturias, Noroeste de Espana).- Boletin de la Real Sociedad Espanola de Historia Natural, seccion Geologica 83, 1-4: 57-82.- FC&P 17-1, p. 27, ID=2140^Topic(s): new taxa, stratigraphy, biogeography; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: Spain, Asturias^The playa de la Huelga section comprises more than 1.500 meters of mainly calcareous sediments. The upper part of the section is very fossiliferous and syringoporids are dominant in some beds. Three new species, Multithecopora hontoriense n.sp., Neomultithecopora cantabrica n.sp. and Neomultithecopora submasiva n.sp. are described. They constitute a very interesting fauna because of their biostratigraphic and zoogeographic implications.^1";
- 997 s[994] = "TOURNEUR F., CONIL R., POTY E. (1990).- Donnees preliminaires sur les Tabules et les Chaetetides du Dinantien de la Belgique.- Bulletin de la Societe belge de Geologie 98, 3/4: 401-442. [in French, with English summary].- FC&P 19-1.1, p. 21, ID=2579^Topic(s): Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Carboniferous L; Geography: Ardennes^The preliminary study of the Tabulata from the Dinantian of Belgium (kept in several collections) allowed us to recognize numerous species. Some of them are succinctly described and figured. The stratigraphic distribution of the taxa was established on the base of the published data and of recent collections.^1";
- 998 s[995] = "COZAR P., SOMERVILLE I.D., RODRIGUEZ S., MEDINA-VAREA P. (2007).- New genera of late Viséan metaspondil dasycladales from the Fuenteovejuna section (Mississppian of the Guadiato Valley, southwestern Spain).- Neues Jahrbuch für Geologie und Paläontologie 246, 1: 97-109.- FC&P 36, p. 124, ID=6572^Topic(s): new taxa; algae Dasycladales; Systematics: algae; Stratigraphy: Carboniferous Vise; Geography: Spain SW^The microfloral assemblages of Mississippian carbonate outcrops close to Fuenteovejuna, southwestern Spain, are analysed and the occurrence of new genera and species of Diploporaceae dasyclad algae can be highlighted. Two new taxa are described, Guadiatella delicata n.gen. n.sp., and Borladella alternans n.gen. n.sp. Both taxa are new monospecific genera without equivalence in the Mississippian. They occur in upper Viséan rocks, in the Asbian and Brigantian substages. The genus Japhetella is here considered as an invalid genus. [original abstract]^1";
- 999 s[996] = "LAUWERS A. (1992).- Growth and diagenesis of

cryptalgal-bryozoan buildups within a Mid-Visean (Dinantian) cyclic sequence, Belgium.- *Annales de la Societe geologique de Belgique* 115, 1: 187-213.- **FC&P 21-2**, p. 7, ID=3293**Topic(s):** reefs, cryptalgal-bryozoan; reefs; **Systematics:** algae Bryozoa; **Stratigraphy:** Carboniferous Vise; **Geography:** Ardennes^Cryptalgal-bryozoan carbonate buildups are reported from the Middle Visean (Upper Dinantian) near Namur, Belgium. They occur in a 20m-thick, upward-shallowing, carbonate rhythm - the thickest in a succession of such rhythms. The rhythm comprises three phases; from bottom to top: (1) packstones-grainstones with rich and diverse biota, indicating open, shallow marine conditions; grading to (2) wackestones, with a poorer and more restricted biota, passing upwards to cryptalgal boundstones; and (3) mudstones with highly restricted and reduced biota. Small- to medium-sized mounds (2-11m thick) occur at the top of phase 2 where they settled on coral thickets. The buildups consist of a meshwork of bryozoans encrusted by finely laminated cryptalgal coatings and encrusting bryozoans. Brachiopods, sponges and vermetid gastropods are also present. Voids were filled by internal sediments and early marine cements. The growth of the buildups was probably interrupted by a short-lived sea-level drop, recorded laterally as what seems to be a karstic surface. Vadose internal sedimentation and minor leaching by meteoric water occurred in the exposed buildups. Marine conditions were then restored and, at the beginning of phase 3 deposition, coral thickets (with cryptalgal coatings) colonized the top of the largest buildup. Most remaining pore space was filled by burial cements. Other minor diagenetic processes include neomorphism, dolomitization, precipitation of Ca-sulphates and silicification.¹;

1000 s[997] = "COZAR P., RODRIGUEZ S., SOMERVILLE I.D. (2003).- Large multi-biotic cyanoliths from relatively deep-water facies in the early Serpukhovian of SW Spain.- *Facies* 49, 1: 31-48.- **FC&P 32-2**, p. 13, ID=7152**Topic(s):** ecology; cyanoliths; **Systematics:** Cyanophyta; **Stratigraphy:** Carboniferous Serp; **Geography:** Spain SW^Large cyanoliths reaching up to 12cm in size and mainly prolate, discoidal and spheroidal in shape occur in early Serpukhovian rocks from the San Antonio-La Juliana Unit (Gudiato Area, SW Spain). The main component in the cyanoliths is *Girvanella*, but other important components are the problematic-algae *Sparaphralysia*, *Calcifolium* and crustose *Fasciella*. A diverse assemblage of invertebrates, algae and aoujgaliids also occur in the cyanoliths. The internal structure of cyanoliths shows discontinuous cortices with tabular and columnar growth of *Girvanella* domes, and bafflestones of *Calcifolium*. These cyanoliths were constructed in a quiet water, low-energy dysphotic environment, in relatively deep water facies, and on the upper part of the slope or deep outer shelf. The probably dominant factors necessary for their growth were bioturbation and gravity. The shape, size, architecture, depositional setting, multibiotic composition and lumpy structure of these cyanoliths are similar to those of Cenozoic-Recent rhodoliths. Similarities to *Osagia*-type oncoids are few, and mostly related to the cyanobacterial composition. Only some Mississippian cyanoliths from Britain (digitate growth of cyanobacteria) and NW Spain and Poland (multibiotic composition) show notable similarities with cyanoliths from San Antonio-La Juliana. The San Antonio cyanoliths can be readily distinguished from coeval shallow-water oncoids in the Gudiato Area. [original abstract]¹;

1001 s[998] = "CHEVALIER E., ARETZ M. (2005).- A Microbe-Bryozoan Reef from the Middle Visean of the Namur Syncline (Engihoul Quarry).- *Geologica Belgica* 8, 1-2: 109-119.
<http://popups.ulg.ac.be/Geol/document.php?id=578>.- **FC&P 35**, p. 94, ID=2416**Topic(s):** reefs; reefs; **Systematics:** Monera Bryozoa; **Stratigraphy:** Carboniferous Vise; **Geography:** Ardennes^A microbe-bryozoan patch-reef was temporarily exposed in the Lives Formation (middle Visean) at the Engihoul Quarry, southern limb of the Namur syncline. It developed

within the Corphalie Member during the transition from bioclastic to stromatolitic facies. Reef formation is the result of a complex meshwork of calcified microbes, which formed complex layers which resemble "Osagia"-biocenose and individual columnar aggregates, fenestellid bryozoans, and early cements. Reef growth began on a hard- substrate provided by brachiopods and microbial crusts. Brachiopods (Composita sp.) are locally abundant in the reef facies, and contributed substantial firm ground for encrustation. Reef growth was controlled mainly by the abundance of fenestellid bryozoans. Their presence indicates reef formation during normal marine conditions. The reef developed in a high-energy area of the inner shelf. Reef growth probably stopped with the establishment of a peloidal mudstone facies, eventually indicating hypersaline conditions. The Engihoul reef is similar to Bome1 reefs (also in the Lives Formation). All are the same age and developed in the transitional phase of the Corphalie Member, but minor differences in the individual reef fauna occur. The transitional phase of the Corphalie Member is an important horizon for reef formation with clear independence from other reef forming episodes within the Belgian Dinantian succession. ^1";

1002 s[999] = "EICHMULLER K. (1985).- Die Valdeteja Formation: Aufbau und Geschichte einer oberkarbonischen Karbonatplattform (Kantabrisches Gebirge, Nord-Spanien).- Facies 13: 45-154.- FC&P 15-1.2, p. 41, ID=0767^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Carboniferous U; Geography: Spain, Cantabrian Mts^The Valdeteja Formation: Environment and History of an Upper Carboniferous Carbonate Platform (Cantabrian Mountains, Northern Spain) [in German, English summary].^1";

1003 s[1000] = "POTY E., ARETZ M., BARCHY L. (2002).- Stratigraphie et sédimentologie des "Calcaires à Productus" du Carbonifère inférieur de la Montagne Noire (Massif central, France).- C.R. Geoscience 334: 843-848.- FC&P 32-1, p. 18, ID=1102^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous L; Geography: France, Montagne Noire^The 'Calcaires á Productus` of the Montagne Noire are microbial build-ups. Two formations are defined and dated respectively as Uppermost Visean (Upper Warnatian-Brigantian) and Serpukhovian on the basis on corals. That makes these limestones out to be younger than previously stated (Lower and base of Upper warnatian-Asbian and base of Brigantian) and indicates that the development of the olistoliths and thrusts including them, due to Variscan orogeny, was at least as young as the Upper Serpukhovian. The Serpukhovian limestones of the Montagne Noire are correlated with the Lanet Limestone (Mounthoumet Massif, Corbières) and Ardengost Limestone (Central Pyrenees).^1";

1004 s[1001] = "MINWEGEN E. (2001).- Die Biokonstruktionen im Pennsylvanum des kantabrischen Gebirges.- Kölner Forum für Geologie und Paläontologie 9: 1-139.- FC&P 32-1, p. 32, ID=1430^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Carboniferous U; Geography: Spain, Cantabrian Mts^The Pennsylvanian organic buildups from the northeastern Cantabrian Zone (Pico de Europa Unit and Ponga Nappe) occur in different topographic settings of a foreland basin with an adjoining external carbonate platform during synorogenic to later orogenic stages. They display spatial and temporal changes in biological structure and organism association, distribution and morphology. Eleven types are distinguished: 1. Beresellid-chaetetid buildups, 2) chaetetid biostromes, 3) coral-chaetetid reefmounds, 4) rugose corals meadows, 5) Petschoria meadows, 6) phylloid algal boundstones, 7) Anthracoporella mounds, 8) Archaeolithophyllum banks, 9) bryozoan-pelmatozoan-brachiopod reefmounds, 10) pelmatozoan mounds and 10) sphinctozoan-algal boundstones. 2. During ther Moscovian the typical Donetzella mounds of the Serpukhovian and Bashkirian were replaced by equivalent shallow water communities of beresellid algae (Dvinella,

Beresella, Uraloporella), chaetetids and corals. Frequently, colonies of syringoporids characterize the base, chaetetids the top of shallowing upward-sequences. Relative small, typically "immature" buildups and low-diverse biostromal and biohermal structures reflect dynamic habitats due to sea-level changes. Bryozoan-pelmatozoan-communities dominated especially in deeper water environments. The platform slopes are stabilized by microbes and/or pure or not calcifying organisms. Bioconstructing communities from the Cantabrian Pennsylvanian in general have a low reef-building potential. Early diagenetic cementation of the sediments is rare. Similarities between North America and the northeastern Cantabrian zone concerning the decrease of chaetetids at the unconform base of the Missourian (= base of the Kasimovian) point to paleozoogeographic relationship, which had been already observed in the coral fauna. Most benthic communities are suppressed by siliciclastic and nutrient input. Archaeolithophyllum obviously tolerated such environments and built low diverse banks at the border of the carbonate platform, which episodically was influenced by deltaic deposition; thus these algal banks mark the progradation of the orogen. The bioconstructions of the mixed siliciclastic-carbonate sections of the Kasimovian are mainly dominated by algae. Especially Anthracoporella and Archaeolithophyllum are of great volumetric importance. The proof of widespread Anthracoporella mounds in the Cantabrian Mountains is of special interest because of the Palaeobiogeographic relations to the Anthracoporella mounds of the Carnic Alps. The decline of chaetetid dominated bioconstructions at the end of the Moscovian and the rise of algal dominated structures is a globally observed phenomenon. It coincides with an important floral change and, moreover, an important excursion of stable isotopes. Therefore, a global climatic change and associated changes of the carbon budget/nutrient input seem to be of first order importance for the reorganisation of the buildups. In ^1";

- 1005 s[1002] = "RODRIGUEZ S., ARRIBAS M.A., BERMUDEZ-ROCHAS D.D., CALVO A., COZAR P., FALCES S., HERNANDO J.M., MAS J.R., MORENO-EIRIS E., De la PENA J.A., PEREJON A., SANCHEZ-CHICO F., SOMERVILLE I.D. (2007).- Stratigraphical and paleontological synthesis of the Sierra del Castillo succession (Late Viséan, Córdoba, SW Spain).- Proceedings of the XVth International Congress on Carboniferous and Permian Stratigraphy [Wong, Th. E. (ed.), Royal Netherlands Academy of Arts and Sciences, Utrecht]: 205-216.- FC&P 35, p. 114, ID=2450^Topic(s): stratigraphy, fossils; stratigraphy, fossils; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Spain, Cordoba^^1";
- 1006 s[1003] = "AMLER M.R.W. (1987).- Fauna, Palaeogeographie und Alter der Kohlenkalk-Vorkommen im Kulm des oestlichen Rheinischen Schiefergebirges (Dinantium).- Geologische Abhandlungen Hessen 88; 339 pp.- FC&P 19-1.1, p. 41, ID=2623^Topic(s): geology; fossils; Systematics: ; Stratigraphy: Carboniferous L; Geography: Germany, Rhenish Mts^^1";
- 1007 s[1004] = "MORENO-EIRIS E., RODRIGUEZ S. (1987).- La seccion Berodia-Puertas. Nueva datacion Kasimoviense en el Carbonifero del sector Norte de los Picos de Europa (N de Espana).- Editorial Universidad Complutense Madrid 1986-87 COL-PA 41: 107-115.- FC&P 21-1.1, p. 47, ID=3233^Topic(s): geology; Systematics: ; Stratigraphy: Carboniferous Kas; Geography: Spain, Picos de Europa^^1";
- 1008 s[1005] = "MUCHEZ P., VIAENE W., BOUCKAERT J., CONIL R., DUSAR M., POTY E., SOILLE P., VANDENBERGHE N., (1990).- The occurrence of a microbial buildup at Poederlee (Campine Basin, Belgium): Biostratigraphy, sedimentology, early diagenesis and significance for Early Warnantian paleogeography.- Annales de la Societe geologique de Belgique 113, 2: 329-339.- FC&P 21-1.1, p. 56, ID=3267^Topic(s): reefs, microbial buildups; reefs; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Ardenes,

Campine Basin^The Poederlee borehole is situated in the Campine Basin and has been drilled in the center of a domal structure at the top of the Visean, identified by reflection seismic studies. The Visean limestones in this borehole have an Early Warnantian (Late Visean) age. They belong to the Carboniferous foraminifer *6*; subzone and to the rugose coral *7*; and *6*; subzones. Two types of lithofacies, namely microbial boundstones and bioclastic packstones and grainstones, are present in these limestones. The first type represents the core of a reef mound, which developed below and near the wave base. The second type occurs above the boundstones, forms the flank and top facies of the reef mound and has been deposited above wave base. Five superimposed reef mounds have been recognized in the Lower Warnantian and are interpreted as a reef complex. A comparison of the Lower Warnantian reef mounds in the Campine Basin indicates that the paleogeographical position is a factor which influences their evolution. Diagenesis started with the precipitation of isopachous fibrous and fibrous radial calcites under oxidizing conditions in marine pore-waters. After the precipitation of the fibrous calcites, dissolution of these cements and of the host limestone possibly occurred in meteoric waters. Rim cements around crinoids and blocky calcites developed in a pore fluid which evolved from oxidizing to reducing.¹;

- 1009 s[1006] = "MANSY J.L., CONIL R., MEILLIEZ F., KHATIR A., DELCAMBRE B., GROESSENS E., LYS M., POTY E., SWENNEN R., TRENTESAUX A., WEYANT M. (1989).- Nouvelles données stratigraphiques et structurales sur le Dinantien dans l'Avesnois.- Annales de la Société géologique du Nord 108: 125-142.- **FC**;P 21-1.1, p. 41, ID=4272^Topic(s): geology, stratigraphy; stratigraphy, structures; Systematics: ; Stratigraphy: Carboniferous L; Geography: France, Avesnois^Paleontology, sedimentology and tectonic fields are investigated. They allow a new paleogeographical approach of the western part of the Ardennes (Ardennes-area). The northern part contains Ivorian and Moliniacian facies with waulsortian variations, they are similar to the *4*;Auge Dinantaise*4*; facies. * The southern part contains shallow water facies identical to those of Condroz area. A stratigraphic log is proposed using paleontological, sedimentological and lithological markers. Near Avesnes a wide quarry provides a tectonic model which can be applied to the Condroz area where outcrops are sparse. A detailed study of this quarry led us to a progressive deformation sequence, where narrow deformation bands follow wide less deformed bands. Regional shortening must have been accommodated by minor folding and slipping over many faults. [original summary]¹";
- 1010 s[1007] = "LEES A., CONIL R. (1980).- The waulsortian Reefs of Belgium.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 35-46.- **FC**;P 9-2, p. 13, ID=5861^Topic(s): reefs waulsortian; reefs waulsortian; Systematics: ; Stratigraphy: Carboniferous; Geography: Ardennes^^1";
- 1011 s[1008] = "POTY E., HANCE L., LEES A., HENNEBERT M. (2001).- Dinantian lithostratigraphic units (Belgium).- Geologica Belgica 4, 1-4: 69-94.<http://popups.ulg.ac.be/Geol/document.php?id=1930>.- **FC**;P 32-1, p. 18, ID=7142^Topic(s): geology; geology, lithostratigraphy; Systematics: ; Stratigraphy: Carboniferous L; Geography: Ardennes^Six paleogeographic sedimentation areas (s.a.) are recognized in the Namur-Dinant Basin: (1) the Hainaut s.a., (2) the Namur s.a., (3) the Condroz s.a., (4) the Dinant s.a., (5) the Visé-Maastricht s.a., and (6) Avesnois s.a. (only in northern France). Together with the sea-level variations (third-order sequences), local controls influenced the nature of the sedimentary deposits, so the lithostratigraphic successions in each sedimentation area distinctive. The depositional setting was that of a

carbonate platform which evolved from a ramp in the early Tournaisian to a rimmed shelf during the early Viséan and then to a regionally extensive shelf during the middle and late Viséan. Before the Livian, open marine facies were developed to the south, but from Livian onwards open marine facies were restricted to the north while evaporites developed in the south. This inversion of a normal pattern was probably related to an early phase of the Variscan shortening. Dinantian biostratigraphy is mainly based upon foraminifera, rugose corals and conodonts. Fifty formations (including members), 3 groups and 2 informal lithostratigraphic units are briefly described. [original abstract]^1";

- 1012 s[1009] = "WEYER D. (1979).- Korallen-Funde im europäischen Zechstein-Meer.- Zeitschrift der geologischen Wissenschaften 1979, 7: 981-1021.- FC&P 9-1, p. 38, ID=0274^Topic(s): taxonomy, biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian Zechst; Geography: Europe, Central^The coral fauna of the European Zechstein (Werra cycle) is made up of only two species of Rugosa (family Polycoeliidae), Calophyllum profundum (Geinitz 1842), and Calophyllum quadrifidum (Howse 1848). Eleven additional taxa based on Zechstein materials are synonyms of these very variable species, as demonstrated by a rich collection of about one thousand specimens from 35 localities. A possible generic division between normal (Gerthia Grabau 1928) and ampleximorph polycoeliids (Calophyllum Dana 1846) would be premature. There are no Zechstein Tabulate, most old records now referring to Bryozoa. Corals lived everywhere in the Zechstein sea and are found both in near-shore and basinal regions. Other Rugosa communities, generally dominated by polycoeliids, from the Upper Permian of the boreal realm are reviewed. Relations are only indicated by striking similar species of Calophyllum from Zechstein sea, Kazanian sea, and eastern Greenland: Calophyllum profundum (Geinitz 1842), Calophyllum permianum (Nechayev 1894), Calophyllum permicum Fluegel 1973. Remarkable regional differences occur in Upper Permian Rugosa faunas of the palaeotethyan realm, too (Armenian assemblage of plerophyllids and southern Chinese Lophophyllidium-waagenophyllidae assemblage, both of lower Dzhulfian = Baisalian age).^1";
- 1013 s[1010] = "KOZUR H. (1984).- Die Verbreitung der limnischen Meduse Medusina liranica Muller, 1978, im Rotliegenden Mitteleuropas.- Paläontologische Zeitschrift 58, 1-2: 41-50.- FC&P 14-1, p. 63, ID=1074^Topic(s): limnic; Scyphozoa, Medusina; Systematics: Cnidaria; Scyphozoa; Stratigraphy: Permian Rotliegendes; Geography: Europe, Central^The fresh water medusoid fossil Medusina limnica Muller 1978 has a large regional, but a rather restricted vertical distribution within the continental Rotliegend facies. Its main occurrences in the higher, but not highest part of the Rotliegend supergroup in red coloured claystones, siltstones, and finegrained sandstones of Artinskian age. Any marine influence can be excluded in Rotliegend sediments of this age in the European hercynian intramontane basin.^1";
- 1014 s[1011] = "CHUDINOVA I.I. (1975).- Permskie Siringoporidy srednego Urala. [Permian Syringoporida of the Middle Ural-region; in Russian] .- Paleontologicheskii Zhurnal 1975, 4: 3-8.- FC&P 5-1, p. 34, ID=5389^Topic(s): Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian Sak; Geography: Russia, Urals^The paper deals with descriptions of Lower Sakmarian (Lower Permian) genera of Syringoporida: three species of Enigmalites Chudinova 1975 - E. lectus, E. lautus n.sp., E. largus n.sp. - two new species of Neosyringopora - N. diva n.sp., N. compacta n.sp. - and a new species of Multithecopora - M. eplicata n.sp.^1";
- 1015 s[1012] = "ZAGORA I., ZAGORA K. (1997).- Ein werrakarbonat (Ca1) - Riff im deutschen Anteil der Ostsee.- Freiburger Forschungsheft C446: 19-31.- FC&P 31-2, p. 55, ID=1714^Topic(s): reefs, facies; reefs; Systematics: ; Stratigraphy: Permian

- Zechst; Geography: Germany N^In the deep borehole H" - 1/90 of "Petrobaltic" joint venture situated 20 km eastward from the Island of Rügen a reef of the basal Zechstein (Upper permian) was discovered. Litho- and biofacies of this reef were investigated by the authors of this paper. New results allow a new paleogeographic interpretation of some elder boreholes of Rügen Island.^1";
- 1016 s[1013] = "KOWALSKI H. (1993).- Die Zechsteinriffe Ostthuringens.- Fossilien 10, 4: 244-251.- FC&P 22-2, p. 79, ID=3497^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian Zechst; Geography: Germany, Thuringia^^1";
- 1017 s[1014] = "PAUL J. (1996).- Stromatolite Reefs of the Upper Permian Zechstein Basin.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 43, ID=3610^Topic(s): stromatolite reefs; stromatolites; Systematics: ; Stratigraphy: Permian Zechst; Geography: Europe central^Stromatolites and laminated mats are characteristic of Zechstein reefs which reach heights of 100 m. Bryozoans and other macroscopic fauna are only additional attributes. Their baffling effects are of minor importance. Reef-types vary from fringing and barrier reefs to patch and pinnacle reefs. Occurrence and construction of these reefs are very similar to those of modern coral reefs, mostly depending on hydrodynamic conditions and the influx of siliciclastics. Extensive reef-flats are controlled by sealevel. Macrofossils are missing at the uppermost part of the reefs as a result of increasing salinity. Very early marine lithification protected the buildups against browsing and wave action, but pervasive dolomitization destroyed the microstructures of reef-builders. Sealevel fluctuation and changes in salinity are the most important parameters controlling growth and termination of Zechstein reefs.^1";
- 1018 s[1015] = "VACHARD D., ROCHE M. (1996).- Oxyhexactines de Lyssakides (Spongiaires Hexactinellides) dans des preparations palynologiques du Rhetien (Trias terminal) de l'Est de la France.- Geobios 29, 2: 171-176.- FC&P 25-2, p. 57, ID=3156^Topic(s): ecology; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Triassic Rhaet; Geography: France, Paris Basin^A taphocenosis with pyritized microscleres spicules of hexactinellid sponges, associated with acritarchs and dinoflagellate cysts, allows precise determination of biosedimentological conditions prevailing during deposition of a facies of the Rhaetian Sandstones from the Paris Basin.^1";
- 1019 s[1016] = "MORYCOWA E. (1988).- Triassic Scleractinia from the Cracow-Silesia region, Poland.- Acta Palaeontologica Polonica 33, 2: 91-121.- FC&P 18-1, p. 27, ID=2223^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Poland, Silesian-Cracow upland^^1";
- 1020 s[1017] = "MORYCOWA E., LABAJ M., SZULC J. (2006).- calicular variation in Eckastraea prisca (Scleractinia) from the Middle Triassic (Anisian) of the Silesian region (SW Poland).- Neues Jahrbuch fuer Geologie und Palaeontologie, Monatshafte 12: 705-720.- FC&P 35, p. 80, ID=2396^Topic(s): calicular variation; Scleractinia, Eckastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: Poland, Silesia^The paper focuses on the growth form and highly variable characters of calicular morphology of the coralla of the Anisian scleractinian species Eckastraea prisca (Weissermel, 1925) from the Lower Muschelkalk in the Silesian region (SW Poland). The shape of the colonies and the variability of the distal corallite structure are explained in terms of the changing environmental factors and by phenotypic plasticity of corals.^1";
- 1021 s[1018] = "MORYCOWA E., SZULC J. (2006).- Remarks on Middle Triassic

- (Anisian) scleractinian corals from the Cracow-Silesian region, Poland (Northern Peri-Tethyan realm).- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 421-433.- FC&P 35, p. 81, ID=2400Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: Poland, Silesia^This paper deals with the mode of occurrence, growth forms, skeletal preservation and the life conditions of some of the oldest, stratigraphically well-documented Anisian (Pelsonian-early Illyrian) scleractinian corals, occurring in situ, in shallow-water carbonate rocks in the Lower and Middle Muschelkalk of the Cracow-Silesian region, Southern Poland (northern Peri-Tethys, Central Europe). Among 18 species (from 14 genera; some of generic names require emendation), one of the important Anisian coral species is Pamiroseris silesiaca (Beyrich) (=former Thamnastraea silesiaca Beyrich), frequently occurring and widely distributed in the Peri-Tethyan (Germany, Poland) and found in the Tethyan provinces (Alps and S. China). The paper also presents skeletal growth bands of P. silesiaca and its septal microarchitecture, important because of high morphological homeomorphy of thamnasterioid corals e.g. Pamiroseris, Thamnasteria.^1";
- 1022 s[1019] = "BODZIOCH A. (1997).- Karchowice Formation: definition and stratigraphy. [in Polish with English summary].- Geologos 2: 165-199.- FC&P 27-2, p. 12, ID=3889Topic(s): stratigraphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: Poland, Upper Silesia^The paper concerns the uppermost unit of the Lower Muschelkalk (Middle Triassic) from the Silesian-Cracow Upland. It is of interest for coral students, as the formation considered contains early Scleractinia known from descriptions by Beyrich (1852), Eck (1865), Weissermel (1925), and recently by Morycowa (1986).^1";
- 1023 s[1020] = "SCHNEIDER E., BECKER J. (1973).- Sur la présence de Polypiers dans le calcaire à Entroques (Muschelkalk supérieur) de la Sarre.- Ann. Sci. Univ. Besançon - Géol. 18: 131-133.- FC&P 3-2, p. 46, ID=4980Topic(s): Scleractinia, Procyathopora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: France, Sarre^Il est signalé la présence de polypiers coloniaux connus dans le Muschelkalk supérieur de la région de Donauschlingen (Allemagne) mais nouveaux pour le Muschelkalk supérieur de la Sarre (Procyathopora fuerstenbergensis Eck).^1";
- 1024 s[1021] = "MORYCOWA E., SZULC J. (2010).- Environmental controls on growth of early scleractinian patch reefs (Middle Triassic; Silesia; Poland).- Palaeoworld 19, 3-4: 382-388.- FC&P 36, p. 117, ID=6559Topic(s): coral reefs, ecology; Scleractinia, reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Anis; Geography: Poland, Upper Silesia^Anisian scleractinian corals are known from the Lower and Middle Muschelkalk of the Cracow-Silesian region, but in bioherms they occur only in the western part, i.e., in the Upper Silesian area, in the higher part of the Lower Muschelkalk (Karchowice Beds). Silesian reefs of Anisian (middle Pelsonian-early Illyrian) age are, so far, the oldest in situ coral reefs following the Permian / Triassic extinction. In Anisian time, Silesian corals formed a Tethys marginal reefal rim, separating offshore Tethyan open marine waters from the backreef area (Germanic Basin). The shallow-water coral-bearing facies capped sponge buildups, following a general shallowing trend in the basin. Final emersion in the early Illyrian halted coral reef growth. Anisian scleractinian corals appear to have been zooxanthellate, as suggested in Morycowa, 1988. [original abstract]^1";
- 1025 s[1022] = "MORYCOWA E., SZULC J. (2006).- New family Eckastraeidae, Scleractinia (Middle Triassic, Peri-Tethys, Central Europe).- Neues Jahrbuch fuer Geologie und Palaeontologie, Monatshefte 12: 721-733.- FC&P 35, p. 80, ID=2399Topic(s): systematics;

Scleractinia, Eckastraeidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: Poland, Silesia^The genus Eckastraea Morycowa, 1988 from the Middle Triassic of Cracow-Upper Silesian region has been created on the basis of the holotype of Isastraea prisca Weissermel, 1925. The systematical position of this genus was however, undetermined. The recent findings of better preserved specimens enabled to place the genus into the new family Eckastraeidae. This new family is closest to the family Margarophylliidae Cuif, 1977 belonging to the superfamily Volzeioidae suborder Caryophylliina.^1";

1026 s[1023] = "GEISTER J. (1984).- Les récifs à Placunopsis ostracina dans le Muschelkalk du Bassin Germanique.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 19.1-19.8.- FC&P 13-1, p. 11, ID=6332^Topic(s): reefs; Placunopsis buildups; Systematics: Mollusca; Stratigraphy: Triassic M; Geography: Germanic Basin^Parmi les concrétionnements à lamellibranches les moins connus, figurent les récifs à Placunopsis du Trias germanique. Reconnus par Wagner (1913) pour la première fois en Franconie, ils étaient ensuite signalés en Souabe (Bachmann 1979, Hagdorn 1982) en Alsace (Düringer 1982) en Lorraine (Holder 1961, 1962) et même dans le Lias d'Espagne (Turnsek et al. 1975). * Placunopsis ostracina est la seule espèce constructrice représentée dans ce type de concrétionnement du Trias germanique, où ces récifs apparaissent dans les couches limitrophes entre le Muschelkalk Supérieur et la Lettenkohle (Keuper inférieur). [part of an introduction]^1";

1027 s[1024] = "FLUGEL E., FLUGEL-KAHLER E., MARTIN J.M., MARTIN-ALGARRA A. (1984).- Middle Triassic Reefs from Southern Spain.- Facies 11: 173-218.- FC&P 13-2, p. 55, ID=0596^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic M; Geography: Spain S^Middle Triassic (probably Ladinian) carbonates of the Lower Dolomitic Member of the Trevenque Unit (a part of the Intermediate Group of the Alpujarride Complex) were studied in the Cahorros de Monachil section southeast of Granada, in the Inner Zone of the Betic Cordillera, with respect to the facies succession and to the paleontological criteria. "Serpulid/algal/cement reefs", developed in the upper part of the section, represent a new subtype of "algal/cement reefs", a special reef type restricted to the Artinskian to Carnian time interval.^1";

1028 s[1025] = "BODZIOCH A. (1997).- Sponge / crinoidal / coral bioherms from the Muschelkalk of Upper Silesia (Middle Triassic, Poland).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 049-059.- FC&P 26-2, p. 22, ID=3701^Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Triassic M; Geography: Poland, Upper Silesia^Sponge / crinoidal / coral bioherms have been found in the Karchowice Formation which is the uppermost lithostratigraphical unit of the Lower Muschelkalk in the Upper Silesian region. Taxonomic composition and biohermal structure show similarities to younger buildups, well-known during the Jurassic. Their lower part is made of primary lime mud with loosely packed clumps of siliceous sponges Hexactinoderma trammeri, accompanied by echinoderms, brachiopods, ecologically diversified bivalves, polychaetes, solitary corals, ostracos and foraminifers. In the middle part, sponges are successively replaced by encrinids, and infaunal bivalves disappear. In the upper part, both sponges and encrinids are replaced by corals (mainly Pamiroseris silesiaca) which form a rigid skeletal framework. Moreover, a significant increase in the number of species and individuals of herbivore gastropods is visible in this part of the bioherms, as well as the dominance of cemented and byssate bivalves. Such development of the biohermal structure can be referred to the shallowing of the sedimentary basin and to taphonomic feedback. Sponges (and other reef-builders) served as a substratum for the epifauna which was a

source of skeletal hardparts. In this way, a hard substratum was originated, infaunal bivalves disappeared and the rigid coral framework developed. The bioherms developed at the edge of a shallow carbonate platform during regression of the Lower Muschelkalk sea. The coral community lived in shallow, euphotic water.^1";

- 1029 s[1026] = "TURNSEK D., SEYFRIED H., GEYER O. (1975).- Geologische und Paläontologische Untersuchungen an einem Korallen-Vorkommen im subbetischen Unterjura von Murcia (Süd-Spanien).- Razprave Slov. Akad. Zn. Um, Cl. 4, 18, 5, 1-35, 25.- FC&P 6-1, p. 30, ID=0105^Topic(s): taxonomy, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic L; Geography: Spain s^Biostromal limestone of shallow water origin in the Lower Jurassic of southern Spain are described and interpreted paleoecologically. A coral fauna consisting of 14 genera and 8 species is described and compared to Upper Triassic and Middle Jurassic forms. Hispaniastraea, nov. gen., H. murciana and H. ramosa, nov. spp. and Coccophyllum llasticum are new taxa.^1";
- 1030 s[1027] = "GEISTER J. (1984).- Bajocian coral reefs of the northeastern Paris Basin.- Advances in Reef Science, Annual Meeting int. Soc. for Reef Studies (Miami 1984) ??? [Paleoecological aspects.-].- FC&P 13-2, p. 9, ID=0621^Topic(s): reefs coral; reefs, Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Baj; Geography: France, Paris Basin^^1";
- 1031 s[1028] = "ROSENDAHL S. (1985).- Die oberjurassische Korallenfazies von Algarve (Sudportugal).- Arbeiten Inst. Geol. Paläont. Univ. Stuttgart N.F. 82: 1-125.- FC&P 15-2, p. 42, ID=0737^Topic(s): ; Anthozoa ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Portugal s^Le bassin de Algarve a ete affecte par une transgression pendant l'Oxfordien moyen a laquelle s'est suivie une regression a partir de l'Oxfordien superieur. Au cours de cette periode regressive s'y sont installees des facies coraliqes qui ont occupe de vastes surfaces surtout a Algarve oriental. L'installation de recifs de madreporaires a commence pendant l'Oxfordien superieur, le maximum etant atteint au Kimmeridgien inferieur. En meme temps en Algarve occidental il y a eu des conditions qui correspondent a une mer peu profonde. Sur la cote occidentale actuelle (Carrapateira) se sont formes des biostromes de madreporaires qui ont occupe de vastes aires. Au cours de l'etape finale du Jurassique superieur la sedimentation en Algarve occidental a progressivement subi des influences continentales. En Algarve oriental, au dessus des recifs des madreporaires apparaissent des biostromes de polypiers a facies carbonatee ou marneuse, la formation de recifs n'etant plus possible.^1";
- 1032 s[1029] = "MOLINA J.M., RUIZ ORTIZ P.A., VERA J.A. (1984).- Colonias de corales y facies oncolitas en el Dogger de las Sierras de Cabra y Puente Genil (Subbetico externo, Provincia de Cordoba).- Estudios geol. 40: 455-461.- FC&P 14-2, p. 40, ID=0925^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic M; Geography: Spain, Cordoba^The presence of coral colonies and oncoid facies in the Dogger of the External Subbetic is first shown in this paper. It is worthy of remark that the Dogger materials (oid limestones basically) are placed between pelagic formations. Really, they represent a part of a shallowing-upward sequence which begins with the pelagic sediments of the Domerian-Toarcian. Over these materials a shallow carbonate shelf is established where bioherms, coral colonies, oncoid and ooid facies are developed, capping the sequence a hard-ground of the Upper Bathonian. The Upper Jurassic materials are clearly pelagic with "ammonitico rosso" facies. This work represents a contribution to the scientific controversy about the interpretation of the ooid limestones of the Dogger. In other areas (Venetian Alps, Balearic Islands, etc.),

these limestones have been interpreted as deep redeposited sediments and attempts to extend this interpretation to all the Dogger ooid limestones of the Alpine realm have been made. The features shown in this paper about the shallow marine nature of these materials in the External Subbetic are conclusives.^1";

- 1033 s[1030] = "WERNER W. (1986).- Palaeokologische und biofazielle Analyse des Kimmeridge (Oberjura) von Consolacao, Mittelportugal.- Zitteliana 13: 1-109.- FC&P 16-1, p. 71, ID=2005^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Kimm; Geography: Portugal^[paleoecological and biofacies analysis of the Kimmeridgian of Consolacao, central Portugal; includes faunal list and detailed discussion of reef coral associations (pp 32-48); with English summary]^1";
- 1034 s[1031] = "ERRENT C. (1991).- Das korallenfuehrende Kimmeridgium der nordwestlichen iberischen Ketten und angrenzender Gebiete, 1.- Palaeontographica A214, 3-6: 121-207.- FC&P 20-1.1, p. 62, ID=2832^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Kimm; Geography: Spain, NW Iberian Range^The Upper Jurassic marine strata in the northwestern Iberian Range and in adjacent areas have been studied by using sections from 78 localities. The main subjects of research are the coral-bearing beds of the Lower Kimmeridgian. A model of the palaeogeographical development is presented, with the northern epicontinental borders of the betic syncline in the southeast and with the Jurassic Cantabrian basin in the North. The differentiated facies development proves the shallow character of this channel over the entire area. with only few exceptions the facies succesion shows continuously open-marine conditions which merely end just before the continental "wealden"-sedimentation starts. Striking is the widespread occurrence of corals. Thick coralline limestones are to be found in the Sierra de los Cameros, the Sierra del Madero and the Noviercas-Ciria-Torrelapaja-Bijuesca-region. They generally indicate a decreasing sea-level in three steps: The "initial stage" is characterized by the flat colonies, especially by Microsolena settling in the different lithofacies. Even in sandy sediments and micritic limestones they are to be found, forming a widely extended biostromal slab up to 20 m in thickness. The following "stage of differentiation" shows a great variety, both in lithofacies and in the composition of coral faunas. A "terminal stage" with pebbly oolitic Chaetetid-limestones, originating from very shallow water, brings the marine development of the Upper Jurassic in the central part of the investigated region to an end. In spite of its shallowness and morphological impediments (reefs, oolite-and sandbars) permanet currents passed through the channel; otherwise the widespread coral growth and the complexity of the coral faunas could not have been developed. The palaeontology of the rich coral fauna from the northwestern Iberian Range is examined for the first time. The research is supplied by additional collections and investigations in the surrounding areas, mainly the Montes Universales, from where Geyer already has described a coral fauna. Altogether 1366 corals have been determined belonging to 49 genera with 96 species, including 7 new ones. The coral fauna described in part 1 is distributed to the families Actinastreaeidae, Amphiastraeidae, Cyathophoridae, Stylinidae, Euhellidae, Montlivaltiidae, Isastraeidae, Placosmiliidae, Faviidae and Dermosmiliidae. The voluminous fauna shows close connections to other Upper Jurassic coral occurrences in Central Europe, the Mediterranean and Caucausian areas, thus marginal domains of the Tethyan sea.^1";
- 1035 s[1032] = "NAGEL R., LAUXMANN U. (1990).- Zur Verkieselung der oberjurassischen Korallen von Wuerttemberg.- N. Jb. Geol. Palaeont. Mh. 1990, 10: 622-638. [in German, with English summary].- FC&P 20-1.1, p. 70, ID=2854^Topic(s): silification; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic

U; Geography: Germany, Württemberg^The silicification of the corals of the Upper Jurassic of Württemberg (SW Germany) is described in regard to the different observed silica-phases. LS-chalcedony (quartzine) is the most common silica-phase; it occurs generally as a replacement of the neomorphic spar of the corals, rarely as a cavity filling. It is spherulitic and nearly always found beneath the surface of the corals, where it can form a skin. LF-chalcedony and megaquartz exist in corals only as cavity fillings, whereas megaquartz may occur in other shell fragments as a replacement. Microquartz is not too abundant and is only found as a replacement in micritic fillings of cavities between the septa of the corals. Lutecite was only found in echinoderm fragments, opale not at all. The aragonite of the coral skeletons was transformed into neomorphic spar in a marine environment. The Mg content of the neomorphic spar made the silica precipitate as LS-chalcedony, whereas in the adjacent cavities LS-chalcedony developed only initially but mainly LF-chalcedony and megaquartz. This is connected with an increasing burial under marine cover and concurrent decrease of the bulk pore-water in Mg²⁺ and SO₄²⁻ - contents. As the sea retreated from the area of the Swabian Alb after the Lower Tithonian, the silicification has to be supposed to be of early Tithonian age. The silicified areas were submitted to beginning recalcitisation.^1";

1036 s [1033] = "BERTLING M. (1993).- Riffkorallen im Norddeutschen Oberjura - Taxonomie, Oekologie, Verteilung.- Palaeontographica A226, 4-6: 77-123.- FC&P 22-1, p. 38, ID=3398^Topic(s): hermatypic, distribution; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Germany N^During Late Oxfordian and Middle Kimmeridgian (Late Jurassic), small patch reefs were formed at numerous localities in northern Germany. The richly structured neritic sea was characterized by seasonally varying environmental factors, such as water movement and illumination as ecological requisites, and sedimentological conditions and bioerosion as ecological addends. These factors evidently affect the faunas. Thus, palaeontological facies interpretation is possible according to qualitative and quantitative criteria supported by sedimentological results. Twenty six species of reef corals are described in detail and arranged in various guilds (builders, bafflers, binders, dwellers) on the basis of the impact of growth forms on the skeletal frame. However, intraspecific variation of guild membership may occur due to different reefal architecture. The most important synecological parameters, dominance and diversity, are calculated for all localities. *Thamnasteria concinna* (Goldfuss) which can tolerate partial mortality well is the dominant species in various environments, thus showing ubiquitous characteristics. The diversities of the associations examined are generally low and strongly vary within comparable facies. These facts prove the oscillation of important environmental factors. Despite the ecological preferences of some taxa, the distribution of reef corals seems to be mostly random, at least in more favourable environments. [list of species: *Actinastrea pentagonalis* (Muenster 1829), *Cyathopora* (C.) *bourgueti* (Defrance 1826), *Convexastrea sexradiata* (Goldfuss 1829), *Sfylna* (S.) *limbata* (Goldfuss 1826), *Stylina* (S.) *deLabechii* Edwards & Haime 1851, *Goniocora socialis* (Roemer 1836), *Cladophyllia dichotoma* (Goldfuss 1826), *Heliocoenia variabilis* Etallon 1859, *Montlivaltia obconica* (Muenster 1829), *Thecosmilia trichotoma* (Goldfuss 1826), *Th. costata* Fromentel 1861, *Latiphyllia suevica* (Quenstedt 1858), *Isastrea crassa* (Goldfuss 1826), *I. helianthoides* (Goldfuss 1826), *Placophyllia minima* Geyer 1955, *Microsolena agariformis* (Etallon 1859), *Thamnasteria concinna* (Goldfuss 1826), *Th. seriata* Becker 1875, *Calamophyllia disputabilis* (Becker 1875), *Dermosmilia? nana* (Roemer 1836), *Latomeandra plicata* (Goldfuss 1826), *Ovalastrea michelini* (Edwards & Haime 1851), *O. caryophylloides* (Goldfuss 1826), *Microphyllia brevivalis* (Becker 1875), *M. seriata* (Becker 1875), *Actinaraea*

- granulata (Muenster 1829)]^1";
- 1037 s[1034] = "MAS J.R., ALONSO A., BENITO M.I. (1997).- Depositional and diagenetic evolution of late Jurassic coral reefs in Northern Iberian Ranges (North Spain).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 143-160.- FC&P 26-2, p. 26, ID=3709^Topic(s): reefs coral, geography, geology; reefs, coral; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Spain, Cameros Basin^The studied reefs are situated around the Cameros Basin (Late Jurassic-Early Cretaceous; North Spain) in a rim of marine Jurassic outcrops. The last marine Jurassic sediments in the area are characterized by the development of coral reefs which correspond to the Kimmeridgian. These reefs were situated in an epicontinental seaway which lay between the Iberian and Ebro massives. This sequence is best exposed near Torrecilla en Cameros where a fringing reef has been identified. In each buildup of this reef complex, the reef-core, with a fore-reef and long-shore carbonate sand bars can be distinguished. The reef complex in Soria has a different geometry for vertical growth dominates, although some progradation occurs and a back reef grainstone facies prograded over the core reef facies. Many diagenetic processes have affected these reefs although cementation is particularly important because it has provided a clear paragenetic sequence related to the diagenetic evolution of these limestones. The most common sequence evolves from submarine cements (only present in primary cavities) to cements precipitated under active fresh-water phreatic conditions, stagnant phreatic afterwards, and finally under burial conditions. This sequence represents progressive burial of these reefs when a very thick series of essentially continental sediments was deposited. Another less common sequence is present in some dissolution cavities generated in the subsurface. This sequence evolved from cements precipitated in a reduced environment to shallower oxidizing ones precipitated under telodiagenetic conditions.^1";
- 1038 s[1035] = "BERTLING M. (1998).- Structure and function of coral associations under extreme siltation stress - a case study from the Northern Germany Upper Jurassic.- Proceedings of the 8th International Coral Reef Symposium Panama City, 2: 1749-1754.- FC&P 27-1, p. 91, ID=3835^Topic(s): reefs ecology; reefs, siltation stress; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Germany N^Coral associations occur in situ within fine-grained siliciclastics in the Oxfordian (Late Jurassic) of northern Germany. Compared with contemporaneous localities representing other environments, their diversity was slightly lower; species tolerating sedimentation were more important. The morphology of their coralla with large well-integrated calices and strongly ornamented septa was flat, resulting from reduced light levels; no branching forms occur. Terrigenous clastics reached the areas of coral growth seasonally during times of increased runoff in a warm-temperate climate, probably without being fenced off somehow. Corals show strong partial mortality but were able to recover by overgrowing the sediments. Since coral surface was quickly covered unless living polyps removed sediment continuously, encrusters and borers found hardly any suitable substrate; their abundance in the associations was very low therefore.^1";
- 1039 s[1036] = "KOENIG W., BERTLING M. (1998).- Der Korallenoolith von Taternpfahl.- Arbeitskreis Paläontologie Hannover 26: 47-56.- FC&P 28-1, p. 42, ID=3973^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Germany^A coral fauna from the Malmian near Hannover (Lower Saxony) is briefly reported]^1";
- 1040 s[1037] = "NOSE M., LEINFELDER R.R. (1997).- Upper Jurassic coral communities within siliciclastic settings (Lusitanian basin, Portugal): implications for symbiotic and nutrient strategies.- Proceedings of the 8th International Coral Reef Symposium Panama City 2: 1755-1760.-

FC&P 27-2, p. 59, ID=4242^Topic(s): ecology, siliciclastic setting; coral biocoenoses; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Portugal, Lusitanian Basin^Upper Jurassic coral communities of Portugal (Lusitanian Basin) grew despite high siliciclastic influx. Small, reef-rimmed carbonate platforms existed on basement uplifts over an extended period of time. Other reefs grew whenever episodes of tectonic quiescence and/or rising sea level reduced siliciclastic influx. Reefs grew within a coarse siliciclastic fan delta and on a fine grained, siliciclastic slope system. The latter is developed as a distally steepened mixed carbonate-siliciclastic ramp system, which provided excellent examples for constantly or periodically sediment-stressed reefs. Sedimentation rather than water depth was the major modifier of diversity of coral communities and coral growth forms. For example, massive to foliose *Microsolena agariciformis* changed to a 'pseudobranch' morphology composed of thinly stacked encrusting layers during elevated sedimentation. Depth distribution patterns and morphologic changes clearly show that Jurassic hermatypic corals had photosymbionts. However, their frequent occurrence within, or very close to, siliciclastic settings indicates that they could tolerate higher nutrient rates than modern reef corals, probably because of a still imperfect symbiotic relation. Consistent with this interpretation are the slower growth rates and the lower low to high density band ratios of Upper Jurassic reef corals even in very shallow, nonsediment-stressed reef settings.^1";

1041 s[1038] = "ROMAN J., ATROPS F., ARNAUD M. (1994).- Le gisement tithonien inferieur des calcaires lithographiques de Canjuers (Var, France): etat actuel des connaissances.- Geobios; Memoire Special 16: 126-135. [in French].- FC&P 24-1, p. 70, ID=4499^Topic(s): ; paleontology, lithographic 1st; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Tith; Geography: France, Var^New data since the synthesis of Fabre et.al. (1982) concerning the fossil locality of Canjuers (Var, France) are provided. Many species are added, mainly among plants, corals, brachiopods, ammonites and echinoderms. The species previously reported are re-examined. The early Tithonian age, mucronatum zone (and not Berriasian as formerly presumed) of the fossil locality is based on ammonites. Flora and fauna are close to the nearly contemporaneous fossils from the lithographic limestones of Bavaria and, with fewer affinities, to those of Cerin (Ain).^1";

1042 s[1039] = "RONIEWICZ E., RONIEWICZ P. (1971).- Upper Jurassic coral assemblages of the Central Polish Uplands.- Acta Palaeontologica Polonica 21, 3: 399-423.- FC&P 1-2, p. 23, ID=4688^Topic(s): biostratigraphy; coral assemblages; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Poland, Central Uplands^The Upper Jurassic coral assemblages of the Holy Cross Mts. and Polish Jura Chain are composed of: a) foliaceous and submassive colonies, b) branching colonies and c) massive subspherical colonies. The character of corals and associated fauna and flora, as well as deposits in which the assemblages occur indicate a very shallow-water environment. The character of this environment and the process of sedimentation, which accompanied the growth, indicate i.a. that the assemblages were formed by the accretion of colonies at a rate equalling that of the sedimentation. An increase in the rate of sedimentation caused the end of their development. The assemblages discussed did not supply detrital material to the sediment and did not exert a decisive influence on the course of sedimentation, which makes them similar to Recent patch reefs of the Bahamas.^1";

1043 s[1040] = "HARY A. (1970).- Recifs de coraux du Bajocien moyen aux environs du Rumelange (Grand-Duche de Luxembourg).- Inst. Grand-Ducal Luxembourg (Sect. Sci. nat., phys., math.) Archives NS 34, 1968/69: 431-455.- FC&P 7-2, p. 26, ID=5666^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa;

- 1044 Stratigraphy: Jurassic Baj; Geography: Luxemburg^[description of Bajocian reefs of Luxembourg]^1";
s[1041] = "BENKE K., DURKOOP A., ERRENST C., MENSINK H. (1981).- Die Korallenkalke im Ober-Jura der nordwestlichen Iberischen Ketten (Spanien).- Facies 4, 1: 27-93.- FC&P 10-1, p. 25, ID=5898^Topic(s): biostratigraphy; coral limestones; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Spain NW^Stratigraphy, facies and paleogeography of the Upper Jurassic coral-bearing beds are described in the area of the Sierra de los Cameros, Sierra del Madero and Tablado and from the margin of the Ebro basin south of Logrono and west of Zaragoza. The under- and overlying sedimentary sequences are also considered. [first part of extensive summary]^1";
- 1045 s[1042] = "REOLID M., MOLINA J.M., LOSER H., NAVARRO V., RUIZ-ORTIZ P.A. (2009).- Coral biostromes of the Middle Jurassic from the Subbetic (Betic Cordillera, Southern Spain) facies: coral taxonomy, taphonomy and palaeoecology.- Facies 55, 4: 575-593.- FC&P 36, p. 101, ID=6530^Topic(s): reefs biostromes; coral biostromes; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic M; Geography: Spain, Betic Cordillera^Coral biostromes from the Camarena Formation (External Subbetic, Betic Cordillera) are reviewed under palaeoecologic, taphonomic and palaeontologic aspects. The biostromes are dominated by phaceloid forms and are characterised by a typical shallow-marine microencruster assemblage with photophilic microencrusters and scarce microbial crusts. The abundance of stylinid corals and light-dependant microencrusters suggest oligotrophic conditions. Coral colonies were located among oolitic shoals which were unfavourable for coral growth. The corals were developed in phases without oolitic production alternating with phases of oolitic production, forming metric-scale sequences. A relative sea-level fall would have reduced the ooidal production and led to the deposition of thin layers of micritic facies in intertidal areas. The cementation and hardening of the bottom resulted in a hardground that was colonized by corals after a subsequent relative sea-level rise. The progressive increase of the energetic conditions induced an increasing production of ooids and the migration of oolitic shoals, which covered and finished the coral biostromes. Repetition of this process gave rise to sequences reflecting small pulses of oscillations in the relative sea level. [original abstract]^1";
- 1046 s[1043] = "BERTLING M. (1987).- Cracks in Coral Colonies - biogenic or abiogenic structures?.- FC&P 16, 2: 13-15. [short note] - FC&P 16-2, p. 13, ID=6768^Topic(s): diagenesis; corals, diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: Germany NW^[...] explanation entails the early diagenetic transformation of aragonite into calcite. Colonies die off in their central parts while peripheral polyps are still living. However, no fracturing occurs during the lifetime of the corals (deduced because no healing of cracks could be observed). [fragment of conclusions]^1";
- 1047 s[1044] = "BERTLING M. (1989).- Die Korallengebundenen Choriozonosen des norddeutschen Malm.- Munster Univ. Inaug.-Diss.: iv + 167 pp., 22 figs, 17 tbls.- FC&P 20-1.1, p. 50, ID=6798^Topic(s): ecology; coral biocoenoses; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Germany N^Subject of the work are corals as substrate and center of activity of various organisms. The material dealt with comes from 12 localities in at least six stratigraphic positions in the northern German Upper Jurassic (Oxfordian and Kimmeridgian). Ten species of corals have to be considered in this context, their measurable surfaces summing up to more than 6.4 qm. (The other 24 species of scleractinians in the region are not examined because of their relative insignificance in ecological terms.) This area reveals some 80 different taxa with about 20.500 individuals altogether. [first part of extensive summary]^1";

- 1048 s[1045] = "LATERNSER R. (2001).- Oberjurassische Korallenriffe von Nordostfrankreich (Lothringen) und Südwestdeutschland.- Stuttgart University "Dissertation"; http://elib.uni-stuttgart.de/opus/volltexte/2001/877.- FC&P 30-2, p. 7, ID=7084^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: France NE, Germany SW^The environmental conditions during the growth of Upper Jurassic coral reefs Northeast France and Southwest Germany were reconstructed by the detailed analysis of the reef fauna and sedimentological criteria in comparison with modern coral reef environments. The ecological interpretation of all exposed reef bodies in this regions makes up the base for the reconstruction of the local and regional environment. While the Oxfordian reefs of Lorraine and the Isteiner Klotz where situated on an extensive and low relief carbonate ramp, the comparatively small platform reef of Arnegg developed on a submarine shallow during the Kimmeridgian. For the comparison of a multitude of structurally different coral reef types in different time sections a new reef classification was worked out. This classification is based on ecological meaningful and exactly defined faunistical and structural features of the reef body and facilitates the comparison of different reef bodies, reef types and over geological time periods. As the determining physically-chemical factors for reef growth light, sedimentation rate, oxygen- and nutrient content, temperature and salinity could be worked out which secondarily were influenced by the topography of the seafloor, the substrate consistence and the position of the reefs on the shelf profile. In all examined sequences the succession of coral faunas and reef types documents a shallowing upwards. The onset of coral reef growth is generally caused by the lowering of sedimentation rates: for the Oxfordian reefs because of a global transgression - for the Kimmeridgian Arnegg platform because of an elevated structural position. Increasing sedimentation rates during the following sea-level highstand (Oxfordian reefs) and relief compensation (Arnegg platform reef) were finally leading to the killing of coral growth. [original English summary]^1";
- 1049 s[1046] = "OLIVIER N., LATHUILLIERE B., THIRY-BASTIEN P. (2006).- Growth models of Bajocian coral-microbialite reefs of Chargey-les-Port (eastern France): palaeoenvironmental interpretations.- Facies 52, 1: 113-127.- FC&P 34, p. 98, ID=1363^Topic(s): reefs; reefs; Systematics: Monera Cnidaria; Anthozoa; Stratigraphy: Jurassic Baj; Geography: France E^Very large amount of microbialites, up to 70% of the reef volume takespart in the edification of Lower Bajocian coral reefs in the Chargey-les-Port quarry (Haute-Saône, France). Such high amounts of microbialiteswere unknown within bioconstructions of Middle Jurassic age. Alongthe 16 m-thick section, seven successive biohermal or biostromal units developed on a shallow platform. Bioconstructions display a first coralgrowth phase with either constratal or superstratal growth fabrics. Coralfauna is relatively poorly diversified and is dominated by massive forms(Isastrea, Thamnasteria, and Periseris) or branched phaceloid(Cladophyllia) and ramose (Dendraraea) colonies. Corals can beheavily encrusted by microbialites of diverse forms and fabrics (leiolitic,thrombolitic, and stromatolitic). According to the coral growth fabrics,microbialite crusts developed on top of or at the underside of coralcolonies, forming a coral-microbialite elementary unit. Microbialitesshow a multiphase development: (i) directly at the coral surface, a firstand mm-scale microbialite layer locally developed; (ii) a second, cmscalemicrobialite layer (up to 8 cm thick) covered the entire coral reefframework and assumed the main building role; and (iii) a third, mm- tocm-scale, laminated microbialite layer may also be observed onlappingprevious reef structures, before having been progressively buried undersediments. Contemporaneously to the coral growth phase, the firstmicrobialite layer developed on dead portions of coral colonies. Thetransition between coral growth and

microbialite development (i.e., second layer of microbialites) is interpreted as a result of a coral reef crisis, probably reflecting more nutrient-rich conditions. The passage to a stromatolitic (third) layer suggests a control of the accumulation rate. Composition and architecture of coral-microbialite reef units of Chargey-les-Port highlight the relations between high-frequency fluctuating environmental factors (mainly accumulation rate and trophic conditions) and reef development.¹¹;

- 1050 s[1047] = "FURSICH F., WERNER W. (1991).- Palaeoecology of coralline sponge - coral meadows from the Upper Jurassic of Portugal.- Paläontologische Zeitschrift 65, 1-2: 35-69.- FC&P 21-2, p. 39, ID=3329Topic(s): reefs ecology; reefs ecology; Systematics: Porifera Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: PortugalThe Comophyllia polymorpha - Crispispongia cf. expansa association of the Kimmeridgian Alcobaca Formation occurs in a 5-10m thick unit that can be followed for at least 10 km in the vicinity of Alcobaca (Estremadura). Corals, coralline sponges (mainly Calcareia), cryptalgal crusts and, to a lesser extent, crinoids are the dominant constituents of the autochthonous community relic. [shortened abstract]11;
- 1051 s[1048] = "FLUGEL E. (1979).- Ptychochaetetiden aus dem oberen Malm der Suedlichen Frankenalb.- Geol. Bl. NO-Bayern 29, 1: 1-11; Erlangen.- FC&P 10-1, p. 26, ID=5904Topic(s): ; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Jurassic U; Geography: Germany, Franconia11;
- 1052 s[1049] = "SCHMID D.U., WERNER W. (2005).- Sobralispongia densespiculata, une nouvelle "coralline sponge" dans le Jurassique supérieur du Portugal.- Geobios 38, 5: 653-666.- FC&P 34, p. 24, ID=1218Topic(s): new order; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: Jurassic U; Geography: PortugalFrom the Kimmeridgian (Upper Jurassic) of Portugal, the coralline sponge Sobralispongia densespiculata nov. gen. and nov. sp. is described. Main characteristics are a crustose habit, a primary spicule skeleton of very densely packed styles and subtylostyles arranged in a plumose architecture, microscleres of possibly aster-type, and a microgranular to fibrous secondary calcareous skeleton. The primary mineralogy of the calcareous skeleton was probably high-Mg calcitic. An assignment to the demosponge Order Axinellida is proposed.11;
- 1053 s[1050] = "WERNER W., LEINFELDER R.R., FURSICH M., KRAUTTER M. (1994).- Comparative palaeoecology of marly coralline sponge-bearing reefal associations from the Kimmeridgian (Upper Jurassic) of Portugal and southwestern Germany.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 381-397.- FC&P 23-1.1, p. 25, ID=4095Topic(s): reef complexes, ecology; reef complexes; Systematics: Porifera; Corallina; Stratigraphy: Jurassic Kimm; Geography: Portugal, Germany SWThree marly reefal associations from the Kimmeridgian of Portugal (Alcobaca, Serra Isabel) and southwestern Germany (Faulenhau), which share a high proportion of coralline sponges as a main unifying element, were studied in a comparative manner. The two Portuguese associations are dominated by corals and coralline sponges (Alcobaca), and by crinoids and corals (Serra Isabel), respectively. Both sedimentological and palaeoecological analysis evidence a very shallow environment at Alcobaca and a deeper slope setting at Serra Isabel. The association at Faulenhau, occurring within the sponge mound fades of Southern Germany, is dominated by hexactinellid and lithistid siliceous sponges, but contains an unusually high proportion of coralline sponges. Comparison of the three associations allows the establishment of bathymetric gradients and enables interpretation of the somehow enigmatic association at Faulenhau. All three associations grew in a fully marine, low-energy,

Low-sedimentation environment. The compositional differences are due to increasing bathymetry (presumably Alcobaca less than 20 m, Serra Isabel 50-60 m, Faulenhau 70-90 m). This is well reflected only at the generic and species level, where several taxa from various groups (coralline sponges, bivalves, microbes and microproblematica) are stenobath, whereas many others are not. The main trends towards deeper water are decrease in the diversity of corals, coralline sponges and **algae**; increase in the diversity of siliceous sponges, change in the composition of encrusting bivalves, and decrease in the activity of boring bivalves. Changes in morphotypes and dominance of guilds occur among corals, sponges and bivalves, but are only partially helpful in discriminating environmental differences. Bathymetric change is commonly, but not necessarily correlated with a change in nutrient and oxygen levels. Partial decoupling of these factors is obvious at Serra Isabel, where siliceous sponges are, at a cm-scale, replaced upwards by a hermatypic coral-crinoid association. However, the dominance of sponges at Faulenhau cannot be explained solely by slightly increased nutrient levels, since the diversity of coralline sponges is much lower than at Alcobaca and Serra Isabel. It is expected that the bathymetric position of the majority of the Upper Jurassic sponge-crust mounds grew in water deeper than for the Faulenhau example, i.e. below 70-90 m, although siliceous sponge facies could have occurred at lower depths in regions or at times of lowered oxygen contents or slightly increased nutrient levels, e.g. during rapid sea-level rise.¹;

- 1054 s[1051] = "BERTLING M. (2002).- Ecological and morphological impact of sedimentation on hermatypic coral associations (Late Jurassic, northern Germany).- Münstersche Forschungen zur Geologie und Paläontologie 93: 5-15.- **FC**;P 33-2, p. 26, ID=1141**Topic(s):** ecology; Scleractinia; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Jurassic U; **Geography:** Germany ¹;
- 1055 s[1052] = "LATHUILIERE B. (1999).- Coraux constructeurs du Bajocien inférieur de France. 1ère partie.- Geobios 33, 1: 51-72.- **FC**;P 29-1, p. 63, ID=1481**Topic(s):** bioconstructors; Scleractinia; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Jurassic Baj; **Geography:** France^{Lower Bajocian (Propinquans and Humphriesianum) reef-building corals of France are rather poorly diversified: 16 to 19 genera (including morphogenera) and 17 to 26 species. The new genus Atelophyllia is created and the poorly known genus Ebrayia is revised. Synonymies of species are well understood, owing to a statistical analysis of populations sampled in the field (1410 samples, 900 thin sections). The taxonomic list and statistics offer first paleogeographical tool to study the trends of diversity. Because this diversity increases southwards (South Jura, Maconnais), it suggests that a climatic control underlies the diversity gradient. Functional morphological analysis of various taxa offers a second method to evaluate ancient light intensities and sedimentation rates. For instance, a comparison with Montastrea, a recent zooxanthellate coral, shows that the variations of the colonial shape of Isastrea are light-dependant. An interpretation of Bajocian bioherms as lithoherms built by nonzooxanthellate corals must be rejected. The average annual growth rates of Bajocian corals are very low. The new findings suggest evolutionary and climatic explanations.} ¹;
- 1056 s[1053] = "LATHUILIERE B. (1988).- Analyse de populations d'Isastrees bajociennes (Scleractiniaires jurassiques de France). Consequences taxonomiques stratigraphiques et paleoecologiques.- Geobios 21, 3: 269-305.- **FC**;P 17-1, p. 11, ID=2099**Topic(s):** populations; Scleractinia, Isastrea; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Jurassic Baj; **Geography:** France^{The present statistical study of two Bajocian populations of Isastrea from eastern France uses different methods of measurement taking into account the colonial}

character. The results of the univariate and the multivariate analyses together with direct observation of qualitative characters show that only two species are present in the samples: *Isastrea bernardiana* and *I. tenuistriata*. A new synonymy is suggested for the Bajocian species. Genera such as *Andemantastraea Alloiteau* and *Parisastraea Alloiteau* correspond to the common variation of *Isastrea*. The taxonomic position of other Jurassic *Isastrea* is examined. It is probably possible to use extreme morphotypes as stratigraphic markers owing to an eventual anagenesis. A comparison between the two samples denotes that the variation range or the mean value of some quantitative characters (number, thickness of septa, dimension of corallites, trabecular density) contributes to the paleoecological interpretation. The present paper emphasizes the necessity of well-defined species based preferably on population study, for a reliable generic definition.¹";

- 1057 s[1054] = "PISERA A. (1987).- Boring and nestling organisms from the Upper Jurassic coral colonies from northern Poland.- *Acta Palaeontologica Polonica* 32, 1-2: 83-104.- FC&P 17-1, p. 13, ID=2102Topic(s): boring and nestling organisms; Scleractinia, borings; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Poland N^^1";
- 1058 s[1055] = "LATHUILLIERE B. (1989).- *Isastrea*, polypier branchu! [*Isastrea*, branching coral!].- *C. R. Acad. Sci., Paris* 308, ser. II: 887-892 [en francais avec abridged english version].- FC&P 18-1, p. 26, ID=2222Topic(s): phaceloid forms; Scleractinia, *Isastrea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj; Geography: France, LorraineIsastrea, a mesozoic genus of Scleractinia usually shows a massive form and a cerioid colonial structure. Samples from the Bajocian of Lorraine (France) demonstrate for the first time that the corallum can be branching and phaceloid. This structure is interpreted as the result of a partial death of the colony.¹";
- 1059 s[1056] = "BLAIN H.-A. (2005).- Présence de coraux (Anthozoa, Hexacorallia) dans le Callovo-Oxfordien basal de falaise des Vaches-Noires (Calvados, France).- *L'Écho des Falaises* 9: 71-77.- FC&P 35, p. 70, ID=2377Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Call Oxf; Geography: France, CalvadosFor the first time the occurrence of corals is reported from the lower part of the Vache-Noir Cliffs of Late Callovian to Early Oxfordian age. The corals are represented by very early stages of supposedly solitary corals which are attached to a gastropod shell. They do not allow determination.¹";
- 1060 s[1057] = "OSCHMANN W. (1989).- Growth and environmental hazards of Upper Jurassic colonial coral *Actinastrea matheyi* (Koby) from Portugal.- *Paläontologische Zeitschrift* 63, 3-4: 193-205.- FC&P 19-1.1, p. 19, ID=2570Topic(s): growth ecology; Scleractinia, *Actinastrea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: PortugalDevelopment and growth of Upper Jurassic colonial corals *Actinastrea matheyi* from Portugal was ruled by abiotic factors (water energy, sedimentation rate) and biotic factors (predation and parasitism). Phases of growth were interrupted by high energy events which caused tilting of the corals. In addition, intensified parasitism and predation occurred.¹";
- 1061 s[1058] = "LATHUILLIERE B. (1990).- *Periseris*: scleractiniaire colonial jurassique. Revision structurale et taxinomie de populations bajociennes de l'Est de la France.- *Geobios* 23, 1: 10 pp., 6 pls.- FC&P 19-1.1, p. 30, ID=2604Topic(s): populations; Scleractinia, *Periseris*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj; Geography: France EFor a long time, *Periseris Ferry 1870* (Jurassic scleractinian) has been confused with *Thamnasteria Lesauvage 1823*, in spite of their different septal morphology. A new diagnosis of the genus, a specific redefinition using a numerical population approach and an illustration

of the type species, *Periseris elegantula* (d'Orbigny) are given here. The studied colonies have been collected at several Bajocian outcrops in Eastern France. The data used consist of measurements of the distance between corallite centers, the corallite density, the number of septa, the septal density, the trabecular density, the pennular width, the trabecular width and the vertical distance between pennulae. Direct observation of qualitative characters, univariate analyses and principal component analysis suggest the presence in the samples of one single variable species: *Periseris elegantula*. Discriminant analysis shows that outcrops are well explained by the variations of characters. These variations are ascribed to an environmental origin. Among Middle Jurassic species, 14 junior synonyms have been enumerated. [communication presentee au premier congres national de l'association paleontologique francaise: Paris, 17-20 mai 1990]^1";

1062 s[1059] = "ERRENST C. (1991).- Das korallenfuehrende Kimmeridgium der nordwestlichen iberischen Ketten und angrenzender Gebiete, 2.- Palaeontographica A215, 1-3: 1-42.- FC&P 20-1.1, p. 63, ID=2833^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Kimm; Geography: Spain, NW Iberian Range^The palaeontology of the rich coral fauna from the Northwestern Iberian Range is examined for the first time. The research takes into account additional collections of surrounding areas as well, for instance from the occurrences of the Montes Universales, previously described by Geyer (1965). The determined corals are distributed to 49 genera with 96 species, 7 new ones among them. The second part submitted contains 3 of these new descriptions. The portion of the fauna dealt with in here includes the families Rhipidogyridae, Haplaraidae, Actinacididae, Thamnasteriidae, Latomeandridae, Synastraidae and Microsolenidae.^1";

1063 s[1060] = "ELIASOVA H. (1994).- Scleractiniaires de Stranska skala (Oxfordien inferieur / superieur, Brno, Moravie, Republique tcheque).- Vestnik Ceskeho geologickeho ustavu 69, 4: 65-74. [in French].- FC&P 24-1, p. 68, ID=4492^Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Oxf; Geography: Czech Republic, Moravia^The Stranska skala limestones in the town Brno yielded an Oxfordian coral fauna with dominating *Isastraea*. In addition the following coral species were found: *Cyathophora bourgueti*, *Pseudocoenia suboctoris*, *Cladophyllia corallina*, *Thecosmilia trichotoma*, *Summiktaraea?* sp., *Dactylaraea truncata*, *Thamnasteria concinna*, *Fungiastraea* cf. *arachnoides*, *Microsolena foliosa* and *Etallonasteria minima*.^1";

1064 s[1061] = "BEAUVAIS L. (1972).- Contribution à l''étude de la faune bathonienne dans la vallée de la Creuse (Indre). Madréporaires.- Annales de Paléontologie, Invertébrés 58, 1: 35-55.- FC&P 1-2, p. 20, ID=4677^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Bath; Geography: France, Indre^Forty-three species of Corals from Saint-Gaultier are described in this paper. The stratigraphical repartition of the species authorizes to confirm a Bathonian age to the coral formation from the Creuse Valley.^1";

1065 s[1062] = "RONIEWICZ E. (1970).- *Kobyastraea* n.gen. homomorphique de *Thamnasteria* Lesauvage 1823 (Hexacoralla).- Acta Palaeontologica Polonica 15, 1: 137-145.- FC&P 1-2, p. 23, ID=4686^Topic(s): homeomorphy; Scleractinia; *Kobyastraea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Poland, Holy Cross^On a décrit le nouveau genre *Kobyastraea* avec l''espèce typique *Thamnasteria lomontiana* Et. 1864, ainsi que 2 autres espèces classées jusqu''à présent parmi *Thamnasteria* Les. 1823, mais qui, suivant l''auteur, doivent être attribuées aussi au nouveau genre *Kobyastraea*. Les espèces décrites proviennent du Jurassique supérieur du Jura et de la bordure

- des Monts de Sainte-Croix (Gory Swietokrzyskie) en Pologne.^1";
- 1066 s[1063] = "BEAUVAIS L. (1972).- Révision des Madréporaires du Dogger de Balin (Pologne). Collection Reuss.- Annalen des naturhistorischen Museums in Wien 76: 29-35.- FC&P 2-1, p. 19, ID=4729^Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Poland, Balin^The author describes 7 species from Reuss's collection (Naturhistorisches Museum, Vienna): Montlivaltia insignis Reuss, Latiphyllia bajociana (d'Orb.), Dimorphastraeopsis biformis (Reuss), Thamnoseria papillosa (Reuss), Dimorphastraea stipitata Reuss, Dimorpharaea aff. contorta (Tomes). Age: Bajocian to Callovian.^1";
- 1067 s[1064] = "ELIASOVA H. (1974).- Genre nouveau Intersmilina (Hexacorallia) du Tithonien des calcaires de Stramberk (Tchécoslovaquie).- Casopis pro mineralogii a geologii 19, 4: 415-417.- FC&P 4-1, p. 43, ID=5163^Topic(s): ; Scleractinia, Intersmilina; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Tith; Geography: Czech Republic^^1";
- 1068 s[1065] = "LATHUILLIERE B. (1984).- La plasticité du genre Kobyastraea (Hexacorallia): un bon marqueur paléocéologique.- Géobios 17, 3: 371-375.- FC&P 13-2, p. 18, ID=6366^Topic(s): ecology; Scleractinia, Kobyastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj; Geography: France^New forms of the genus Kobyastraea Roniewicz have been found in the Bajocian of Jura and Lorraine (France). They are adapted to low light levels (colonial morphology, colonial structure, calicinal structure).^1";
- 1069 s[1066] = "NOSE M. (1999).- Environmental control on the morphology and the linear growth rate of Microsolena agariciformis Etallon (Scleractinia) from the Upper Jurassic of Portugal.- Profil 16:125-133; Stuttgart.- FC&P 29-1, p. 40, ID=7023^Topic(s): ecology; Scleractinia Microsolena; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Portugal^^1";
- 1070 s[1067] = "HELM C., REUTER M., SCHULKE I. (2003).- Die Korallenfauna des Korallenooliths (Oxfordium, Oberjura, NW-Deutschland): Zusammensetzung, Stratigraphie und regionale Verbreitung.- Paläontologische Zeitschrift 77, 1: 77-94.- FC&P 32-1, p. 28, ID=7146^Topic(s): stratigraphy, ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Oxf; Geography: Germany NW^The stratigraphic and regional distribution of the Oxfordian scleractinian reef corals in the Korallenoolith Formation (NW German Malm Group) is described from the Suntel, Deister, Kleiner Deister and Osterwald Mountains. In the study area four horizons with (par-)autochthonous corals are developed two of which can be traced region-wide (Untere Korallenbank Member and florigemma-Bank Member / ObereKorallenbank Member). * The coral fauna of the biostromes, forming the Untere Korallenbank Member, is impoverished and dominated by ubiquitous r-strategists. In contrast, the reefal bioconstructions of the florigemma-Bank Member show a high variability in their regional appearances, partly forming highly diverse coral associations. The highest diversity is developed in the patch reefs from the Obere Korallenbank Member of the Osterwald Mountains (about 40 species). * Corals are an important part of the Korallenoolith fauna. Altogether 20 species belonging to 15 genera have been identified which were formerly unknown from NW German Oxfordian successions. [original abstract]^1";
- 1071 s[1068] = "ELIASOVA H. (1975).- Sous-ordre Amphistraeina Alloiteau 1952 (Hexacorallia) des calcaires de Stramberk (Tithonien, Tchécoslovaquie).- Casopis pro mineralogii a geologii 20, 1: 1-25.- FC&P 4-2, p. 52, ID=5238^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Tith; Geography: Czech Republic,

Moravia^Description de 10 genres (dont 2 nouveaux) et 19 espèces (dont 19 nouvelles) provenant des calcaires de Stramberk, Carpates externes (Tchécoslovaquie). Précisions sur les caractères du sous-ordre Amphiastreaina Alloiteau 1952. Les genres étudiés n'appartiennent qu'à une seule famille Amphiastreaidae Ogilvie 1897.¹";

- 1072 s[1069] = "LATHUILIERE B. (1996).- Itinéraires astogéniques chez des coraux simples et coloniaux montlivaltiides du Bajocien de France.- *Geobios* 29, 5: 577-603.- **FC#038;P 26-1**, p. 70, ID=3642^Topic(s): populations; Scleractinia, Montlivaltiidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj; Geography: France^A population study has been carried out on Bajocian montlivaltioid corals. Some colonies determined as *Complexastrea* come from reef-building environments; others, non reef builders, were collected from the outcrop of Denney and display all the transitional morphological steps between the genera *Montlivaltia*, *Coenotheca*, *Latiphyllia*, *Complexastrea* and *Thecosmilia*. A statistical study shows an unimodal distribution of usual quantitative specific characters, a comparable mean for reef building and non reef building forms but a larger variability range for non builders. Discriminant analysis does not allow to separate infallibly these two sets. Both are put in a common specific, transgeneric, taxonomic unit through use of the spectral nomenclature. The study of serial sections confirms the non-reef building population as corals stopped at a young phase of their astogeny. This kind of populations is not exceptional in the Jurassic, probably controlled by the unstable nature of the substrate. Relatively to evolutionary patterns, it is impossible at present to consider the cited genera as being phyletic. Several alternative hypotheses are proposed, among which, some renew our vision of this group, emphasizing the iterative production of generic morphologies explained by the hypothesis of heterochronic process. The study of the microarchitecture demonstrates that the laminar layers of the septa in montlivaltioid corals are in full continuity with the dissepiments of the endotheca. Their geometry supports the idea of a genesis of dissepiments linked to a rising of the soft body.¹";
- 1073 s[1070] = "ELIASOVA H. (1973).- Un genre nouveau de la famille Montlivaltiidae Dietrich, 1926, Hexacorallia.- *Casopis pro mineralogii a geologii* 18, 1: 71-72.- **FC#038;P 2-2**, p. 23, ID=4732^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Tith; Geography: Czech Republic, Moravia^[Description of *Thecomeandra* nov. gen. from Tithonic beds of Stramberk (Moravia). This genus differs from other meandroid genera of Montlivaltiidae by a septothecal wall and lamellar linkages between centers.] En étudiant les coraux des calcaires Tithoniques de Stramberk (Moravie) j'ai trouvé parmi eux un nouveau genre de la famille Montlivaltiidae, que j'ai nommé *Thecomeandra*. Diagnose: polypier colonial, massif, méandroïde, présentant des séries calicinales séparées par des collines tectiformes continues, sans ambulacres. Rares calices isolés. Les calices dans les séries sont reliés par des septes de vallée. Les costoseptes entre les séries ne confluent pas, ou apparemment seulement, formant par leurs extrémités périphériques une septothèque. Dissepiments abondants, subhorizontaux ou obliques. Bourgeoisement intracalical. Le nouveau genre ne comprend qu'une espèce, *T. remesi* n.sp. Affinités: Le genre nouveau diffère des autres genres méandroïdes de cette famille surtout par la muraille septothécale et les septes de vallée.¹";
- 1074 s[1071] = "REITNER J., BOTTCHER G., BRUNING J., KRUGER B., MAURER J., OPPERMANN K., OTTO A. (1994).- Mikrobialith-Porifera Fazies eines Exogyren/Korallen Patchreefs des Oberen Korallenooliths im Steinbruch Langenberg bei Oker (Niedersachsen).- *Berliner geowissenschaftliche Abhandlungen* E13: 397-417.- **FC#038;P 23-2.1**, p. 73, ID=4431^Topic(s): reefs; reefs; Systematics: Monera Porifera; Stratigraphy: Jurassic Oxf / Kimm; Geography: Germany, Niedersachsen^In the uppermost facies of the Oxfordian

/ Kimmeridgian " Korallenoolith" of Oker small lagoonal patchreefs are present. They are constructed of exogyrid oysters, serpulids, and large single scleractinians. Framebuilding algae are absent. The surrounding sediments were stable soft bottoms with large numbers of nerineid gastropods and semi-infaunal bivalves. Dasycladacean algae are rarely present. Within small caves, empty conches of exogyrids, and inter biogene spaces settled a large number of cryptic sponges (mainly tetractinellid demosponges). Caused by bacterial ammonification part of the sponge soft tissues were altered in automicrite. Therefore the sponge skeletons exhibit more or less their entire shapes. Beside this type of automicrite stromatolitic and thrombolitic microbialites play an important role in stabilizing the patchreef frame. ^1";

1075 s[1072] = "LANG B. (1989).- Die Schwamm-Biohermfazies der Noerdlichen Frankenalb (Ursprung; Oxford, Malm): Mikrofazies, Palaeoekologie, Palaeontologie.- Facies 20: 199-274.- FC&P 18-2, p. 47, ID=2507^Topic(s): reefs, bioherms; reefs; Systematics: Porifera; Stratigraphy: Jurassic Oxf; Geography: Germany, Frankenalb^^1";

1076 s[1073] = "FRIEBE A. (1995).- Die Schwammfazies im Mitteljura des nordoestlichen Keltiberikums (Spanien).- Profil 8: 239-279.- FC&P 24-2, p. 97, ID=4604^Topic(s): reefs; reefs; Systematics: Porifera; Stratigraphy: Jurassic M; Geography: Spain NE^Spongiolitic facies occurs widespread in the northeastern part of the Iberian Chains, spanning the humphresianum to parkinsoni zones of Bajocian age. The study area extends from Chelva in the South to Ricla in the North (provinces of Valencia, Teruel and Zaragoza). Spongiolite development include biostromes and bioherms which overlie a generally regressive succession of bioclastic limestones punctuated by occasional hardgrounds. Spongiolite development was surrounded by coeval biomicritic or ooid-bearing detrital limestones. Spongiolites of the humphresianum zone are dominated by hexactinosan (dictyid) porifera, brachiopods and bivalves, whereas 'lithistid' demosponges and crinoids are the predominant elements of the superimposed spongiolites of the parkinsoni zone. Glauconite grains and layered to nodular siliceous concretions are abundant within the Spongiolites. Clear differences in faunal composition exist between firm bottoms (on frequent hardgrounds as well as within bioherms and biostromes) and soft bottoms (in evenly bedded limestones and intermound areas). Firm bottom communities are composed of sponges, brachiopods (rhynchonellids, Septaliphoria ssp, Loboidothyris ssp.) limid and pectinid bivalves, gastropods (Pleurotomariacea, Trochidea, Loxonematacea, Naticacea and Muriacea) regular echinoids, crinoids, 'algae'; serpulids, bryozoans as well as a distinct spectrum of foraminifers characteristic of sponge facies. Soft bottom communities comprise sponges (rarely in life position), brachiopods (rhynchonellids, Tetrarhynchia ssp., Loboathyris ssp.), burrowing bivalves (Myophoriidae and Pholadomyidae), rare gastropods, irregular echinoids and foraminifers which are clearly different from the sponge facies. The spatial arrangement of different lithofacies and biofacies is characteristic of a ecologically / bathymetrically and sedimentologically differentiated ramp. Spongiolites only developed in selected areas with optimum condition. Towards East and West Spongiolite facies is substituted by oolitic bioclastic limestones of higher energy settings. During the late Bajocian changing environmental conditions resulted in a retreat of sponges from the Celtiberian region. ^1";

1077 s[1074] = "MEYER R.K. (1975).- Mikrofazielle Untersuchungen in Schwamm-Biohermen und -Biostromen des Malm Epsilon (Ober-Kimmeridge) und obersten Malm Delta der Frankenalb.- Geol. Bl. NO-Bayern 25, 4: 149-177.- FC&P 6-2, p. 9, ID=5532^Topic(s): reefs biohermes biostromes; reefs, Porifera; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Germany,

- Frankenalb^[microfacies studies of sponge bioherms and biostromes in the Kimeridgian of the Franconian Alb / southern Germany]^1";
- 1078 s[1075] = "MEYER R.K.F. (1977).- Mikrofazies im Uebergangsbereich von der Schwammfazies zur Korallen-Spongiorphiden-Fazies im Malm (Kimmeridge-Tithon) von Regensburg bis Kelheim.- Geol. Jb. A37: 33-69.- FC&P 6-2, p. 9, ID=5533^Topic(s): poriferan facies; poriferan facies; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Germany, Frankenalb^[microfacies study of vertical and lateral transitions from sponge reefs to coral and spongiomorphid reefs, Kimeridgian-Tithonian of the southern Franconian Alb, southern Germany]^1";
- 1079 s[1076] = "PALMER T.J., FURSICH F.T. (1981).- Ecology of sponge reefs from the Upper Bathonian of Normandy.- Palaeontology 24, 1: 1-23.- FC&P 10-1, p. 64, ID=6039^Topic(s): sponge reefs; sponge reefs; Systematics: Porifera; Stratigraphy: Jurassic Bath; Geography: France, Normandy^Platychonia magna (d'Orbigny), a lithistid sponge previously regarded as a calcisponge (Cupulospongia magna) forms small bioherms in rocks of Upper Bathonian age (sub-zone of Clydonioeras hollandi) at Saint-Aubin-sur-Mer on the Normandy coast. In addition to the main frame-builder, four subsidiary faunal groups are preserved. These are: (i) encrusting organisms which attached to the sponge fronds and gave the reef additional strength: (ii) byssate and pedically attached filter-feeding nestlers; (iii) vagile strollers which predated, scavenged, or grazed; (iv) borers. The encrusters may be further subdivided into a low diversity assemblage on the upper sides of the Platychonia fronds, and a high diversity assemblage on their undersides. The reefs are envisaged as having grown in the lower photic zone, below normal wave-base but above that reached during storms. The fauna and habitat of the reefs are compared with those of Upper Jurassic lithistid sponge reefs in southern France and Germany, and with those of Middle and Upper Jurassic sponge accumulation in Great Britain. * The Platychonia magna fronds underwent early diagenetic loss of their original hyaline silica skeleton, together with early lithification of the fine sediment which permeated their canals after death. This appears to be a common occurrence in fossil lithistids.^1";
- 1080 s[1077] = "FLUGEL E., STEIGER T. (1981).- An Upper Jurassic sponge-algal buildup from the northern Frankenalb, west Germany.- SEPM Special Publications 30 [D.F. Toomey (ed.): European Fossil Reef Models]: 371-397.- FC&P 11-2, p. 40, ID=1869^Topic(s): reefs; reefs; Systematics: Porifera algae; Stratigraphy: Jurassic U; Geography: Germany, Frankenalb^During Upper Jurassic time (middle-upper Oxfordian) a number of relatively small organic buildups, principally composed of siliceous sponges and algae, developed in the area of southern Germany. This study concentrates on one of these organic structures, the Mllersfelsen buildup (northern Franconian Alb near Streitberg). It is demonstrated that the dominant buildup constructional organisms are siliceous sponges, principally of two morphologies (cup-shaped and dish-shaped forms), and cyanophycean algae, which aided in forming the mound configuration. * The Mullerfelsen buildup developed during several cyclic stages which occurred in relatively deeper water subtidal depositional environments, without strong current and wave actions. Three facies types have been recognized, these are: (1) sponge-crust boundstone facies characterized by micritic bound-stone rich in calcified siliceous sponges, tuberooids, and crusts; (2) lithoclastic packstone facies in which spheroidal sedimentary particles (lithoclasts, tuberooids, and bioclasts) are the dominant grain-supported allochems; and (3) tuberoitic wackestone facies in which mud-supported sedimentary particles are dominant. * The spatial distribution of these microfacies indicate that the sponge-crust boundstone facies is the mound constructional facies, whereas both the tuberoitic wackestone and packstone facies are only developed in those areas marginal to the main organic buildup. The

- uppermost portion of the Mullerfelsen buildup is dolomitized. [original summary]^1";
- 1081 s[1078] = "DUARTE L.V., KRAUTTER M., SOARES A.F. (2001).- Siliceous sponge buildups in the late Liassic of the Lusitanian basin (Portugal): stratigraphy, sedimentology and palaeogeographic significance.- Bulletin de la Societe geologique de France 172, 5: 637-647.- FC&P 30-2, p. 34, ID=1603^Topic(s): sedimentology, geography; Porifera, Silicispongiae reefs; Systematics: Porifera; Stratigraphy: Jurassic L; Geography: Portugal^The Upper Liassic series in the western border of Iberia (Lusitanian Basin, Portugal), show an important lutitic sedimentation, characterized generally by a monotonous marl/limestone alternation. Small scale siliceous sponge mudmounds occur in these deposits from Middle Toarcian to Lower Aalenian age. The scope of this work is to pinpoint the stratigraphical and sedimentological context and to characterize controlling factors of the spongioliths. [initial fragment of extensive summary]^1";
- 1082 s[1079] = "KRAUTTER M. (1995).- Kieselschwämme als potentielle Indikatoren fuer Sedimentationsrate und Nährstoffangebot am Beispiel der Oxford-Schwammkalke von Spanien.- Profil 8: 281-304. [in German, with English abstract].- FC&P 24-2, p. 100, ID=4610^Topic(s): environmental indicators; Porifera, Silicispongiae; Systematics: Porifera; Stratigraphy: Jurassic Oxf; Geography: Spain^The siliceous sponge fauna of the Oxfordian spongiolites of eastern Spain clearly demonstrates that the shape of morphovvariable sponges as well as the taxonomic composition of morphoconstant sponges precisely mirrors external environmental factors. Richness of hardgrounds, automicrites and glauconite, very reduced sediment thicknesses as well as overall character, abundance, low diversity and uniformity of benthic fauna over a minimum area of 75000 qkm suggest a moderately deep, uniform low-energy ramp setting with extremely reduced carbonate and terrigenous background sedimentation. The very reduced influx is interpreted to have resulted in a very low nutrient level, which is reflected by a strong reduction in filter-feeding organisms such as bivalves, crinoids, brachiopods or serpulids frequent in other Late Jurassic sponge settings. The sponge fauna itself is characterized by the almost exclusive occurrence of a uniform low-diversity, specimen rich fauna of hexactinosan dish-shaped sponges, uncommon in most other Late Jurassic sponge faunas. These observations indicate that the major factors controlling the morphological and taxonomic composition of siliceous sponge faunas are sedimentation rate and food supply. When food is available filter-feeding sponges live on free bacteria. The mesohyl of these sponges shelters a rich microflora of symbiotic bacteria. At low nutrition rates two different strategies are developed. Demosponges enlarge their mesohyl so that more bacteria can be stored during times of reduced food supply. In morphoconstant demosponges, this strategy results in a thickening of the sponge walls in order to increase the available volume. Morphovvariable sponges are able to completely change their form and will preferably develop thick knob-like or tube-like morphologies. [part of extensive summary]^1";
- 1083 s[1080] = "LAFUSTE J. (1971).- Présence de pennules chez un Spongiomorphide du Kimméridgien de l'île de Ré (Charente Maritime).- C. R. som. séances S.G.F. 16: 42-43.- FC&P 1-2, p. 25, ID=4702^Topic(s): structures, pennulae; Spongiomorphs; Systematics: Porifera; Stratigraphy: Jurassic Kimm; Geography: France?^^1";
- 1084 s[1081] = "HELM C., REUTER M., SCHULKE I. (2003).- Der Korallenoolith (Oberjura) im Osterwald (NW-Deutschland, Niedersächsisches Becken): Fazielle Entwicklung und Ablagerungsdynamik.- Zeitschrift der Deutschen Geologischen Gesellschaft 153, 2/4: 159-186.- FC&P 33-2, p. 28, ID=1150^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Jurassic U; Geography: Germany

NW^Based on microfacies analysis, the sedimentary succession of the Korallenoolith Formation cropping out in the Hainholz limestone quarry in the Osterwald Mountains has been studied. The 42m thick deposits almost completely represent the Korallenoolith Formation in the Osterwald Mountains and allow the subdivision into three lithological units: the section starts with (1) the Ahrensberg Member, a 26m thick succession with an alternation of oolitic bioclastic limestones and marls at its base that swiftly grades into a monotonous oolite sequence. It is separated from (2) the overlying Hainholz Member (Obere Korallenbank; of Hoyer 1965) by a prominent erosional unconformity. The Hainholz Member represents reefal deposits 12m in thickness. It is followed by (3) an unit of quartz-bearing calcarenite vertically grading into oolite, and cortoid limestone upsection, the Barenburg Member. Although the Korallenoolith Formation is traditionally subdivided into three (litho-) stratigraphical subunits (Unterer Korallenoolith;, Mittlerer Korallenoolith;, and Oberer Korallenoolith;, see Schulze 1975), they cannot be equated with the tripartite lithology of the studied section. According to comprehensive geological mapping and microfacies analysis, the lithological units recognized in the Hainholz quarry can be traced - with lateral variations in facies development and thickness - throughout the Osterwald Mountains. However, even at a distance of few km from the Osterwald Mountains, the Korallenoolith Formation differs in facies development and vertical facies patterns, so that a correlation of the sedimentary succession up to now appears almost impossible. When compared to the overall development of the Korallenoolith Formation in NW Germany, the reduced thickness of the Korallenoolith Formation exposed in the Osterwald Mountains is a notable feature. Furthermore, the erosional unconformity at the top of the basal oolite succession indicates a prominent hiatus in the Osterwald Mountains that is positioned at the base of the reefal deposits. Whether or not this unconformity can be correlated with the well developed lowstand unconformity at the top of the widely distributed florigemma-Bank Member (Hauptdiskontinuitätsfläche;) that terminates reefal development remains unsettled. The middle lithological subunit (Hainholz Member) is developed as a reef complex with abundant coral thrombolite patch reefs imbedded in and interfingering with reef rubble. Its exposed dimensions make it the largest reef complex known from the Late Jurassic sedimentary succession in the Lower Saxony Basin.

1085 s[1082] = "CARPENTIER C., MARTIN-GARIN B., LATHUILIERE B., FERRY S. (2004).- L'oxfordien de l'Est du Bassin de Paris: corrélations des épisodes récifaux entre la Lorraine et la Bourgogne.- Colloque AIH; Géologie et hydrogéologie du Bassin de Paris;, 16/17 nov 2004. Résumé. 8p.- FC;P 34, p. 72, ID=1311^Topic(s): reefs, stratigraphy; reefs; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Paris Basin^1";

1086 s[1083] = "CARPENTIER C., LATHUILIERE B., FERRY S. (2003).- La plate-forme carbonatée oxfordienne de Lorraine: arguments pour une ouverture vers la Mer germanique.- Comptes Rendus Geosciences 336, 1: 59-66.- FC;P 34, p. 73, ID=1312^Topic(s): reefs geography; reefs geography; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Lorraine^The study of sedimentary facies in the quarry of Dompcevrin (Middle Oxfordian) located northwestward of St-Mihiel (Meuse department) provides evidences of high-energy depositional conditions. The occurrence of beaches associated with hurricane coral breccias containing megaclasts is characteristic of platform edge environments. The open sea was located northeastward, in the direction of Germany, as it is indicated by the direction of progradation of beaches. It is concluded that the Oxfordian carbonate platform of Lorraine was opened to the northeast

- toward the Germanic Sea during the Middle Oxfordian.¹¹";
- 1087 s[1084] = "HELM C. (2005).- Riffe und fazielle Entwicklung der florigemma-Bank (Korallenoolith, Oxfordium) im Süntel und östlichen Wesergebirge (NW-Deutschland).- Geologische Beiträge Hannover 7: 3-339.- FC&P 34, p. 78, ID=1319^Topic(s): reefs, patch reefs, biostromes; reefs; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Germany NW^During the sedimentation of the platform carbonate deposits of the Korallenoolith Formation (Middle Oxfordian to early Kimmeridgian) small buildups of corals arose in the Lower Saxony Basin. These bioconstructions are restricted to certain horizons (Untere Korallenbank, florigemma-Bank Member etc.) and represent patch reefs and biostromes. [first fragment of extensive summary]¹¹";
- 1088 s[1085] = "LATHUILLIERE B., CARPENTIER C., ANDRE G., DAGALLIER G., DURAND M., HANZO M., HUAULT V., HARMAND D., HIBSCH C., Le ROUX J., MALARTRE F., MARTIN-GARIN B., NORI L. (2003).- Production carbonatée dans le Jurassique de Lorraine.- Excursion Groupe Français d'Etudes du Jurassique, livret-guide, 2 vol. 113 p.+ 42 p. [unpublished].- FC&P 34, p. 85, ID=1327^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Jurassic; Geography: France, Lorraine^[unpublished excursion guide]¹¹";
- 1089 s[1086] = "OLIVIER N., CARPENTIER C., MARTIN-GARIN B., LATHUILLIERE B., GAILLARD C., FERRY S., HANTZPERGUE P., GEISTER J. (2004).- Coral-microbialite reefs in pure carbonate versus mixed carbonate-siliciclastic depositional environments: the example of the Pagny-sur-Meuse section (Upper Jurassic, Northeastern France).- Facies 50, 2: 229-255.- FC&P 34, p. 90, ID=1333^Topic(s): reefs, sedimentology, geography; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: France NE^Middle to Upper Oxfordian reefs of a shallow marine carbonate platform located in northeastern France show important facies changes in conjunction with terrigenous contents. The Pagny-sur-Meuse section shows coral-microbialite reefs that developed both in pure carbonate limestones and in mixed carbonate-siliciclastic deposits. Phototrophic coral associations dominated in pure carbonate environments, whereas a mixed phototrophic/heterotrophic coral fauna occurred in more siliciclastic settings. Microbialites occur in pure carbonate facies but are more abundant in mixed carbonate-siliciclastic settings. Reefs seem to have lived through periods favourable for intense coral growth that was contemporaneous with a first microbialitic layer and periods more favourable for large microbialitic development (second microbialitic layer). The first microbialitic crust probably developed within the reef body and thus appears to be controlled by autogenic factors. The second generation of microbialites tended to develop over the entire reef surface and was probably mainly controlled by allogenic factors. Variations in terrigenous input and nutrient content, rather related to climatic conditions than to water depth and accumulation rate, were major factors controlling development of reefs and their taxonomic composition.¹¹";
- 1090 s[1087] = "HELM C., SCHULKE I., FISCHER R. (2001).- Palaeobiogeographie des Korallenooliths (Mittleres Oxfordium - Unteres Kimmeridgium): Tethyale Faunen- und Florenelemente auf höherer Paläobreite (Niedersächsisches Becken, NW-Deutschland).- Geologische Beiträge Hannover 02: 51-64.- FC&P 30-2, p. 10, ID=1593^Topic(s): carbonates; carbonates Scleractinia; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Germany NW^An overview is given here on the palaeobiogeography of the Korallenoolith Formation (middle Oxfordian to early Kimmeridgian) in NW Germany (Lower Saxony Basin). Based on microfocies observations, abundant faunal and floral elements of the tropical tethyan realm are recognized in shallow-marine calcareous sediments s of the Korallenoolith Formation. Foraminiferal fauna is both highly diverse and abundant and mostly of

mediterranean character. Also, there is a small flora recorded, which includes heavily calcified red algae, aragonitic green algae, and cayeuxiid algae. They display restricted diversity when compared to those of shallow-marine tropical tethyan seas. Chaetetids and diceratids are locally abundant. Lithocodium aggregatum and Bacinella irregularis have been observed in Late Jurassic palaeolatitudes north of the Tethys for the first time. Corals are present in numerous genera and species. Their occurrence is restricted to a few horizons of the Korallenoolith formation where they build patch reefs, coral biostroms and coral meadows. The overall character of the coral-thrombolite-reefs (florigemma-Bank Member) is very similar to those of the Tethys. The presence of these marine tethyan taxa assigned the position of the Lower Saxony Basin during middle Oxfordian to early Kimmeridgian paleobiographically into the submediterranean province and reflects northward migration of tropical tethyan fauna and flora which reach in the Lower Saxony Basin their northern limit. These biota seem to be biogeographically transitional between communities present in England and the Tethys.¹";

- 1091 s[1088] = "REUTER M., FISCHER R., HELM C., SCHULKE I. (2001).- Entwicklung und Faziesverteilung eines Riffkomplexes im Korallenoolith (Oberjura) des Osterwaldes (Niedersachsen).- Geologische Beitraege Hannover 02: 31-50.- FC&P 30-2, p. 32, ID=1613Topic(s): reef complexes, facies; reef complexes; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Germany, NiedersachsenThe Hainholz quarry in the Osterwald hills of NW-Germany is the most impressive outcrop in the Lower Saxony Basin exposing Late Jurassic (Korallenoolith, Oxfordian) coral buildups. The Korallenoolith deposits in the quarry commence with a oolitic sequence about 20 m thick which is limited by a distinctive hardground at its top. This sequence is overlain by the so called "Obere Korallenbank"-Member about 13 m in thickness which is mainly build up by coral reef complexes. Throughout a lateral extend of about 400 m exposed in the quarry, the Obere Korallenbank Member shows numerous pillar-shaped reefal build ups which are flanked by a reefal debris limestone. The coral fauna of the in situ reefal bioconstructions comprises not less than 37 taxa most of which have been described from the Lower Saxony Basin for the first time. Probably, the pillar-shaped reefs formed a small positive relief of only a few dm against the debris deposits during deposition. The interreef debris limestones in the lower and middle part of the Obere Korallenbank Member show three intercalated biostromal coral layers. In the upper part of the member, the interreef facies is represented by a mikritic peloidal limestone rich in sponge remains and, unusual in such a depositional environment, ammonites (Dichotomosphinctes bifurcatoides, D. sp.). Additionally, at the top of the peloidal limestone a layer enriched in nerineids and other gastropods limits the reefal constructions of the Obere Korallenbank Member against the overlaying "humeralis-Oolith" sequence. On the basis of the facies development of this depositional sequence the reef formation in relation to sea-level changes is discussed.1";
- 1092 s[1089] = "BRACHER T.C. (1986).- Kontinuierliche und diskontinuierliche Sedimentation im suddeutschen Oberjura (unteres Kimmeridge; Ludwag / Oberfranken, Nordliche Frankenalb).- Facies 15: 233-284.- FC&P 16-1, p. 69, ID=1985Topic(s): carbonates; reefs, carbonates; Systematics: ; Stratigraphy: Jurassic Kimm; Geography: Germany, Oberfranken[includes the study of algal-sponge bioherms]1";
- 1093 s[1090] = "LEINFELDER R.R. (1986).- Facies, stratigraphy and paleogeographic analysis of Upper ? Kimmeridgian to Upper Portlandian sediments in the environs of Arruda dos Vinhos, Estremadura, Portugal.- Muenchner geowiss. Abh. A (Geologie & Palaeontologie) 7: 1-216.- FC&P 16-1, p. 69, ID=1989Topic(s): reefs, facies; reefs; Systematics: ; Stratigraphy: Jurassic U;

- Geography: Portugal^[includes description of coral banks and coral patch reefs, species list, plate 13 with 12 figs of scleractinians]^1";
- 1094 s[1091] = "JOACHIMSKI M.M., SCHELLER J.W. (1987).- Faziesgesteuerte Diagenese am Beispiel des Korallen-Patchriffes von Laisacker (Untertithon, Suedliche Frankenalb).- Facies 17: 129-140.- FC&P 16-2, p. 28, ID=2071^Topic(s): reefs, diagenesis; reefs; Systematics: ; Stratigraphy: Jurassic Tith; Geography: Germany, Franconia^The coral patch-reef of Laisacker (Neuburg a.d. Donau, Southern Franconian Alb) exhibits three facies zones: the reef core consists of reef debris, there is almost no reef framework. The core facies, interfingering with the reef debris facies is built up by fine-grained reef detritus with intercalated coarse-grained layers of partly high porosity (up to 24%). They mainly consist of coral fragments (up to 83%) and reach 0.80 m in thickness. These coarse-grained layers have been formed by storms. The interreef facies corresponds to massive limestones. Destruction of the reef framework was favoured by bioerosion. The high still open porosity of the coarse-grained reef rubble was caused by high freshwater flow rates delimiting cementation and favouring dissolution.^1";
- 1095 s[1092] = "HELM C., SCHULKE I. (2006).- Patch reef development in the florigemma-Bank Member (Oxfordian) from the Deister Mts (NW Germany): a type example for Late Jurassic coral thrombolite thickets.- Facies 52, 3: 441-467.- FC&P 35, p. 95, ID=2418^Topic(s): reefs, patch reefs; reefs; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Germany, Deister Mts^Small reefal bioconstructions that developed in lagoonal settings are widespread in a few horizons of the Late Jurassic (Oxfordian) succession of the Korallenoolith Formation, exposed southwest of Hannover, Northwest Germany. Especially the florigemma-Bank Member, "sandwiched"; between oolite shoal deposits, exposes a high variety of build-ups, ranging from coral thrombolite patch reefs, to biostromes and to coral meadows. The reefs show a distribution with gradual facies variations along an outcrop belt that extends about 30 km from the wesergebirge in the NW to the Osterwald Mts in the SE. The patch reefs from the Deister Mts locality at the "speckhals"; are developed as coral-chaetetid-solenoporid-microbialite reefs and represent a reef type that was hitherto unknown so far north of its Tethyan counterparts. They are mainly built up by coral thickets that are preserved in situ up to 1.5m in height and a few metres in diameter. They contain up to 20 coral species of different morphotypes but are chiefly composed of phaceloid Stylosmilia corallina and Goniocora socialis subordinately. The tightly branched Stylosmilia colonies are stabilized by their anastomosing growth. The coral branches are coated with microbial crusts and micro-encrusters reinforcing the coral framework. Encrusters and other biota within the thicket show a typical community replacement sequence: Lithocodium aggregatum, Koskinobullina socialis and Iberopora bodeuri are pioneer organisms, whereas the occurrence of non-rigid sponges represents the terminal growth stage. The latter are preserved in situ and seem to be characteristic so far poorly known constituents of the Late Jurassic cryptobiont reef dweller community. The distance and overall arrangement of branches seems to be the crucial factor for the manifestation of a (cryptic) habitat promoting such community replacement sequences. widely spaced branches often lack any encrusting and/or other reef dwelling organisms, whereas tightly branched corals, as is St. corallina, stimulate such biota. Hence, such reefs are well suited for research on coelobites and community sequences of encrusting and cavity dwelling organisms.^1";
- 1096 s[1093] = "CARPENTIER C., LATHUILLIERE B., FERRY S., SAUSSE J. (2007).- Sequence stratigraphy and tectono sedimentary history of the Lower and Middle Oxfordian of eastern Paris Basin (Northeastern France).- Sedimentary Geology 197, 3-4: 235-266.- FC&P 35, p. 104, ID=2434^Topic(s): sequence stratigraphy; sequence stratigraphy;

Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Paris Basin^In the present study, the difficulty which lies in the identification of sea-level fall discontinuities in deep depositional environments led the authors to use the transgressive surfaces (i.e. the most noticeable surfaces in the present case) to determine depositional cycles. Four (3rd order?) Lower and Middle Oxfordian cycles were identified (S1, S2, S3, and S4) in the Eastern Paris Basin. These four cycles can be organised into two lower frequency cycles (So I and So II) which comprise the S1, S2 and the S3, S4 cycles respectively. During the time intervals of the S1, S2, and S3 cycles, sedimentation occurred along a southward dipping carbonate-siliciclastic ramp, prograding from the northern Ardennes area. The S4 cycle shows the development of a reefal distally steepened ramp which subsequently evolved into a flat-topped platform as a result of the compensation infill of the available accommodation space by the carbonate production during a climatic warming, in this case reef growth. Isopach and facies maps suggest syndimentary activities of hercynian faults coevals with the floodings of the So I and So II cycles. One of these events generated a diachronism of the maximum flooding (Plicatilis zone) during the So II cycle between the northwestern and southeastern parts of the studied area. The depositional patterns found in the Eastern Paris Basin and the Swiss Jura show great similarities for the Early-Middle Oxfordian. Both regions were probably connected and recorded the same tectonosedimentary evolution. In contrast a tectonic control certainly generated differences between the sequence-stratigraphic framework of the Eastern Paris Basin and the eustatic chart.^1";

1097 s[1094] = "CARPENTIER C., MARTIN-GARIN B., LATHUILIERE B., FERRY S. (2006).- Correlation of reefal Oxfordian episodes and climatic implications in the eastern Paris Basin (France).- Terra Nova 18, 3: 191-201.- FC&P 35, p. 105, ID=2435^Topic(s): reefs, stratigraphy, paleoclimates; reefs, stratigraphy; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Paris Basin^Oxfordian reefal episodes of Lorraine and Burgundy have a long time been considered as contemporaneous. Biostratigraphic data and sequential evolutions peculiar to each region indicate their structural autonomy during Oxfordian times. A north-south oriented well-logging transect shows that, during the Middle Oxfordian, a shallow reefal platform developed in Lorraine while thin deeper deposits occurred in Burgundy. In spite of their different ages, reefal episodes of Middle Oxfordian in Lorraine and Upper Oxfordian in Burgundy exhibit a broadly similar vertical evolution of coral communities. During the Late Oxfordian, the contemporaneous occurrence of a diversified assemblage in the Burgundy region, a colder coral assemblage characterized by eurytopic genera and the decrease in seawater isotopic temperatures in Lorraine can be explained by a shift in trophic conditions, a climatic change related to structural rearrangements in this strategic place and a modification of oceanic circulations between the arctic and the Tethyan regions.^1";

1098 s[1095] = "LEINFELDER R.R. (1989).- Intrabecken-Karbonatplattformen und Riffstrukturen im Ostteil des Lusitanischen Beckens - Fallbeispiele fuer gemischt karbonatisch-siliciclastische Sedimentation aus dem Oberjura von Portugal.- Mainz University, unpublished habilitation paper; 483 pp., 83 figs., 19 pls. [in German, with English summary].- FC&P 18-2, p. 46, ID=2503^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Portugal^[unpublished]^1";

1099 s[1096] = "GARCIA J.-P., COURVILLE P., LAURIN B., THIERRY J. (1989).- Degradation differentielle et encroûtement des constructions a madreporaires du Callovien inferieur (Jurassique moyen) d'Etrochey (Cote-d'Or). [differential degradation and encrusting of Lower Callovian coral bioconstructions of Etrochey; in French, with English summary] .- Bulletin de la Societe geologique de France 8, 5, 6:

1217-1225.- FC&P 19-1.1, p. 57, ID=2676Topic(s):reefs degradation; reefs, degradation; Systematics: Stratigraphy:Jurassic Call; Geography:France, BurgundyThe coral limestones from the Lower Callovian of Etrochey, near Chatillon-sur-Seine (Cote-d'Or) represent one of the last sequences of the Burgundy platform at the end of the Middle Jurassic. The geometrical arrangement of the reefs and associated facies shows a progressive development with competition between constructive and other organisms, and interference between biological and physical factors of the environment. Three sedimentary units can be recognized, corresponding to three successive steps in the coral complex formation. The size and the frequency of corals decrease up through the reef. The development of the biological frameworks, their biodegradation by borers (bivalves and clionid sponges) and their colonization by encrusting organisms (sponges and oysters) are controlled by the amount and frequency of the oolitic and bioclastic sand supply which is a major limiting factor. The successive steps of biological constructions and biological destructions, controlled by organisms can be considered as a palaeoecological succession. However the action of the limiting factor, linked with a decrease in water depth results in a termination of the reef growth and biodegradation, and this occurs at an earlier stage in the younger units. Thus the three successive units appear as an upside down palaeontological succession, reflecting a stronger external control on reef development.¹;

1100 s[1097] = "CALZADA S., REIG J.M. (1995).- Nota paleontologica sobre el Oxfordiense de Aguilon.- Scripta Musei Geologici Seminarii Barcinonensis 227: 3-6.- FC&P 25-1, p. 44, ID=3042Topic(s): paleontology; Systematics: Stratigraphy:Jurassic Oxf; Geography:Spain?Some species from the Oxfordian of Aguilon are studied. The gastropod Proconulus gurraei is described as a new species. The scleractinian Thecocyathus pusillus is reported from this outcrop and so enlarges its geographical distribution because it was only known from Portugal.¹;

1101 s[1098] = "BAUSCH W.M. (1996).- Distinction Between Deep Water and Shallow Water Reefs by Sedimentological Methods.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke1 F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 34, ID=3593Topic(s):reefs bathymetry; reefs, Porifera, Algae; Systematics: Stratigraphy:Jurassic Oxf; Geography:Germany, FranconiaAccording to preliminary results, in sponge-algae-reefs of the Oxfordian in the Franconian Alb no differentiation occurs in the silt / clay ratios between reef and surrounding bedded facies. This indicates a growth in quiet and deep water. The complementary study of coral reefs in the Tithonian - grown in shallow and turbulent water - has to be finished.¹;

1102 s[1099] = "DECROUEZ D., PROZ P.-A. (1996).- Les collections du departement de geologie et de paleontologie des Invertebres du Museum Geneve 57: La collection Richard.- Revue de Paleobiologie 15, 2: 597-615.- FC&P 26-1, p. 68, ID=3639Topic(s):collection of fossils; fossils; Systematics: Stratigraphy:Jurassic; Geography:FranceThe specimens of the collection Richard are listed, among them some corals from the Jurassic of France.¹;

1103 s[1100] = "BERTLING M., INSALACO E. (1998).- Late Jurassic coral / microbial reefs from the northern Paris Basin - facies, palaeoecology and palaeobiogeography.- Palaeogeography, Palaeoclimatology, Palaeoecology 139, 3-4: 139-175.- FC&P 27-1, p. 113, ID=3872Topic(s):reefs, ecology; reefs; Systematics: Stratigraphy:Jurassic U; Geography:France, Paris BasinDuring the late middle Oxfordian, patch reefs grew on the northern margin of the Paris Basin. According to the facies analysis of the reef and inter-reef sediments, the environment was a warm, clear

and agitated sea with highly episodic sedimentation. The bioherms were a short-lived phenomenon during the third phase of regional reefal development. Sequence stratigraphically, they are associated with a highstand system tract. Volumetrically and trophically dominant organisms were microbes now represented by massive clotted leiolite; 'stalactitic' hemispheroids with purely thrombolitic texture are restricted to open caves. Corals were of structural, reef-building importance due to their rapid upward growth. The patch reefs are characterized by thickets of ramose corals which developed a very open framework. In the vicinity of these patch reefs, though in hydrodynamically higher-energy environments, grew thickets of more stoutly branched corals; however, they are rarely preserved in situ and are generally represented as abundant coral rubble. The reef taxa are characterized by the notable absence of several groups (e.g. oysters, serpulids, bryozoans, pectinids) occurring at other localities where reefs of similar age developed in similar environmental conditions. The reefs also have strikingly modern aspects to them, in particular the presence of cryptic elements within caves and a sponge-dominated borer association. Dwellers belong to various life-form types although encrusting taxa are exceedingly rare. This may be explained by the presence of soft microbial films on most surfaces. The palaeoecological analysis suggests that the major controls on faunal composition and high diversity were elevated nutrient levels, highly episodic sedimentation and probably seasonal environmental disturbances. Structural and functional aspects of the reef community (grazers trigger framebuilders, borers trigger binders, binders hamper borers) allow ecological comparisons to be made with contemporaneous, as well as Recent, reefs. The unique combination of ecological comparisons to be made with contemporaneous, as well as Recent, reefs. The unique combination of ecological factors resulted in a specialized, previously undescribed, community which differs from both Tethyan and northern localities in various aspects; these include cavities with cryptofauna, prominence of grazing gastropods and high faunal diversity in a microbially dominated build-up.¹¹;

- 1104 s[1101] = "SCHULKE I., DELECAT S., HELM C. (1998).- Oberjura-Riffe in NW-Deutschland: Ein Ueberblick.- Mitteilungen aus dem Geologischen Institut der Universitat Hannover 38: 191-202.- FC&P 27-2, p. 61, ID=3927^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Germany NW^In this short study NW German coral reef localities are compared. Three well exposed localities were analyzed and classified. The palaeoecology of these reefs is compared with those of reefs of W and SW Europe.¹¹;
- 1105 s[1102] = "FLUGEL E., ALT T., JOACHIMSKI M.M., RIEMANN V., SCHELLER J. (1993).- Korallenriffe im oberen MaIm (Unter-Tithon) der suedlichen Frankenalb (Laisacker, Marching): Mikrofazies-Merkmale und Fazies-Interpretation.- Geol. Bl. NO-Bayern 43, 1-3: 33-56. [in German, with English summary].- FC&P 23-1.1, p. 86, ID=4200^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic Tith; Geography: Germany, Franconia^Case studies of two early Tithonian coral reefs in Southern Franconia exhibit the quantitative importance of bioclastic debris not only in the composition of reef talus adjacent to the'reef core' but also for the reef core itself. Extensive bioerosion in combination with episodic storms might have been responsible for the formation of these sand piles which were stabilized by micritic pellet crusts and early marine carbonate cements. Allochthonous and autochthonous parts of the reefs are characterized not only by different microfacies types but also by the distributional patterns of fossils (specifically foraminifera).¹¹;
- 1106 s[1103] = "LEINFELDER R.R. (1994).- Karbonatplattformen und Korallenriffe innerhalb siliziklastischer Sedimentationsbereiche (Oberjura, Lusitanisches Becken, Portugal).- Profil 6: 1-207. [in German, with English and Portuguese summary].- FC&P 23-2.1, p. 107, ID=4200^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Germany, Franconia^In this study the quantitative importance of bioclastic debris is examined in the composition of reef talus adjacent to the'reef core' and in the reef core itself. Extensive bioerosion in combination with episodic storms might have been responsible for the formation of these sand piles which were stabilized by micritic pellet crusts and early marine carbonate cements. Allochthonous and autochthonous parts of the reefs are characterized not only by different microfacies types but also by the distributional patterns of fossils (specifically foraminifera).¹¹;

p. 70, ID=4439^Topic(s): reefs, structure, history; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Portugal^During the Late Jurassic, the Lusitanian Basin of Portugal experienced an intensive rifting phase which caused pronounced bathymetric and, hence, facies differentiation. Particularly during the Kimmeridgian and Tithonian, siliciclastics were fed into the basin, resulting in a mixed carbonate-siliciclastic basin fill. Carbonate platforms and isolated coraliferous reefs of different dimensions and composition frequently developed within this setting. A shallow-water carbonate platform exhibiting distinct facies zonation is represented by the narrow Ota Platform (Kimmeridgian). The buildup exhibits an aggradational architecture and is rimmed by a high-energy, high-diversity coral reef. In contrast to most other Upper Jurassic high-energy reefs, the Ota coral reef contains abundant microbial and algal crusts. This was due to the achievement of equilibrium conditions between production and export of debris, which can be explained by the existence of a tectonically caused, steep by-pass margin. Sedimentation in interior platform settings is mostly characterised by stacked, autocyclic, small-scale shallowing-up sequences. The narrow Ota buildup developed over a basement horst and was protected from surrounding siliciclastics by its elevated position and a strong longshore current. The Castanheira slope-type fan delta (Kimmeridgian) also formed at the strike-slip margin of a continental pull-apart subbasin. The fan sediments are dominated by coarse arcose conglomerates. Coral-microbial reefs grew on deactivated fan areas during two phases of relative sea-level rise. Collapse events in the course of sea level falls led to re-sedimentation of allochthonous limestones in more distal fan areas. [part of extensive summary]^1";

1107 s [1104] = "NOSE M. (1995).- Vergleichende Faziesanalyse und Paläoökologie korallenreicher Verflachungsabfolgen des Iberischen Oberjura.- Profil 8: 1-237. [in German, with English abstract].- FC&P 24-2, p. 102, ID=4615^Topic(s): facies; facies reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Portugal^Upper Jurassic deposits occur widespread along the northern Tethyan shelf and the marginal basins of the young North Atlantic Ocean. This work focusses on the sedimentological and palaeoecological comparison of two Portuguese sedimentary basins (Arruda Subbasin, eastern Algarve Basin) and the Celtiberian zone of eastern Spain. Based on this comparative analysis, regional and global factors controlling the depositional development are deduced. The Upper Jurassic sediments in all three Iberian basins are characterised by large-scale, mixed carbonate-siliciclastic, shallowing-upward successions. Typically the development started with Oxfordian, ammonite-bearing deeper water carbonates which were overlain by slope deposits consisting of marls, turbiditic sandstones and intraclastic limestones (Lower Kimmeridgian). Superimposed were reefal shallow water carbonates of Lower / Upper Kimmeridgian age. Besides rimmed shelves (Ota Limestone, Arruda Subbasin) and buildups on deactivated fan-lobes (Castanheira reef, Arruda Subbasin), the mixed carbonate-siliciclastic systems were more frequently arranged in ramp configurations. The Celtiberian zone, located on the stable northern Tethyan shelf represented a homoclinal ramp situation, whereas the Arruda Subbasin was characterised by an intense differentiation due to tectonic activity. Hence distally steepened ramp settings could only develop on the shallow dip slope of the tectonically inactive eastern margin of the half-graben basin. The eastern Algarve Basin exhibited both distally steepened and homoclinal ramp configurations, which was due to halokinetic differentiation and regional tectonic. This study concentrates on the coral-bearing shallow water deposits, which encompass a great variety of different reefal structures. According to their morphology and composition (amounts of metazoans, microbial crusts and reefal debris) 16 reef types with at least 15 faunal assemblages and associations could be distinguished. [first part of

- extensive summary]^1";
- 1108 s[1105] = "BEAUVAIS L., BEAUVAIS M., BOURROUILH F. (1973).- Etude du complexe récifal de Bellême (Normandie, France).- Proceedings of Second Intern. Symposium on Coral Reefs, Great Barrier Reef, Australia: pp??.- FC&P 3-1, p. 31, ID=4902Topic(s): reefs, ecology, stratigraphy; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: France^Le récif de Bellême signalé par L. Dangeard (1939-1940) et décrit par le même auteur (1950), est étudié à nouveau à la lumière des nouvelles méthodes de pétrologie sédimentaire et de paléoécologie. Ainsi, nous avons pu donner des détails plus précis sur sa description et établir des comparaisons plus objectives avec certaines formations actuelles. * La répartition stratigraphique des faunes a permis de donner un âge Séquanien supérieur - Kimméridgien inférieur à la formation. L'étude de la répartition écologique des fossiles récoltés, celle des différents faciès, microfaciès, nanofaciès et de leurs répartitions dans le "complexe récifal"; ainsi que les variations géochimiques mesurées au sein de la formation ont conduit à conclure que le terme de récif ne peut être appliqué à la formation du jurassique supérieur de Bellême et qu'il doit être remplacé par le terme de mud bank (l'élément madréporique de la lentille est monospécifique, l'espèce *Thamnasteria cf. dendroidea* est une espèce à branches ténues, les colonies ne sont pas jointives mais séparées les unes des autres par une fine micrite). Ce mud bank situé dans la zone subtidale pouvant passer en zone intertidale avec formation de calcarénite, d'oolithes et de beach rock, était probablement entouré de chenaux de marée divagants où la vitesse de l'eau était plus grande que celle des eaux des zones contiguës. Les conditions de vie étaient confinées (faible taille des individus, nombre restreint de genres et d'espèces). * Le remplacement du terme récif par celui de mud bank à cette place du Jurassique supérieur de Normandie a probablement une signification paléogéographique qui sera étudiée dans la suite de nos recherches sur les formations carbonatées de Normandie.^1";
- 1109 s[1106] = "MENOT J.C. (1974).- Sur l'organisation du système récifal inférieur oxfordien aux confins de l'Yonne et de la Nièvre.- C. R. Acad. Sci. Paris 278, 11, ser. D: 1459-1462.- FC&P 3-1, p. 33, ID=4904Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Yonne^Au-dessus de la surface perforée recoupant les calcaires calloviens (zone à coronatum), la base de la série oxfordienne (zone à transversarium) montre l'installation du régime récifal. Une nette polarité nord-sud y apparaît traduite par un amincissement des divers horizons et même la disparition des niveaux inférieurs, ainsi que par la diminution de la densité du peuplement en polypiers en direction du Sud.^1";
- 1110 s[1107] = "BEAUVAIS L., BEAUVAIS M., BOURROUILH F. (1974).- A study of the reef complex at Belleme (Normandy, France).- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 639-652.- FC&P 4-1, p. 20, ID=5054Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: France^^1";
- 1111 s[1108] = "KAEVER M., OEKENTORP Kl., SIEGFRIED P. (1976).- Fossilien westfalens II. Invertebraten des Jura.- Muenster. Forsch. Geol. Palaeont. 40/41.- FC&P 6-2, p. 9, ID=5534Topic(s): paleontology, corals; Systematics: ; Stratigraphy: Jurassic; Geography: Germany, westphalia^[with chapter on corals by Kl. Oekentorp: pp 91-115; figs 7, 8; pls 12-16; 1 photopl.]^1";
- 1112 s[1109] = "FISCHER J.C. (1979).- Le Jurassique moyen au SW du Massif Ardennais. Essai de synthèse biosédimentologique.- Assoc. Sedim. Français, Publ spec. 1 [La sédimentation du Jurassique w-europeen]: 47-54.- FC&P 9-1, p. 17, ID=5774Topic(s): reefs sedimentology; reefs, sedimentology; Systematics: ;

- 1113 Stratigraphy: Jurassic M; Geography: France NE^^1";
s[1110] = "MENOT J.C. (1980).- Formations recifales du Jurassique superieur de la Vallee de l'Yonne.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 47-53.- FC&P 9-2, p. 13, ID=5862^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Jurassic U; Geography: France, Yonne^^1";
- 1114 s[1111] = "GEISTER J. (1984).- Récifs à coraux du Bajocien du Grand-Duché de Luxembourg et de Malancourt en Lorraine.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 12.1-12.16.- FC&P 13-1, p. 11, ID=6325^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic Baj; Geography: France, Paris Basin^C'est dans ce cadre sédimentologique caractérisé par des fluctuations considérables du niveau de la mer qu'il faut examiner l'installation, l'épanouissement et le déclin des récifs au cours du Bajocien. De tels récifs bien développés affleurent dans les carrières de Rumelange (Luxembourg) et de Malancourt (Lorraine). [final fragment of an introduction]^1";
- 1115 s[1112] = "CARPENTIER C., LATHUILLIERE B., FERRY S. (2010).- Sequential and climatic framework of the growth and demise of a carbonate platform: implications for the peritidal cycles (Late Jurassic, North-eastern France).- Sedimentology (2010) 57, 4: 985-1020.- FC&P 36, p. 113, ID=6549^Topic(s): carbonate platforms; carbonate platform; Systematics: ; Stratigraphy: Jurassic U; Geography: France, Paris Basin^The Middle Oxfordian of the eastern Paris Basin constitutes a remarkable example of the growth and demise of a carbonate platform. The paper proposes a sequence stratigraphic interpretation of famous coral bearing sedimentary units that yielded a great part of Jurassic coral taxa created by Michelin (1843). [first part of extensive abstract]^1";
- 1116 s[1113] = "HELM C., SCHULKE I. (1999).- Ein "Tethys-Riff" im Korallenoolith (Oxfordium) von Nordwestdeutschland.- Zentralblatt für Geologie und Paläontologie 1999, 5/6: 399-414.- FC&P 29-1, p. 39, ID=7019^Topic(s): reefs; reef; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Germany NW^^1";
- 1117 s[1114] = "OLIVIER N., HANTZPERGUE P., GAILLARD C., PITTET B., LEINFELDER R.R., SCHMID D.U., WERNER W. (2003).- Microbialite morphology, structure and growth: a model of the Upper Jurassic reefs of the Chay Peninsula (Western France).- Palaeogeography, Palaeoclimatology, Palaeoecology 193, 3-4: 383-404.- FC&P 32-1, p. 33, ID=7147^Topic(s): carbonates microbial; microbialites; Systematics: ; Stratigraphy: Jurassic U; Geography: France W^During the Early Kimmeridgian, the northern margin of the Aquitaine Basin (Western France) is characterised by a significant development of coral reefs. The reef formation of the Chay Peninsula comprises two main reefal units, in which the microbial structures can contribute up to 70% of framework. The microbial crusts, which played an important role in the stabilisation and growth of the reef body, show the characteristic clotted aspect of thrombolitic microbialites. Corals are the main skeletal components of the build-ups. The bioconstructions of the Chay area are thus classified as coral-thrombolite reefs. Four main morpho-structural types of microbial crusts are distinguished: (1) pseudostalactitic microbialites on the roof of intra-reef palaeocaves; (2) mamillated microbialites, found either on the undersides or on the flanks of the bioherms; (3) reticular microbialites in marginal parts of the reefs and between adjacent bioconstructed units; and (4) interstitial microbialites in voids of bioclastic deposits. Thrombolitic crusts developed on various substrates such as corals, bivalves, or bioclasts. The thrombolites formed a dense, clotted and/or micropeloidal microbial framework, in which macro- and micro-encrusters also occur. Variations in

- accumulation rate strongly influenced the reef morphology, in particular its relief above the sediment surface. The coalescence of the coral-microbialite patches created numerous intra-reef cavities of metre-scale dimensions. The direction of microbial growth, which defined the macroscopic microbialite forms, strongly depended on the position within the reef framework but was also controlled by water energy, accumulation rate and light availability. [original abstract]^1";
- 1118 s[1115] = "GEYER O.F., ROSENDAHL S. (1985).- Stromatoporen, Korallen und Nerineen aus oberjurassischen und unterkretazischen Schichten des Prabetikums von Cazorla (Prov. Jaen, Spanien).- Arbeiten Inst. Geol. Paläont. Univ. Stuttgart N.F. 82: 161-179.- FC&P 15-1.2, p. 9, ID=0846^Topic(s): taxonomy; stroms, Anthozoa; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Jurassic U, Cretaceous L; Geography: Spain S^Faunal lists and figures of stromatoporoids, scleractinians and nerineans from the Tithonian, and Upper Berriasian/Lower Valanginian in the Prebetic area of Cazorla (Southern Spain).^1";
- 1119 s[1116] = "FRIEG C. (1982).- Palaogeographische und ökologische Bedeutung von Korallenfaunen des Unter-Cenoman und Unter-Turon am Kassenberg bei Mulheim/Ruhr.- Paläontologische Zeitschrift 56, 1-2: 19-37.- FC&P 11-2, p. 42, ID=0381^Topic(s): biogeography, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Cen Tur; Geography: Germany, Mulheim / Ruhr^Coral faunas from the Lower Cenomanian and the Lower Turonian at the Kassenberg near Mulheim / Ruhr are systematically investigated and described. In comparison with other European coral collecting localities, criteria are yielded on the migration paths of the mediterranean coral faunas. Ecological interpretations point to the paleoecology of the Cenomanian in westphalia. [original summary]^1";
- 1120 s[1117] = "WITTLER F., ROTH R. (2003).- Fazies und Fauna der Oberkreidegesteine im Dortmunder Stadtgebiet. I: Temporäre Aufschlüsse im Turon und Unterconiac zwischen 1988 und 2001.Stratigraphie, Fossilführung.- Dortmunder Beiträge zur Landeskunde 36/37: 247-340.- FC&P 33-2, p. 40, ID=1183^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Tour Cogn; Geography: Germany NW^About 30 outcrops in the area of the town of Dortmund are described. Their stratigraphy reach from the Turonian to Early Coniacian. The following corals are reported: Parasmilia centralis, Coelosmilia cf. concincta, C. cf. granulata, attachment bases of Epiphaxum cf. auloporoides.^1";
- 1121 s[1118] = "ELIASOVA H. (1989).- Les Madreporaires du Cretace superieur de la Montagne de Beskydy (Tchecoslovaquie).- Zapadne Karpaty, ser. paleont. 13: 81-107. [in French, with English summary].- FC&P 18-2, p. 39, ID=2490^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Cen - Sant; Geography: Czech Republic, Beskides^The coral fauna from the Pribor area has already been known on the basic of F. Trauth's (1911) paper. The corals form part of the clastic rocks redeposited in the Frydek and Trinec Members (Senonian to Paleogene) of the Subsilesian unit of the Carpathian Flysch. Thus, the probably Upper Cenomanian to Lower Santonian age of the coral fauna, does not agree with the age of the host rock which is younger. In the present paper 18 coral species are described, of which one belongs to a new genus and 3 species are new. The coral assemblage is of a transitional character between the Cretaceous coral assemblages of the epi-Variscan platform and those of the Tethys (the Carpathians and the Alps). The coral fauna from the Pribor area represents a pioneer assemblage existing during a short stage of favourable conditions, probably on the western side of the Baska cordillera. During the Laramian or younger movements, the already silicified coral colonies were redeposited in rather deep parts of the Subsilesian basin.^1";
- 1122 s[1119] = "FERNANDEZ-MENDIOLA.P.A., GARCIA-MONDEJAR J. (1989).-

- Sedimentation of a Lower Cretaceous (Aptian) coral mound complex, Zaraya Mountains, northern Spain.- Geological Magazine 120, 4: 423-434.- FC&P 18-2, p. 43, ID=2498^Topic(s): coral mound; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Apt; Geography: Spain N^A Lower Cretaceous mixed carbonate-siliciclastic sequence is well exposed in Zaraya Mountains in Guipuzcoa Province, northern Spain. The sequence begins with interfingering deltaic platform facies and marine patch-reef carbonates. This unit is dominated by mudstones and sandstone with minor interbeds of shallow-water carbonates (calcareous mudstones and sandstones and grain-stone-packstones). A thick mixed carbonate-terrigenous unit overlies the siliciclastics and is composed principally of limestones and marls. Periodic influx of terrigenous sediments over a dominantly carbonate sea-floor gave rise to repeated cycles typical of a mixed shallow-water platform. Demise of a southerly derived deltaic input allowed the development of a mainly carbonate third unit. Large (several metres across) bioherms resulted from high in situ organic productivity (mechanical breakage of bioclasts, algal-induced precipitation, trapping and baffling of lime mudstone). The mounds grew making up a coral carbonate mound complex. This progrades to the south, towards a small backreef basin, and slightly retreated in its forereef margin. A period of tectonic instability is thought to have been responsible for the drowning of the shallow-water complex, which was unable to keep pace with relative sea-level rise.^1";
- 1123 s[1120] = "REIG ORIOL J.M. (1991).- Fauna coralina Cretacica del nordeste de España.- published by the author, Barcelona: 53 pp., 9 pls.- FC&P 20-2, p. 67, ID=2963^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: Spain NE^Es un estudio sobre Madreporarios procedentes del Cretacico inferior y del piso Cenomaniense del NE de Espana. En el describimos taxones ya estudiados por diversos autores y taxones nuevos. De los taxones nuevos, la mayoría lo son a nivel de especie, pero dos de ellos lo son a nivel de Genero y de Subgenero. La relacion de los nuevos taxones es la siguiente: Axosmilia angelisi n.sp. Axosmilia bella n.sp.; Axosmilia viai n.sp.; Angelismilia angelisi n.sp.; Lophosmilia calzadai n.sp., Pachythecosmilia clarae n.gen., n.sp.; Cryptocoenia viaderi n.sp.; Phyllocoenia (Paraphyllocoenia) gerardi n.subgen., n.sp.; Diplocoenia calzadai n.sp.; Plesiofavia villaltai n.sp.; Hydnothophora viaderi n.sp.; Hydnothophora cerebriformis n.sp.; Hydnothophora alloiteaui n.sp.; Stylosmilia abadi n.sp.; Rhabdophyllia gasseri n.sp.^1";
- 1124 s[1121] = "ELIASOVA H. (1997).- Coraux cretace de Boheme (Cenomanien superieur; Turonien inferieur - Coniacien inferieur), Republique tcheque.- Vestnik Ceskeho geologickeho ustavu 72, 3: 245-266.- FC&P 27-1, p. 93, ID=3837^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: Czech Republic, Cretaceous Basin^The paper summarizes previously published data on the Cenomanian and Turonian corals from the Bohemian Cretaceous basin. A detailed description is given on all localities, their geological setting and palaeoenvironment. The palaeogeography and the faunal composition are discussed. An appendix cites all localities and the corals found there respectively.^1";
- 1125 s[1122] = "LOSER H. (1998).- Die Korallen der sachsichen Oberkreide - eine Zwischenbilanz und Bemerkungen zu Korallenfaunen des Cenomans.- Abhandlungen des Staatlichen Museums für Mineralogie und Geologie zu Dresden 43/44: 173-187.- FC&P 27-1, p. 93, ID=3841^Topic(s): distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Cen Tur; Geography: Germany, Saxony^Coral material which has been systematically collected in the past 15 years - mostly in the Cenomanian of the Upper Cretaceous of Saxony (Cenomanian-Turonian) - indicates that the corals (Hexacorallia and Octocorallia) dominate in

the limestone facies of the transgressive horizons. The revision of the rich collections has not yet been finished, however, in this paper the taxonomic state of knowledge is given, which is accompanied by a short introduction on the history and a description of the localities. Up to now, 63 species in 43 genera are known: 29 species from the Lower Cenomanian, 37 species from the Upper Cenomanian and three species from the Turonian.^1";

- 1126 s[1123] = "SCHROEDER U. (1997).- Fossilien aus der Schreibkreide von Lagerdorf bei Itzehoe (Schleswig-Holstein).- Der Geschiebesammler 30, 1: 3-42.- FC&P 27-1, p. 95, ID=3846^Topic(s): ; paleontology, chalk; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Camp Maas; Geography: Germany, Schleswig-Holstein, erratics^[Among many invertebrate fossils three coral species from the Campanian / Maastrichtian are listed and depicted]^1";
- 1127 s[1124] = "LOSER H. (1994).- Die Korallenfauna des Kassenberges in Muelheim/Ruhr (Westfalisches Kreidebecken, NW-Deutschland; Oberkreide). (1) Geologie und Paläologie.- Coral Research Bulletin 02: 1-19.- FC&P 23-2.1, p. 50, ID=4388^Topic(s): geology, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Cen Tur; Geography: Germany, Kassenberg^The monograph outlines the geology, facies and palaeoecology of the Cretaceous coral-bearing sediments of the Kassenberg quarry in Muelheim/Ruhr (Westfalian Cretaceous Basin, NW-Germany), access to which has become difficult. Several particularly reconstructed profiles give an overview over the bedding. On its base the possible sedimentation cycles from the Lower Cenomanian to Upper Turonian are discussed. The palaeontological research is documented by a list of the published papers on the locality. A reconstruction of the Cenomanian habitat, facies and sedimentation of the Kassenberg site is attempted with the aid of studies conducted on Mediterranean abrasions platforms. The occurrence of the corals is discussed and compared to other localities of cenomanian / turonian age.^1";
- 1128 s[1125] = "LOSER H. (1994).- La faune corallienne du mont Kassenberg a Muelheim-sur-la-Ruhr (Bassin cretace de Westphalie, Nord Ouest de I'Allemagne). (2) Paleontologie.- Coral Research Bulletin 03: 1-93.- FC&P 23-2.1, p. 50, ID=4389^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Cen Tur; Geography: Germany, Kassenberg^Part 2 of the monograph deals with the corals found at the Kassenberg site. The relatively small fauna of a pronounced Jurassic character comprises 41 species of hermatypic corals belonging to 30 genera of both Hexacorallia and Octocorallia. A comparison with type material from the Cretaceous in France, Saxony (Germany), Austria, Slovenia, Serbia, the Czech Republic and from the Jurassic in Poland and Romania augments the existing knowledge of some species and genera. The families Stylinidae and Haplaraeidae and the genera Acrosmilia, Adelocoenia, Epistreptophyllum and Mixastraea are dealt with in detail. In the concluding chapter, the coral fauna is compared - both geographically and stratigraphically - with other coral faunas of the Lower to Middle Cretaceous.^1";
- 1129 s[1126] = "LOSER H. (1994).- Kreidekorallen vom Kassenberg in Muelheim/Ruhr.- Fossilien 5: 304-310.- FC&P 23-2.1, p. 51, ID=4390^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Cen Tur; Geography: Germany, Kassenberg^1";
- 1130 s[1127] = "LOSER H., KIENEL U. (1994).- Geologie und Paläologie der Korallenfauna des Kassenberges in Mülheim / Ruhr (westfälisches Kreidebecken; NW-Deutschland).- Coral Research Bulletin 02: 255 pp., 9 pls.- FC&P 23-2.1, p. 25, ID=6853^Topic(s): geology, Anthozoa; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous, Cen - Tur; Geography: Germany, westphalia^[this is] the first part of the monograph [which] outlines

the geology, facies and palaeoecology of the Cretaceous (Lowermost Cenomanian to Upper Turonian) coral-bearing sediments of the Kassenberg quarry in Mülheim / Ruhr (Westfalian Cretaceous Basin, NW-Germany), access to which has become difficult. Several particularly reconstructed profiles give an overview over the bedding. On its base the possible sedimentation cycles from the Lower Cenomanian to Upper Turonian are discussed. The palaeontological research on the locality is documented. A reconstruction of the Cenomanian habitat, facies and sedimentation of the Kassenberg site is attempted with the aid of studies conducted on Mediterranean abrasion platforms. The occurrence of the corals is discussed and compared to other localities of Cenomanian / Turonian age. In addition, two assemblages of calcareous nannofossils are introduced and their stratigraphical value discussed.^1";

- 1131 s[1128] = "GOTZ S., LOSER H., SCHMID D.U. (2005).- Reef development on a deepening platform: two Early Cretaceous coralgal patch reefs (Catí, Llacova Formation, eastern Spain) compared.- Cretaceous Research 26, 6: 864-881.- FC&P 34, p. 59, ID=1280^Topic(s): reefs, patch reefs; reefs ecology; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Cretaceous Haut; Geography: Spain E^Two coralgal patchreefs of the Hauterivian Llacova Formation (Maestrat Basin, E-Spain), subsequently exposed within one section, were investigated to reveal the taxonomical implications of changing environmental controls on reefal palaeocommunities. After taxonomical work on the coral fauna, microfacies analysis and palaeoecological interpretation, two communities could be distinguished that differ in coral taxonomical composition, microbialite formation pattern and in abundance and composition of encrusters and bioeroders. The coral fauna comprises 14 species (e.g. Actinastrea pattoni, Cladophyllia aff. catalaunica, Dimorphocoenia cf. crassisepta, Dimorphocoenia rudis, Eocomoseris raueni, Eocomoseris sp., Holocoenia jaccardi, Latusastrea irregularis, Mesomorpha sp., Microsolena kugleri, Polyphylloseris cf. mammillata, Polyphylloseris mammillata, Polyphylloseris sp., Styliina parvistella) and differs on the species level between the reefs. Only one coral species (S. parvistella) occurs in both the lower (abundant) and the upper reef (rare, occurs near the reef base). The lower reef was dominated by phototrophic fauna and coral species that show small corallites with nonperforate septa (a stylinid, thamnasteriid, heterocoeniid, actinastreid association) predominate together with Abacinella-Lithocodium dominated encruster association. The upper reef had a balanced phototrophic-heterotrophic fauna that gradually passed into a heterotrophic-dominated fauna during its latest growth stage where microsolenid corals predominated. The encruster spectrum is dominated by an association of sponges, polychaets and bryozoans. Moderate deepening during a transgressive systems tract (TST) depositional sequence and elevated nutrient supply are interpreted to represent the driving environmental parameters that caused this change in reefal palaeocommunity composition. In addition, we determined nine coral species that were only known from younger strata (Barremian, Aptian, Albian, Cenomanian) which emphasizes the importance of the Hauterivian as a time of evolutionary transition from Late Jurassic to Cretaceous coral faunas. ^1";
- 1132 s[1129] = "FISCHER J.C., VOIGT E. (1978).- Redescription d'Ubaghsia favosites Oppenheim 1899, Chaetetoide du Maestrichtien de Maestricht.- Paläontologische Zeitschrift 52, 3-4: 164-168.- FC&P 9-1, p. 18, ID=5778^Topic(s): redescription; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Cretaceous Maas; Geography: Maastricht^^1";
- 1133 s[1130] = "GRUBER G., REITNER J. (1991).- Isolierte Mikro- und Makrosklere von Porifera aus dem Untercampan von Hover (Norddeutschland) und Bemerkungen zur Phylogenie der Geodiidae (Demospongia).- Berliner geowissenschaftliche Abhandlungen A134: 107-117.- FC&P 21-2, p. 50, ID=3347^Topic(s):

sclerites; Porifera Demospongia; Systematics: Porifera; Demospongiae; Stratigraphy: Cretaceous, Camp; Geography: Germany N^From the lower Campanian of the quarry "Alemania Hover" a lot of sponge spicules mainly microscleres are described. This discovery is the first record of microscleres from this outcrop. These microscleres are related to the demosponge taxa Poecilosclerida (chela, diancistra, toxa), Tetractinellida (sterraster, oxyaster) and the hexactinellid taxon Amphidiscophorida (hemidisc). Sterraster microscleres are firstly reported from the lower Cambrian of South Australia. These spicules, and the Cretaceous ones, are compared with the taxon Rhaxella perforata Hinde. Besides these microscleres some monaxonic demosponge megascleres (strongyles, oxea, subtylostyles, cricoamphioxea) were also collected.^1";

1134 s[1131] = "SALOMON D. (1990).- Ein neuer lyssakiner Kieselschwamm, Regadrella leptotoichica (Hexasterophora, Hexactinellida) aus dem Untercenoman von Baddeckenstedt (Nordwestdeutschland).- Neues Jahrbuch Geol. Palaont. Mh. 1990, 6: 342-352. [in German, with English summary].- FC&P 19-2.1, p. 39, ID=2764^Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cretaceous Cen; Geography: Germany NW^The new species is a representative of the lyssakine Hexactinellida, a group which has been hardly documented from the Mesozoic. The rich occurrence of "Hexactinosa" and Lychniscosa in the "Schreibkreide" Formation suggests that the Hexactinellida have been blossoming in the Late Cretaceous and that the poor documentation of the "Lyssakinosa" is a preservational artefact.^1";

1135 s[1132] = "GASSE W., GOCKE R., HILPERT K.-H. (1991).- The Hexactinellid Sponge Genus Becksia Schlueter 1868 from the Campanian of the NW Muensterland (Upper Cretaceous, NW Germany).- In: Reitner J. & Keupp H. (eds) Fossil and Recent Sponges: 21-35.; Springer, Berlin - Heidelberg.- FC&P 20-2, p. 70, ID=2971^Topic(s): ; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cretaceous Camp; Geography: Germany, Munsterland^In the district of Coesfeld near the villages of Holtwick, Osterwick, Darup and Lette, northwest area of the Muenster Cretaceous Basin, extraordinary associations of hexactinellid and lithistid sponges are exposed. These occur in Late Senonian strata [late Lower Campanian (Campanian 2-3)]. The regional so-called Osterwicker Schichten include alteration layers of glauconitic-sandy, argillaceous and calcareous marls, and marly limestones. A first systematic review indicates a dominance of hexactinellid sponges as opposed to lithistid ones. The Lithistida are represented by species of the genera Callopegma, Seliscothon, Verruculina, Jerea, and Siphonia. The Hexactinellida comprise species of the genera Aphrocallistes, Becksia, Camerospongia, Coeloptychium, Coscinopora, Lepidospongia, Leptophragma, Plocoscyphia, Sporadoscina, Tremabolites and Ventriculites (Gasse et al. 1988). Well known from this region is the occurrence of specimens of the genus Becksia. Also from this area the type species Becksia soekelandi was erected by Schluter (1868). Recently collected and well-prepared individuals of this species have stimulated the following remarks [on Becksia]. ^1";

1136 s[1133] = "MEHL D., NIEBUHR B. (1995).- Diversität und Wachstumsformen bei Coeloptychium (Hexactinellida, Lychniscose) der Meiner Mulde (Untercampan, N-Deutschland) und die Palökologie der Coeloptychidae.- Berliner geowissenschaftliche Abhandlungen E16: 91-107.- FC&P 26-1, p. 73, ID=3645^Topic(s): diversity, growth form; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cretaceous Camp; Geography: Germany N^^1";

1137 s[1134] = "NIEBUHR B., WILMSEN M. (2005).- First record of the hydroid Protulophila gestroi Rovereto, 1901, a serpulid symbiont, from the Middle Cenomanian primus Event, northern Germany.- Neues Jahrbuch für Geologie und Palaontologie, Monatshefte 2005, 4: 219-232.- FC&P

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, p. 98, ID=1362^Topic(s): commensalism; Hydrozoa, Annelida; Systematics: Cnidaria Annelida; Hydrozoa; Stratigraphy: Cretaceous Cen; Geography: Germany N^The colonial hydroid *Protulophila gestroi* Rovereto, 1901, a common serpulid symbiont, is recorded for the first time from the lower Middle Cenomanian Praeactinocamax primus Event of northern Germany. It is represented by a reticulate system of thin stolons, small subcircular openings or chimney-like bosses, and elongate polyp chambers preserved by in vivo bioimmuration in the outer layers of the calcareous tubes of serpulid worms. From the rich serpulid fauna of the primus Event, only representatives of the genus *Rotulispira* Chiplonkar & Tapaswi are infested whereas other genera (e.g., *Nogrobs* (Tetraditrupa) Regenhardt and *Pentaditrupa* Regenhardt) appear to be not affected. This observation may indicate that *P. gestroi* was selective in the choice of its hosts, a phenomenon known also from recent colonial hydroids living as polychaete symbionts. A commensalic relationship is inferred for *P. gestroi* from the primus Event as the percentage of infestation (ca.40%) indicates that infested and non-infested serpulids were roughly equally successful in the same environment.^1";

1138 s[1135] = "REHFELD U., ERNST G. (1998).- Hydrozoan build-ups of *Millepora irregularis* sp nov. and fungiid coral Meadows of *Cunolites Alloiteau* (Anthozoa). - Palaeoecological and Palaeoceanographical implications for the Upper Cretaceous of North Cantabrica (Northern Spain).- *Facies* 39, 1: 125-138.- FC&P 27-2, p. 76, ID=3945^Topic(s): reefs hydrozoan-fungiid; reefs hydrozoan-fungiid; Systematics: Cnidaria; Hydrozoa Scleractinia; Stratigraphy: Cretaceous U; Geography: Spain N^The Cantabrian Basin of northern Spain yields an Upper Santonian / Lower Campanian carbonate sequence, where both milleporid hydrozoans and fungiid corals established uncommon and hitherto unknown bioconstructions. The section where these bioconstructions are exposed can be divided in four lithological units. The hydrocoralline bioconstructions are developed as biostromes in unit one and as bioherms in unit three. Biostromes and bioherms are separated by unit two, a carbonate facies rich in "lithistid" and hexactinellid sponges. The hydrozoan colonies were preserved due to early diagenetic silicification of their formerly aragonitic skeleton. The examined fauna strongly resembles the Recent milleporid taxon *Millepora alcicornis*. Significant differences between fossil and Recent skeletal structures can be recognized only in the distribution of zooecial tubes within the coenosteum. The hydrozoan facies is topped by unit four, a quartz-rich limestone, with at least a dozen bed surfaces, each covered by dense meadows of a more or less monospecific fungiid coral fauna, assigned to the genus *Cunolites Alloiteau*. The milleporids developed in, at least intermittently agitated, shallow water environment with normal, open marine salinities. The sediment yields a microfacies rich in benthic foraminifera and bioclasts and poor in terrestrial components. The *Cunolites* fauna, instead, probably spread in a quiet, more restricted environment of a deeper lagoonal facies, poor in marine biogenes, except for some rare associated gryphaeid oysters and irregular echinoids. This facies is conspicuously influenced by terrigenous input, as is substantiated by abundant quartz minerals, wood fragments and small coal flakes. The conspicuous environmental change from the hydrozoan into the fungiid coral facies matches an approach of the coastline, obviously related to an Upper Santonian / Lower Campanian "tecto-event", which has been proved on a superregional scale. Both the milleporid hydrozoans and the fungiid corals point to a temporary influx of subtropical Tethyan ocean waters in the Boreal Realm of the Biskaya Ocean during this time.^1";

1139 s[1136] = "WITTLER F. (2003).- Zur systematischen Position der *Isis vertebralis* (Hennig) zugeordneten Wurzelgeflechte in der Oberkreide.- *Dortmunder Beiträge zur Landeskunde* 36/37: 223-228.- FC&P 33-2, p. 39, ID=1181^Topic(s): ; Scleractinia, *Isis*;

- Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous U; Geography: Germany NW^Most attachment bases of octocorals previously assigned to Isis vertebralis (Upper Cretaceous) cannot be confirmed as octocorals. They belong to solitary corals as Parasmilia cf. granularis (from the Late Turonian of Dortmund) and Parasmilia centralis (Early Campanian from Hannover, Höver and Lägerdorf; all NW Germany).^1";
- 1140 s[1137] = "MALECKI J. (1982).- Bases of Upper Cretaceous octocorals from Poland.- Acta Palaeontologica Polonica 27, 1-4: 65-75.- FC&P 12-1, p. 21, ID=1884^Topic(s): Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous U; Geography: Poland^Bases of octocorals, mostly epifaunal, from Cretaceous deposits of the environs of Cracow, Poland have been classified according to parataxonomic criteria. A form-genus Octobasis has been proposed [by the] writer for eleven forms-species of octocorals.^1";
- 1141 s[1138] = "KOENIG W. (1991).- Oktokorallen-Basen aus dem Campanium von Misburg und Hoyer.- Arbeitskreis Paläontologie Hannover 19, 6: 153-176.- FC&P 21-2, p. 40, ID=3332^Topic(s): taxonomy; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous Camp; Geography: Germany, Hannover^Bases of Octocorals which are attributed to the genera Moltkia and Isis are known from numerous Cretaceous marine sediments. In the last time they were considered among others by Voigt (1958) and Malecki (1982). On the base of material from the Campanian around Hannover (Germany) the relation between the bases and internodes as well as the role of the parataxon Octobasis Malecki is discussed.^1";
- 1142 s[1139] = "ZITT J., NEKVASILOVA O. (1993).- Octocoral encrusters of rock substrates in the Upper Cretaceous of Bohemia.- Journal of the Geological Society 38, 1/2: 71-78; Praha.- FC&P 23-1.1, p. 78, ID=4178^Topic(s): rock substrates, holdfasts; Octocorallia holdfasts; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Bohemian Massif^Four morphological types of octocoral bases are described from the nearshore Upper Cenomanian-Lower Turonian sediments of Bohemia. The studied bases still adhered either to rock clasts or to the rocky bottom and their low number shows that the octocorals were a rare component of encrusting communities.^1";
- 1143 s[1140] = "HELM C., SCHULKE I. (2003).- An almost complete specimen of the Late Cretaceous (Campanian) octocoral'Isis' ramosa Voigt (Gorgonacea) from the Lower Saxony Basin, northwest Germany.- Cretaceous Research 24, 1: 35-40.- FC&P 33-2, p. 29, ID=1151^Topic(s): Octocorallia, Gorgonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous Camp; Geography: Germany NW^An almost completely preserved specimen of the octocoral'Isis' ramosa (Mitteil. Geol. Staatsinst.Hamburg 27 (1958) 5) (Gorgonacea) is described. The specimen was found in Campanian strata in the Lower Saxony Basin near Hannover (NW Germany), presumably in the Pachydiscus stobaeil Galeola basiplana Zone of the regional northwest German zonation. It consists of a small, rigid, fan-shaped corallum that was formerly known only from a few poorly preserved fragments. This feature separates'I' ramosa significantly from related extant Isididae that expose a corallum subdivided into calcified internodes and horny nodes.'Isidid' species from deeper shelf settings with rigid branches and a presumed articulation only between root system and fan are interpreted as ancestral to extant gorgonaceans.^1";
- 1144 s[1141] = "KEMPER E. (1982).- Die Kaltwasser-Korallen der Schlammgrunde des fruhen Alb in Nordwestdeutschland.- Geologisches Jahrbuch A65: 513-515.- FC&P 13-1, p. 21, ID=0396^Topic(s): ecology; Scleractinia, Tethocyathus; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb; Geography: Germany NW^The paleoenvironment of Tethocyathus (Caryophylliidae)

- from the Aptian / Albian is discussed including evidence on paleotemperature and water depth.¹";
- 1145 s[1142] = "LELOUX J. (2003).- *Columactinastraea anthonii* sp.nov. (Scleractinia, Astrocoeniina), a new coral species from the Maastrichtian (Upper Cretaceous) of The Netherlands.- *Scripta Geologica* 126: 185-201.- FC&P 33-2, p. 31, ID=1159Topic(s):taxonomy; Scleractinia, *Columactinastraea*; Systematics:Cnidaria; Scleractinia; Stratigraphy:Cretaceous Maas; Geography:Netherlands^Only four cerioid species of scleractinian corals have been described from the Maastrichtian in its type area; the montlivaltioid *Isastrea angulosa* (Goldfuss, 1826), and the astrocoeniids *Actinastrea goldfussi* d'Orbigny, 1849, *A. faujasi* (Quenstedt, 1881) and *Columastrea fallax* Umbgrove, 1925. A lectotype is selected for the latter species. A new cerioid species, *Columactinastraea anthonii* sp.nov., is recorded from the middle part of the Meerssen Member (Maastricht Formation) at the ENCI Quarry, Zuid Limburg, The Netherlands. It is well-preserved and differs from other *Columactinastraea* species mainly by the relatively large diameter of its lumen.¹";
- 1146 s[1143] = "LELOUX J. (2004).- Notes on taxonomy and taphonomy of two Upper Maastrichtian (Upper Cretaceous) scleractinian corals from Limburg, The Netherlands.- *Scripta Geologica* 127: 313-339.- FC&P 33-2, p. 32, ID=1160Topic(s):taphonomy; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Cretaceous Maas; Geography:Netherlands^A lectotype has been assigned for *Placosmia? robusta* Umbgrove, 1925. This taxon, although fitting into the original diagnosis of *Placosmia*, is not defined by the emended diagnosis of Alloiteau and later authors. Specimens from the Upper Maastrichtian of The Netherlands, that were formerly wrongly attributed to *Galaxea fasciculata* (Lamarck, 1816), a homonym of the extant species *Galaxea fascicularis* (Linnaeus, 1758), belong to *Placocoenia macrophthalma* (Goldfuss, 1826). The specimen depicted as *P. macrophthalma* by Umbgrove does not belong to this taxon and is placed in open nomenclature.¹";
- 1147 s[1144] = "MORYCOWA E., MASSE J.-P., VILAS L., ARIAS C. (2002).- *Montlivaltia multiformis* Toula (Scleractinia) from the Aptian of the Prebetic domain (SE Spain).- *Revista Espanola de Paleontología* 16, 1: 131-144.- FC&P 33-2, p. 34, ID=1169Topic(s):ecology; Scleractinia, *Montlivaltia*; Systematics:Cnidaria; Scleractinia; Stratigraphy:Cretaceous Apt; Geography:Spain SE^*Montlivaltia multiformis* Toula (Scleractinia, Favina, Montlivaltiidae), formerly reported from the Carpatho-Balkan domain is described from Lower Aptian beds of the Prebetic Domain (SE Spain). Taxonomic attributes include the organisation of radial elements, septal trabeculae, carinae and endothecal elements while the external morphology of the coralla is fairly variable. The sedimentological context suggests a circalittoral environment also supported by palaeoecological features of the surrounding fauna. Owing to its stratigraphic position in the Carpatho-Balkan region and in Spain, *Montlivaltia multiformis* appears as a potential marker for both shallow carbonate or outer shelf settings of the Lower Aptian Tethys European margin.¹";
- 1148 s[1145] = "GUERRERO KOMMRITZ J., HILLMER G. (2004).- Die Gattungen *Parasmilia* und *Trochosmia* (Scleractinia) aus der Schreibkreide Norddeutschlands.- *Geologisches Jahrbuch A157*: 69-97.- FC&P 34, p. 60, ID=1281Topic(s):taxonomy; Scleractinia, *Parasmilia*, *Trochosmia*; Systematics:Cnidaria; Scleractinia; Stratigraphy:Cretaceous U; Geography:Germany N^The chalk quarries of Lägerdorf, Krons Moor (southeast of Itzehoe, Holstein) and Hemmoor (northwest of Stade, Lower Saxony) expose an early complete section from the upper Cretaceous (Middle Coniacian to the Upper Maastrichtian) which has a thickness of 520m. It is chalk facies. Most of the solitary corals in this section are of the genera *Parasmilia* and

Trochosmilium (Coelosmilium). From 300 corals more than 50% belong to these genera. The genus Parasmilium can be found from the Coniacian to the Maastrichtian, Trochosmilium can only be found in the Maastrichtian. Material for comparison from other quarries in North-Germany were not studied.¹";

- 1149 s[1146] = "STOLARSKI J., VERTINO A. (2006).- First Mesozoic record of the scleractinian Madrepora from the Maastrichtian siliceous limestones of Poland.- Facies 53, 1: 67-78.- FC&P 34, p. 69, ID=1303Topic(s): new records; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: PolandThe objective of the present article is to document the first stratigraphic occurrence of the colonial oculinid Madrepora, known from the modern seas as azooxanthellate taxon that contributes to formation of deepwater coral reefs. The Upper Cretaceous specimens of Madrepora sp. reported herein from Poland were recovered from Upper Maastrichtian (Nasilów and Bochońnica localities) and Lower Maastrichtian (Blizów locality) siliceous limestones. The corals are preserved as imprints of the branch fragments and molds of the calices. Despite their moldic preservation, the coral remains exhibit key generic features of the genus Madrepora: (1) sympodial colony growth form with calices arranged in opposite and alternating rows in one plane of the branch, and (2) imprints of the granular coenosteum texture, occasionally showing peculiar reticulate patterns. Some features of the Cretaceous Madrepora sp., such as the reticulate coenosteum texture, the range of the corallite diameter (2.8-4 mm), and the arrangement of the septa in three regular cycles resemble the skeletal features of the modern, typically constructional, species M. oculata (type species). The lack of any evidence of coral buildups and related debris in the whole Upper Cretaceous/Paleogene sequences from Poland and the sparse occurrence of colony fragments, suggests that the Cretaceous Madrepora sp. formed small, isolated colonies.1";
- 1150 s[1147] = "LOSER H., DECROUEZ D. (2000).- Stratigraphy of selected Cretaceous coral localities in Northern Spain.- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 21: 63-71.- FC&P 29-1, p. ???, ID=1488Topic(s): stratigraphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: SpainFive Lower Cretaceous localities in Northern Spain (near Castellví de la Marca, Masarbones and Montsec de Rubies) with rich coral faunas known from the historical literature were sampled and dated as Upper Aptian on the basis of foraminifers, rudists and calcareous algae. The dating was confirmed by the coral associations, despite their low stratigraphical value.1";
- 1151 s[1148] = "LOSER H. (1987).- Zwei neue Gattungen der Korallen (Scleractinia) aus der Saechsischen und Boehmischen Oberkreide.- Vestnik Ustredniho Ustavu Geologickeho 62, 4: 233-238. [in German, with English and Czech summaries].- FC&P 17-1, p. 8, ID=2094Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Germany,, Czech RepublicThe paper contains a systematic evaluation of taxons from the order Scleractinia from the Saxon surf facies and the Upper Cretaceous basin. They are Confusaforma weyeri gen. nov., sp. n. and Latohelium reptans (Pocta 1887), which was originally described under the generic name of &Synhelium&.1";
- 1152 s[1149] = "LOSER H., SALDANA-VILLODRE J.C. (2008).- Colonial corals from the Early Aptian siliciclastic Montlivaltia Marls of Jumilla (Murcia, Spain).- Revista Espanola de Paleontologia 23, 1: 1-6.- FC&P 35, p. 78, ID=2393Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Spain, MurciaThree species of colonial scleractinian corals are reported from Early Aptian sandy marls of the so-called Montlivaltia marls from a section exposed on the SE flank of the Sierra de Sopalmo, south of Jumilla in Murcia, Spain. While solitary corals of the genus Montlivaltia are extremely common in

the marls, colonial corals are rare. The three colonial coral species presented here (*Cryptocoenia* sp. n. aff. *C. pygmaea*, *Holocystis elegans*, and *Columnocoenia aragonensis*) are all common Early Cretaceous species. They range in age from the late Barremian to early Albian with the exception of *Columnocoenia aragonensis*, which ranges from the Valanginian to Cenomanian. Their geographical distribution is large and all species were found in the central Tethys as well as in the Caribbean province. All species were previously found in siliciclastic environments and while *Holocystis elegans* occurs primarily in such facies, the other two species occur in pure carbonates as well.¹¹";

1153

s[1150] = "TOMAS S., LOSER H., SALAS ROIG R. (2008).- Low-light and nutrient-rich coral assemblages in an Upper Aptian carbonate platform of the southern Maestrat Basin (Iberian Chain, eastern Spain).- *Cretaceous Research* 29, 3: 509-534.- FC&P 35, p. 86, ID=2407^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Spain, Iberian Chain^A Lower Cretaceous (Aptian) succession of carbonate rocks in the southern Maestrat Basin (Iberian Chain, Spain) was analysed in terms of sedimentological and palaeontological criteria. The shallow marine sequence was deposited upon a homoclinal carbonate ramp. Five main facies types were distinguished: (A) peloidal and bioclastic grainstones and rudstones of the inner ramp shoals; (B) orbitolinid wackestones-packstones of the distal outer ramp; (C) peloid and *Ostrea* wackestones-packstones of the middle outer ramp; (D) coral-algal sheetstones of the proximal outer ramp; and (E) coral-algal platestones-domestones of the middle ramp. Coral-bearing facies types (D) and (E) showed similar major environmental factors: low energy hydrodynamism, low light intensity and apparently nutrient-rich water. Slight differences in these conditions are reflected in the different growth forms and coral assemblages. Coral-algal sheetstones are characterized by sheet-like and lamellar forms with a low coral diversity not clearly dominated by any taxon. Coral-algal platestones-domestones develop platy, tabular and irregular massive forms with a slightly higher coral diversity characterized by a *Microsolenina*-*Faviina* association. The coral fauna is revised taxonomically and yielded a total of 22 species in 18 genera (21 *Scleractinia* species, one *Octocorallia* species). Genera of the suborders *Microsolenina* and *Faviina* predominate, those of the suborders *Stylinina*, *Fungiina*, *Rhipidogyrina* and the order *Coenothecalia* are subordinate.¹¹";

1154

s[1151] = "WILMSEN M., NIEBUHR B., WOOD C.J., ZAWISCHA D. (2007).- Fauna and palaeoecology of the Middle Cenomanian *Praeactinocamax primus* Event at the type locality, Wunstorf quarry, northern Germany.- *Cretaceous Research* 28, 3: 428-460.- FC&P 35, p. 87, ID=2408^Topic(s): ecology; fossils; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: Germany N^A systematic account of the fauna from the early Middle Cenomanian *Praeactinocamax primus* Event, a 50-60cm thick marl bed, at the type locality, Wunstorf quarry, to the west of Hannover (northern Germany), is given. Numerous invertebrate taxa (over 50 in total) have been collected, including two species of belemnites, ten ammonites, at least 12 bivalves, a single scaphopod, five gastropods, at least eight brachiopods, two solitary corals, a single hydrozoan, four echinoids, and ten polychaetes. The benthic community of the *primus* Event clearly represents a soft-bottom fauna, with hard-bottom elements limited to secondary hard substrates. Most of the macrobenthic elements constitute suspension feeders; shallow-infaunal deposit feeders, grazers and microcarnivores occur as well, while deeper infaunal elements are largely missing. [first fragment of extensive summary]¹¹";

1155

s[1152] = "LOSER H. (1989).- Die Korallen der sächsischen Oberkreide, Teil 1, Hexacorallia aus dem Cenoman.- *Abhandlungen des Staatlichen Museums für Mineralogie und Geologie zu Dresden* 36: 88-164.-

FC&P 18-2, p. 16, ID=2459^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: Germany, Saxony^In den transgressiven Ablagerungen der saechsischen Oberkreide im Suedosten der DDR nehmen Korallen in der Anzahl der Arten wie der auffindbaren Exemplare stellenweise einen hohen Rang ein. Die zumeist kolonialen, seltener solitaeren Formen sind relativ schlecht erhalten und erschwerten eine Untersuchung. Auf der Basis der Arbeit von Bolsche (1871) wird unter Einbeziehung der Originale mit vorliegender Publikation ueber die Scleractinia des Cenomans eine vollstaendige Neubearbeitung eingeleitet. Von den hier beschriebenen 31 Arten in 26 Gattungen, vor allem der Unterordnung Fungiina Duncan 1883, weniger der Unterordnungen Archaeocoeniina Alloiteau 1952, Astraeoniina Alloiteau 1952 und Heterocoeniina M. Beauvais 1977, werden acht Arten offen, weitere drei vergleichsweise bestimmt. Die in Loeser (1987) vorgestellten beiden neuen Arten werden anhand den ihnen zugeordneten Arten naehr charakterisiert. Eine neue Art der Gattung Mesomorpha Pratz 1883 wird beschrieben.^1";

1156 s[1153] = "REIG ORIOL J.M. (1988).- Dos nuevos generos de corales cretacicos.- Batailleria 1: 39-45.- FC&P 20-1.1, p. 63, ID=2837^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Spain^Two new genera of Cretaceous Scleractinia are described. They belong to superfamily Montlivaltioidae but the familial assignment is open. The diagnosis of the first one, named Pseudocunnulites is as follows: solitary circular or discoidal. Lower face epithecate with many growth concentric rings. Upper faci with numerous radial septa strongly perforate. Columella fasciculate. Endotheca very thick. without synapticula. The type species is Pseudocunnulites rosendoi n.sp., coming from Santonian of La Llobera (Villanova de Meia), Prepyrenees of Catalonia, NE of Spain. The diagnosis of the second genus, Angelismilia, is: Solitary, trochoid and with parathecal wall, covered by a smooth epitheca, followed by a second inner wall. Perforate septa. Abundant endotheca. Columella spongy and pseudolamellar. This new genus encloses the following species, described by De Angelis (1905): portisi (type species), neviani and sandalina. They were collected in Cenomanian of Castelvi de la Marca (Catalonia, NE of Spain).^1";

1157 s[1154] = "REIG ORIOL J.M. (1989).- Sobre varies generos y especies de Escleractinias fosiles del Cretacico Catalan.- published by the author?; 49 pp. [in Spanish, with English summary].- FC&P 20-1.1, p. 64, ID=2838^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Spain, Catalonia^For many years we have carried out detailed studies on Scleractinia from the Cretaceous period in Catalonia. As a result of these studies, we have established 21 new species, five of these belong to new genera. The new taxons are the following: Placocolumnastrea torallolensis (nov. gen., nov. sp.), P. humilis (nov. sp.); Pachynefocoenia danieli (nov.gen., nov sp.), Placocaeniopsis pallarsensis (nov. sp.); Orbignygyra campaniensis (nov. sp.); O. ilerdensis (nov. sp.); Phyllosmilia hispanica (nov. sp.); Ilerdogyra clazadai (nov. gen., nov. sp.); Hydnohpora minima (nov. sp.); Stylohelvia rosi (nov. sp.); Pallarsastrea viai (nov. gen., nov. sp.); Actinastrea schiziformis (nov. sp.); Parasmiliopsis calzadai (nov. sp.); Polystephanastrea danieli (nov. sp.); Eugyra crassisepta (nov. sp.); Columnocaenia lamberti torallolensis (nov. subsp.); C. moralejai (nov. sp.); Columnocaeniopsis eduardi (nov. gen., nov. sp.); Astedroseris vidali (nov. sp.); Placophora viaderi (nov. sp.); Latiphyllia viai (nov. sp).^1";

1158 s[1155] = "ELIASOVA H. (1995).- scleractinaire du Cretace superieur a Pavlovske vrchy en Moravia du Sud (Zone de Waschberg, bassin Zdanice-sous-silesien des Carpates externes, Republique tcheque).- Vestnik Ceskeho geologickeho ustavu 70, 3: 35-39. [in French].-

- FC&P 25-1, p. 40, ID=3029^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Czech Republic, Moravia^The new coral genus Larisolena (family Microsolenidae) is described on the basis of a new species from the Upper Cretaceous of southern Moravia (Czech Republic).^1";
- 1159 s[1156] = "ELIASOVA H. (1995).- Famille nouvelle des Scleractiniaires du Cretace superieur de Boheme (Cenomanien superieur - Turonien inferieur, Republique tcheque).- Vestnik Ceskeho geologickeho ustavu 70, 3: 27-34. [in French].- FC&P 25-1, p. 41, ID=3030^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Cretaceous Basin^On the basis of the genus Negoporites Eliasova 1989, the new monogeneric family Negoporitidae in the suborder Fungiina is established. Additionally, a new species of Negoporites is described from the Cenomanian-Turonian-border of Bohemia.^1";
- 1160 s[1157] = "REIG ORIOL J.M., VILELLA J. (1995).- Un nuevo subgenero de corales (Maastrichtiense de Isona, Llerida).- Batalleria 5: 37-39.- FC&P 25-1, p. 42, ID=3036^Topic(s): revision; Scleractinia, Acrosmilopsis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Spain, Llerida^The new subgenus Acrosmilopsis of the genus Acrosmilia is established, based on Calamophyllia marini Bataller 1936. A further new species of the subgenus is described from the Maastrichtian of Isona (N Spain).^1";
- 1161 s[1158] = "COLLETE C., FRICOT C., MATRICON M. (1995).- La geologie du departement de l''Aube.- [editor?]; 213pp; Troyes. [in French].- FC&P 25-2, p. 53, ID=3146^Topic(s): geology; geology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Haut; Geography: France, Aube^The systematic description of the geology of the department Aube (France) encloses a report on a new locality with a rich Hauterivian coral fauna which is comparable to those of the department Yonne; the corals are listed and partly figured]^1";
- 1162 s[1159] = "ELIASOVA H. (1991).- Revision du genre Glenarea Pocta (Scleractiniaires Cenomanien superieur - Turonien inferieur de la Boheme, Tcheoslovaquie).- Casopis pro mineralogii a geologii 36, 2/3: 97-102.- FC&P 21-2, p. 39, ID=3328^Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic^The origin Cretaceous genus Glenarea Pocta 1887 was rather unknown but often reported also from the Upper Jurassic. Now it is finally revised. In view at the main characters (a septothecal wall in a fashion zig-zag, a lamellar columella, a well developed and partial vesiculous endotheca, microstructure) Glenarea is placed in the family Meandrinidae. The genus Melikerona Alloiteau 1958 is considered to be a younger synonym of Glenarea. In addition a new species, Glenarea poctai, is described.^1";
- 1163 s[1160] = "HILLMER G., SCHOLZ J. (1991).- Korallen aus der Oberkreide von Helgoland.- Geol. Jb. A120: 127-137.- FC&P 21-2, p. 40, ID=3330^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Germany, Helgoland^Solitary corals of Turonian age are described from submarine outcrops around the isle Helgoland in the North Sea. The four coral species belong to the genera Parasmilia, Coelosmilium and Onchotrochus.^1";
- 1164 s[1161] = "REIG ORIOL J.M. (1992).- Madreporarios cretacicos de España y Francia.- published by the author, Barcelona: 69 pp., 9 pls.- FC&P 22-1, p. 39, ID=3401^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Spain, France^Our description of Spanish and French Scleractinian fossils is not a comparative study of

specimens from both countries. There are really very few coincidences or common species. In spite of the same age their genetic relationship was scarce, being the reason for the disparity of the species. In this study we describe the following new taxa: *Pachygira calzadai* n.sp., *Strotogyra magna* n.sp., *Uxacalcareae motsecana* n.sp., *Stephanoxyphylia villaltai* n.sp., *Stephanoxyphylia toralolensis* n.sp., *Astraraea viai* n.sp., *Astraraea rosi* n.sp., *Diplotheocora guillermoi* n.gen. et n.sp., *Plesiastraeopsis nicolau* n.sp., *Placosmia vicentei* n.sp., *Nefocoenia batalleri* n.sp., *Nefocoenia casanovai* n.sp., *Acrosmilia danieli* n.sp., *Phyllocaeniopsis occitanica* n.sp., *Phyllocaeniopsis gasseri* n.sp., *Hydnophora obliqua* n.sp., *Hydnophora dissimilis* n.sp., *Ilerdopsammia eduardi* n.gen. et n.sp., *Clazadastrea digitata* n.gen. et n.sp., *Columactinastrea parvistella* n.sp., *Meandroria viaderi* n.sp., *Heterocoenia pusilla* n.sp., *Phyllohelix vilellai* n.sp., *Placocaeniopsis sorelensi* n.sp., *Meandastrea calzadi* n.sp., *Barysmilia tiara* n.sp., *Michelinaraea subaticiana* n.sp., *Dimorphastraea audensis* n.sp., *Dimorphastraea bugaracensis* n.sp., *Dimorphastraea toralolensis* n.sp., *Dimorphastraea urquiolai* n.sp., *Parastephanocora gallica* n.gen. et n.sp.¹;

- 1165 s[1162] = "BARON-SZABO R.C. (1993).- Korallen der höheren Unterkreide ("Urgon") von Nordspanien (Playa de Laga, Prov. Guernica).- Berliner geowissenschaftliche Abhandlungen E09: 147-181.- FC&P 22-2, p. 88, ID=3522Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Spain N^Two coral faunas are described from the lower Cretaceous of northern Spain. Both are assigned to the Urgonian facies of Aptian-Albian age. Fifteen different species are reported from each fauna. They belong to the genera *Heliocoenia*, *Cyathophora*, *Pseudocoenia*, *Pentacoenia*, *Latusastraea*, *Eugyra*, *Budaia*, *Lochmaeosmia*, *Columnocoenia* (the worldwide distributed *C. ksiazkiewiczi*), *Complexastraea*, *Epistreptophyllum* (!), *Placophylia*, *Cladophylia*, *Axosmia*, *Trochoidomeandra*, *Diploastraea*, *Dimorphastraea*, *Fungiastraea*, *Astraeofungia*, *Comoseris* (!), *Meandraraea*, *Meandrophyllia*, *Calamophylliopsis* and *Acrosmilia*. A strong relation to upper Jurassic and lower Cretaceous faunas from Europe and Asia is showed.¹;
- 1166 s[1163] = "ELIASOVA H. (1996).- *Canleria* gen. nov. (Scleractinia, Heterocoeniina) Cenomanien superieur, Republique tcheque.- Vestnik Ceskeho geologickeho Ustavu 71, 3: 255-258.- FC&P 26-1, p. 68, ID=3641Topic(s): taxonomy; Scleractinia, *Canleria*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: Czech Republic, Cretaceous Basin^A new genus of the family Heterocoeniidae is described from the Upper Cretaceous (Upper Cenomanian) of Bohemia.¹;
- 1167 s[1164] = "BARON-SZABO R.C., FERNANDES-MENDIOLA P.A. (1997).- Cretaceous scleractinian corals from the Albian of Cabo de Ajo (Cantabria Province, N-Spain).- Paläontologische Zeitschrift 71, 1-2: 35-40.- FC&P 26-2, p. 70, ID=3748Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb; Geography: Spain N^For the first time a detailed stratigraphic section of the Lower Cretaceous (Albian) of Cabo de Ajo peninsula (Cantabria Province) is logged. The Ajo facies represents a subtropical shallow-water carbonate platform environment. When the platform was subjected to relatively high-energy conditions, calcarenite skeletal shoals developed. In periods of higher sealevel, deeper-water marls were deposited in intraplatform basins. The outcrops yield abundant fossils of scleractinian corals. Three selected stratigraphic horizons containing corals were sampled. Fauna 1 and 2 grew on a shallow-water soft bottom substrate (marl) below wave-base level and contain very small plocoid and phaceloid growth forms. Fauna 3 is associated with a calcarenitic matrix and large forms suggesting a more agitated and wave-influenced environment. 16 species of corals belonging to 7 suborders are described taxonomically. These

- rather diverse coral associations are among the youngest from the Urgonian facies of Europe, and compare well with other Urgonian Tethyan faunas.¹¹";
- 1168 s[1165] = "ELIASOVA H. (1997).- Coraux pas encore decrits ou redecrits du Cretace superieur de Boheme.- Vestnik Ceskeho geologickeho ustavu 72, 1: 61-80.- FC&P 26-2, p. 72, ID=3753^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Cretaceous Basin^The present paper contains the last part of the new taxonomic descriptions of the Upper Cenomanian, Lower Turonian and Lower Coniacian corals from the Bohemian Cretaceous Basin. Nineteen taxa of scleractinian suborder and one species from Coenothecalia were described. One new genus *Colonicyathus* gen. nov. for *Placoseris geinitzi* Bolsche 1871, and the new species *Micrabacia wellsii* sp. n. (sooner described from the Bohemian Cretaceous Basin as *Micrabacia coronula* Goldfuss 1827), *Onchotrochus hatifnatus* Stolarski & Eliasova sp. n., and *Protrochocyathus* (?) *pergratus* sp. n. were proposed. All these three new species were ahermatypic scleractinian corals of Lower Turonian and Lower Coniacian ages.¹¹";
- 1169 s[1166] = "LOSER H., STOLARSKI J. (1997).- Les scleractiniaires solitaires de la carriere du Gaty (Cretace: Albien moyen, Geraudot, department de I'Aube, France).- Bulletin annuelle de l'Association geologique de I'Aube 17/18: 30-37.- FC&P 26-2, p. 73, ID=3755^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb; Geography: France, Aube^One of the two species is provisionally identified as *Trochocyathus conulus*. According to the literature it should be quite common in the Cretaceous of Europe. The generic attribution of the other species is still uncertain. It is remarkable by its symbiosis with a sipunculan (analogy with certain Recent scleractinians). It is the oldest recognized case of this type of symbiosis in the Cretaceous.¹¹";
- 1170 s[1167] = "REIG ORIOL J.M. (1997).- Generos y especies nuevas de Madreporarios cretacicos.- published by the author?; 45 pp., 5 pls; Barcelona.- FC&P 26-2, p. 73, ID=3758^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Spain^Four new genera (*Promadarcis*, *Ilderdosmilina*, *Pseudodesmophyllum*, *Lamnastrea*) and 18 species are described from the Upper Cretaceous of Northern Spain, and one new species from the Lower Cretaceous in the Tarragona province.¹¹";
- 1171 s[1168] = "RUSSO A., CHERCHI A., SCHRODER R. (1996).- An example of auto-mobility and host substrate relationship in "Cycloseris" escosurae Mallada 1887, scleractinian coral from Lower Aptian of Spain.- Bolletino della Societa Paleontologica Italiana, Spec. vol. 3: 191-220.- FC&P 27-1, p. 95, ID=3844^Topic(s): auto-mobility; Scleractinia,'Cycloseris'; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Spain^"Cycloseris" escosurae is an Early Aptian solitary coral from Spain created [described!] by Mallada (1887). The taxonomic revision indicates that the species of Mallada shows intermediate characters between the genus *Cycloseris* Lamarck and *Cyclophyllopsis* Alloiteau 1959, and, may be, it is pertaining to a new genus. This small, discoidal coral is commonly settled on Palorbitolina tests and, occasionally, on bivalve fragments, conchostracan shells, and others. Few specimens do not display apparent attachment. The hypothesis of Alloiteau (1952) concerning an association of Eocene solitary corals to macroforaminifera as a case of commensal relationship is here discussed. Architectural criteria for self induced mobility, such as trabeculae directed also basally and the lack of epitheca, as demonstrated within Recent *Cycloseris cyclolites* (Lamarck) suggest that the species from Spain had been auto-mobile (Gill & Coates 1977). The relationship between the coral and its host substrate

- is analyzed.^1";
- 1172 s[1169] = "BARON-SZABO R.C. (1998).- A new coral fauna from the Campanian of Northern Spain (Torallola village, Prov. Lleida).- Geologische und Palaontologische Mitteilungen 23: 127-191.- FC&P 28-1, p. 41, ID=3970^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Camp; Geography: Spain N^A new coral fauna is described from the Puimanyons Olisthostrome Member of the Vallcarga Formation (Campanian) in the Torallola area, north Spain, Taxonomic diversity is emphasized by the appearance of 36 genera belonging to 2 orders and 9 suborders. Four species are new: Placophyllia bandeli n.sp., Barysmilia iberica n.sp., Latohelia circularia n.sp., and Gyrodendron leptoneuma n.sp. Within the European Province the coral fauna from Torallola represents one of its most complex Campanian coral communities.^1";
- 1173 s[1170] = "REIG ORIOL J.M. (1994).- Madrepোরios Cretácicos de Catalunya.- [editor?]; 61 pp., 7 pls.; Barcelona.- FC&P 23-1.1, p. 77, ID=4173^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Spain, Catalonia^From the Cretaceous of Catalonia numerous new genera and species are described. They are assigned to the families Caryophylliidae, Clausastraeidae, Columnastraeidae, Cunnolitidae, Hemiporitidae, Heterocoeniidae, Latomeandridae, Meandridae, Micrabaciidae, Microsoleniidae, Month'valtiidae, Oculiniidae and Smilotrochidae. The new family Hydnohyllidae is introduced. The taxa described are: Meandrastrea vilellai n.sp.; Paramiliopsis abadi n.sp.; Heterocoenia subramosa n.sp.; Heterocoenia rosi n.sp.; Cyphastreopsis ramonae n.gen., n.sp.; Cyphastreopsis masrierai n.sp.; Caelumastrea scutulum n.gen., n.sp.; Trochocyathus ilerdensis n.sp.; Stephanaxophyllia montsecana n.sp.; Oculina simplex n.sp.; Diplocoenia nicolai n.sp.; Prohydnohyllia danieli n.sp.; Placocolumastrea magnei n.sp.; Placosmilia lloberensis n.sp.; Plesioovalastrea josepmariai n.gen., n.sp.; Phragmosgyra torallolensis n.gen., n.sp.; Paradeitocyathus ibericus n.gen, n.sp.; Clausastrea vilellai n.sp.; Clausastrea montsecana n.sp.; Microsolena explanata n.sp.; Latomeandra marmellensis n.sp.; Hydnoiseris hispanicus n.sp.; Micrabacia catalaunica n.sp.; Cunnolites llomparti n.sp.; Paracunnolites angelireigi n.sp.; Paracunnolites gasseri n.sp.; Paracunnolites viaderi n.sp.; Paracunnolites excentricus n.sp.; Paracunnolites gibber n.sp.^1";
- 1174 s[1171] = "BARON-SZABO R.C. (1994).- Palaeoecologie von nordspanischen Korallen des Urgon (Playa de Laga, Prov. Guernica, N-Spanien).- Berliner geowissenschaftliche Abhandlungen E13: 441-451.- FC&P 23-2.1, p. 48, ID=4385^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Spain N^The Playa de Laga, Guernica Province, Northern Spain (Vasco-Cantabrian) yielded corals from two limestones (KK I, KK II) within a carbonatic/clastic shallow water sequence. The outcropping lithological units are attributed to the Urgonian complex. Among the colonial corals there are no encrusting or sheet-like forms; among the solitary taxa discoidal or flat growth-types are lacking. Plocoid and phaceloid morphotypes dominate, to a lesser extent there are also thamnasterioid and meandroid forms. Special growth-patterns (e.g. "rolling stone"-type; coverage by numerous tiny polyps; subhemispherical forms) indicate adaptation to shallow water and soft bottom substrate. Microfacies studies of the lower coral limestone point to an assignment to categories I2 to III1 of the Energy-Index after Plumly et al. (1962). The upper coral limestone falls in category III1. The composition of the coral faunas, their growth-patterns, the conspicuous small size of individuals, as well as the microfacies, suggest deposition of both limestones in a lagoonal environment.^1";
- 1175 s[1172] = "REIG ORIOL J.M. (1994).- El genero Eugyra en el Cretácico

del nordeste español.- *Batallaria* 4: 31-36.- FC&P 24-1, p. 70, ID=4496Topic(s): taxonomy, new taxa; Scleractinia, Eugyra; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Spain NEFive species of the genus Eugyra are described from the Aptian of northeast Spain, three of which are new. The new species are: E. vivesi, E. cahadai and E. casanovai. This study deals also with E. arasensis Alloiteau and E. crassisepta Reig. D'Angelis (1905) cited from an outcrop in Garraf (Barcelona Prov.) the following taxa: E. coteau and E. pusilla pauciseptata, the last one being a new subspecies. After careful study of the specimens kept in the Geological Museum of the Seminary of Barcelona, it is concluded that E. pusilla pauciseptata does not belong to genus Eugyra. The specimens labelled as E. pusilla pauciseptata are considered by Reig (1991) as several species of genus Hydnothra. It is possible that E. coteau may be present in Garraf. The description [distinction] between Eugyra and Hydnothra is underlined. A principal distinctive feature is the form of the axial part of septa: tapering in Eugyra, and clubbing in Hydnothra.¹;

- 1176 s[1173] = "REIG ORIOL J.M. (1995).- *Madreporarios Cretácicos*.- published by the author, Barcelona; 62 pp., 7 pls [in Spanish, with English summary].- FC&P 24-1, p. 70, ID=4498Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: SpainIn this article we have once again dealt with Scleractinian corals from Cretaceous and we describe six new genera and thirty-one species originating from Upper Cretaceous of Lleida, Pre-Pyrenees in Catalonia and the Lower Cretaceous of Marmella (Tarragona) and Sant Martí Sarroca (Barcelona), both in Catalonia, too. In addition several species are described originating from Lower Cretaceous of Traiguera (Castello de la Plana), Valencia: *Holocystis cahadai* n.sp.; *Pseudostylocora simplex* n.gen., n.sp.; *Angelismilia magnei* n.sp.; *Haplohelix jorginae* n.sp., *Haplohelix serrai* n.sp.; *Strotogyra pirenaica* n.sp., *Metadeltocyathus montserratiae* n.gen., n.sp.; *Dactylosmilia torallosensis* n.sp.; *Astrogyropsis wellsi* n.gen., n.sp.; *Astrogyropsis vilellai* n.sp.; *Heterocoenia magna* n.sp.; *Patellocyathus princeps* n.gen., n.sp.; *Plesiofavia quadrans* n.sp.; *Cerionefocoenia iberica* n.gen., n.sp.; *Tethocyathus antiquus* n.sp.; *Cladangia villaltai* n.sp.; *Placosmilia plicata* n.sp.; *Stephanaxophyllia amati* n.sp.; *Oculina formosa* n.sp.; *Dimorphastraea vilellai* n.sp.; *Dimorphastraea parvissima* n.sp.; *Dimorpharaea catalaunica* n.sp.; *Actinaraea morycowai* n.sp.; *Meandraraea viaderi* n.sp.; *Diplaraea posae* n.sp.; *Asteroseris formosus* n.sp.; *Latomeandra minor* n.sp.; *Acrosmilia parva* n.sp.; *Actinacis minutus* n.sp.; *Barycoenia brevis* n.gen. n.sp.; *Baryphyllia gasseri* n.sp.¹;
- 1177 s[1174] = "VOIGT E., LAFRENTZ H.R. (1973).- *Serpuliden* (?) als Kommensalen in einer Stock-koralle aus dem englischen Ober-Albien.- *N. Jb. Geol. Pal. Monatshefte* 8: 501-511.- FC&P 3-1, p. 33, ID=4907Topic(s): scleractinian, serpulid commensalism; scleractinian, serpulid commensalism; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb; Geography: Britain, DevonshireA silicified coral fragment from Haldon Hill (Devonshire) of Upper Albian age contains numerous parallel (?) serpulid tubes, vertically imbedded within the coral colony. Each tube is coiled like a corkscrew and suggests commensalism between the corals and ?"serpula" *gyrolithiformis* n.sp. while symbiotic worms are known from corals both fossil and recent no similar case seems to be described in colonial scleractinians.¹;
- 1178 s[1175] = "LOSER H. (2008).- A new solitary coral genus of the suborder Heterocoeniina (Scleractinia) from the Aptian (Cretaceous) of Spain.- *Paläontologische Zeitschrift* 82, 3: 279-284.- FC&P 36, p. 94, ID=6509Topic(s): new genus; Scleractinia *Hexasmiliopsis*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: SpainThe new scleractinian coral genus *Hexasmiliopsis* is described on the basis of material from the

Early Aptian (Early Cretaceous) of Murcia (Spain). The new genus of the Heterocoeniidae family is characterised by its solitary growth form, a very strong main septum and the presence of apophysal septa. It is closely related to the genera Hexasmilia (phaceloid growth form), Rodinosmilia and Tiarasmilia (both without main septum). The genus is monospecific and represents only the type species, Hexasmiliopsis saldanai. [original abstract]^1";

1179 s[1176] = "LOSER H. (2008).- Remarks on the genus Hexasmilia (Scleractinia; Cretaceous) and description of a new species from the Aptian of Spain.- Neues Jahrbuch für Geologie und Palaeontologie, Abhandlungen 250, 1: 45-52. [revision] - FC&P 36, p. 94, ID=6510^Topic(s): new species; Scleractinia Hexasmilia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Spain^The morphological characteristics of the genus Hexasmilia de Fromentel, 1870 are analysed for the first time, using material from the type locality of the type species. The position of the genus within the Heterocoeniidae family (Heterocoeniina suborder) is confirmed. The genus differs from Heterocoenia by its phaceloid growth mode and the presence of apophysal septa. Up to now, Hexasmilia was believed a monospecific genus, but in addition to the type species, the genus includes the species Hexasmilia pachythecalia (Kuzmicheva, 1980), previously attributed to Hexapetalum. Hexasmilia elmari n.sp. from the Aptian of Spain is newly described and further material is presented in open nomenclature. The genus reaches from the Late Barremian to the Santonian. [original abstract]^1";

1180 s[1177] = "LOSER H., CASTRO J.M., NIETO L.M. (2010).- A small Albian coral fauna from the Sierra de Seguilí (Alicante province, SE Spain).- Neues Jahrbuch für Geologie und Palaeontologie, Abhandlungen 255, 3: 315-326.- FC&P 36, p. 98, ID=6517^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb; Geography: Spain, Alicante^From the Early to Middle Albian of south-eastern Spain (Prebetic) a small coral fauna is reported. Five species are described. Four species belonging to the Leptophyllidae, Montlivaltiidae, and Cyathophoridae families are quite common in outcrops of an Aptian to Early Cenomanian age, mainly in the central Tethys and western Hemisphere. One species belongs to the Hemiporitidae family and represents only the second colonial coral genus known from the Meandrinina suborder in the Early Cretaceous, the first being Phyllocoenia. A short account is therefore given of the suborder Meandrinina, its history, taxonomic composition and diversity through the time. Due to the low quality of the material and the availability of only one sample, the material is preliminarily assigned to the genus Lamnastrea Reig Oriol 1997, which is herein revised on the basis of thin sections obtained from the type of the type species. [original abstract]^1";

1181 s[1178] = "GOTZ S. (2003).- Biotic interactions and synecology in a Late Cretaceous coral-rudist biostrome of southeastern Spain.- Palaeogeography, Palaeoclimatology, Palaeoecology 193, 1: 125-138.- FC&P 33-2, p. 28, ID=1148^Topic(s): reefs, coral-rudist biostrome; Scleractinia, ecology; Systematics: Cnidaria Mollusca; Scleractinia Bivalvia; Stratigraphy: Cretaceous Camp; Geography: Spain SE^A coral-rudist biostrome exposed in Campanian limestones near the village of Tabernas de Valldigna in southeast Spain was analysed with respect to its palaeontology, sedimentology and palaeoecology. Special attention was given to possible evidence for synecological interactions between corals and rudists. Changes in the rudist shell accretion process are evident in some polished slabs and thin sections and resulted from in vivo contact with coral colonies. These unusual balcony-like shell protuberances exist where the rudist's commissure was in contact with corals. They likely represent defence-reactions of rudists against the coral cnidia. Nevertheless, the fossil record of these biotic

interactions is rare. This may be due to different growth-rates of rudists and corals, differing shape and size of interacting areas, or different life-spans. In consequence, the discrete 'window' of intergroup biotic interaction was small. Sedimentation and resuspension rates were high in the biostrome and corals only established pioneer associations under these unfavourable conditions. A higher diversity of corals is reached, however, when rudists are present. This increase in diversity resulted from the availability of additional ecological niches such as rudist-shell hard substrates and elevation above mobile sediment surface. Rudists on the other hand, received support from stabilisation of their shells through coral encrustation and framework building. In consequence, both groups benefited from their co-existence.^1";

1182 s[1179] = "REIG J.M., CALZADA S. (1993).- Nuevos datos sobre la fauna albiense de Traiguera (Castellon).- Cuadernos geol. Iberia 17: 371-392. [in Spanish, with English summary].- FC&P 23-1.1, p. 77, ID=4174^Topic(s): taxonomy; Scleractinia, gastropods; Systematics: Cnidaria Mollusca; Scleractinia Gastropoda; Stratigraphy: Cretaceous Alb; Geography: Spain NE^The Albian outcrop of Traiguera (Prov. Castellon, NE Spain), was studied by Canerot & Collignon (1981). They described Ammonites, Bivalves and Gastropods. Here new paleontological data about Scleractinia and other [!?] Gastropoda are reported. This fauna derives from Middle Albian beds. Two genera of Scleractinia and seven species of Gastropods are described. The genus Oonia reaches Albian age. The synonymy of Helicacanthus octavius is pointed out This species has a large distribution in the Tethyan Albian.^1";

1183 s[1180] = "ELIASOVA H. (1992).- Archaeocoeniina, Stylinina, Astraeoina, Meandriina et Siderastraeidae (Scleractiniales) du Cretace de Boheme (Cenomanien superieur - Turonien inferieur; Tchechoslovaquie).- Vestnik Ustredniho ustavu geologickeho 67, 6: 399-414.- FC&P 22-1, p. 42, ID=3406^Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic^Selected Scleractinian corals from the upper Cretaceous (Cenomanian - Turonian) from Bohemia (Czech Republic) are described. The paper includes a revision of types established by Reuss (1844/45) and Pocta (1887).^1";

1184 s[1181] = "HELM C. (1998).- Eine caryophylliide Koralle aus dem Campan von Höver ("Hannoversche Oberkreide").- Arbeitskreis Paläontologie Hannover 26: 101-104.- FC&P 29-1, p. 39, ID=7018^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Camp; Geography: Germany, Hannover^Über Korallen der campanzeitlichen Mergelkalk- und Kalkmergelfazies der Lehrter Westmulde (Misburg, Höver) gibt es bisher nur wenige Angaben. Korallen sind dort ausschließlich durch solitäre Formen vertreten. Am weitaus häufigsten findet sich Parasmilia, vor allem P. centralis Mantell (Frerichs 1992). Auch die Gattung Trochosmilia (Coelosmilia) ist vertreten (Niebuhr 1995: 49, Taf. 12/10). Beide Gattungen treten nach Niebuhr (1995:49) insbesondere im Untercampan und in der "Gebankten Kalkmergelfazies" der tieferen minor/polyplocum-Zone häufiger auf. Selten, und anscheinend in allen aufgeschlossenen Zonen vorkommend, ist die "Knopfkorallen"-Gattung Micrabacia (siehe Kruger 1983; Helm 1998). Micrabacia-Exemplare werden allerdings aufgrund ihrer geringen Gröβe meistens übersehen. Darüber hinaus nennen Ernst et al. (1997) Einzelfunde von Desmophyllum sp.; und zwar ausschließlich aus der "vulgaris"/stolleyi-Zone (frühes Obercampan) der Grube Teutonia Nord. Onchotrochus minima (Bolsche) konnte der Verfasser erst kürzlich in zahlreichen Exemplaren in der Grube Alemannia bergen (Helm 1998). Letztgenannte Funde stammen aus der lingua/quadrata-Zone, Aus demselben Niveau liegt ebenso ein nahezu vollständiges Exemplar einer weiteren Korallenart vor. Der Einzelfund wird nachfolgend beschrieben. [original introduction]^1";

- 1185 s[1182] = "ELIASOVA H. (1996).- Cunnolitides du Cretace de Boheme (Scleractiniaries, Fungiina) Cenomanien superieur-Turonien inferieur Republique tcheque.- Vestnik Ceskeho geologickeho Ustavu 71, 2: 127-134.- FC&P 26-1, p. 68, ID=3640Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Creraceous Basin^The study contains supplements to the diagnosis of the genus Leptophyllia Reuss 1854. Reuss (1854) has described representants of two genera under a single specific name, Leptophyllia clavata. One of them, with ornamentation on septa and ribs composed of grains (cf. Reuss 1854, PI. VI -figs. 3 and 6), was reassigned to the genus Acrosmilia d'Orbigny 1849, by M. Beauvais (1982). The second genus, whose species show penular ornamentation of radial septa (cf. Reuss 1854, PI. VI - figs. 4 and 5), remained anonymous till today. It is probable that the genus Leptophyllia and Acrosmilia which lasted for decades in the literature. Leptophyllia remains a valid genus. The species Leptophyllia cenomana Milne-Edwards & Haime 1849, and Leptophyllaraea svobodai sp. n. are systematically described. [slightly modified original abstract]^1";
- 1186 s[1183] = "ELIASOVA H. (1994).- Latomeandrides (Scleractiniaries) du Cretace superieur de Boheme (Republique Tcheque).- Vestnik Ceskeho geologickeho ustavu 69, 2: 1-17.- FC&P 23-2.1, p. 50, ID=4386Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Creraceous Basin^Scleractinian corals of the family Latomeandridae are systematically described from the Upper Cenomanian to Lower Turonian of the Bohemian Cretaceous Basin, including the description of one new genus and four new species. The paper revises particularly the works by Reuss (1845-46) and Pocta (1887).^1";
- 1187 s[1184] = "ELIASOVA H. (2004).- Coraux solitaires (Zooantharia, Microsolenina) du Crétacé de Bohème (Cénomanien supérieur, République Tcheque).- Bulletin of Geosciences 79, 3: 157-166.http://www.geology.cz/bulletin/contents/art2004.03.157.- FC&P 34, p. 55, ID=1275Topic(s): taxonomy; Scleractinia, Microsoleniina ; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: Czech Republic, Bohemian Massif^Nine solitary corals from the Late Cenomanian sediments of the Bohemian Cretaceous Basin are described and discussed in this paper. These corals are poorly known representatives of the genera Leptophyllia, Leptophyllaraea, and Neothecoseris, and constitute the new taxon Leptophyllia separata sp. n. (suborder Microsolenina, family Synaestraeidae). The species Dimorphastraea parallela (Reuss) has been transferred to the the genus Synaestraea. Microphyllia gemina sp. n., anew species of family Latomeandridae, is described. Some commentson the species Synhelia gibbosa (Siderastraeidae) of the Early Turonianage are added.^1";
- 1188 s[1185] = "ELIASOVA H. (1991).- Rhipidogyrides (Scleractiniaries) du Cretace de Boheme (Cenomanien superieur - Turonien inferieur, Tchechoslovaquie).- Vestnik Ustredniho ustavu geologickeho 66, 3: 163-172.- FC&P 21-2, p. 39, ID=3326Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic^Scleractinian rhipidogyrid corals are decribed from the Upper Cretaceous (Upper Cenomanian - Lower Turonian) of Bohemia (CSFR). The genus Placohelia Pocta 1887, which is placed in the family Rhipidogyridae, is revised. Two genera (Saxuligyra, Rhipidastraea) and one family (Rhipidastraeidae) are described as new.^1";
- 1189 s[1186] = "LELOUX J. (1999).- Numerical distribution of Santonian to Danian corals (Scleractinia, Octocorallia) of Southern Limburg, the Netherlands.- Geologie en Mijnbouw 78: 191-195.- FC&P 29-1, p. ???, ID=1483Topic(s): distribution; Scleractinia, Octocorallia; Systematics: Cnidaria; Scleractinia Octocorallia; Stratigraphy: Cretaceous U; Geography: Netherlands^1";

- 1190 s[1187] = "REITNER J. (1987).- Euzkadiella erenoensis n.gen. n.sp. ein Stromatopore mit spikulärem Skelett aus dem Oberapt von Ereno (Prov. Guipuzcoa, Nordspanien) und die systematische Stellung der Stromatoporen.- Paläontologische Zeitschrift 61: 203-222.- FC&P 17-1, p. 41, ID=2164^Topic(s): ; stroms, Euzkadiella; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Cretaceous Apt; Geography: Spain N^[The skeleton is composed of calcite spherulites and is crowded with spicule pseudomorphs. The new genus is placed in the demosponges on the basis of the spicules. Stromatoporoid-type basal skeletons are found in demosponges and therefore the subclass Stromatoporoidea does not exist as a true systematic unit. Comparison of the skeletons with Astrosclera and Calcifibrospongia are made.]^1";
- 1191 s[1188] = "NEUWEILER F., REITNER J. (1992).- Karbonatbanke mit Lithocodium aggregatum Elliot / Bacinella irregularis Radoicic. Palaeobathymetrie, Palaeoökologie und stratigraphisches Aequivalent zu thrombolithischen Mud Mounds.- Berliner geowissenschaftliche Abhandlungen E03: 273-293.- FC&P 21-2, p. 59, ID=3362^Topic(s): reefs Lithocodium; reefs, Lithocodium; Systematics: algae; Stratigraphy: Cretaceous Alb; Geography: Spain N^A section including Lithocodium / Bacinella boundstones with a thickness of up to 8m is reported from the Lower / Middle Albian of northern Spain. According to microfacies and sedimentological analyses the bathymetric position of the Lithocodium / Bacinella banks ranges from deeper subtidal to shallowest subtidal / intertidal conditions. The maximum depth is related to the photic zone, which itself is controlled by the amount of muddy suspension. The upper bathymetric limit is mechanically defined and corresponds to increased depositional energy (i.e. waves and tidal currents). Together with other algae and microbes Lithocodium / Bacinella is a major constituent of thrombolitic mud mounds (Gandara mound). In the context of mud mound genesis the functional role of Lithocodium / Bacinella includes baffling and binding, the production of micrite via the calcification inside of mucilagenous sheaths, and via intensive boring activities upon and inside of skeletal hard parts. The mass occurrence of Lithocodium / Bacinella with associated algae and microbes may be explained by a longer ranging eutrophism of the environment or by shifts in seawater carbonate alkalinity.^1";
- 1192 s[1189] = "HART M.B., JOHNSON K. (1984).- Ceriopora ramulosa (Michelin) an aberrant bryozoan from the Cenomanian of SE Devonshire.- Proceedings of the Ussher Society 6: 25-28.- FC&P 15-2, p. 43, ID=0744^Topic(s): Sclerospongiae ?; Porifera, Ceriopora; Systematics: Porifera; Stratigraphy: Cretaceous Cen; Geography: Britain, Devonshire^These large "bryozoans" are more appropriately classified as sclerosponges.^1";
- 1193 s[1190] = "GASSE W., GOCKE R., HILPERT K.-H. (1988).- Oberkretazische Spongien des NW-Muensterlandes - ein Ueberblick.- Beiträge zur elektronenmikroskopischen Direktabbildung von Oberflaechen 21: 385-396.- FC&P 18-1, p. 17, ID=2204^Topic(s): review; Porifera; Systematics: Porifera; Stratigraphy: Cretaceous U; Geography: Germany, Munsterland^^1";
- 1194 s[1191] = "ROSALES I., MEHL D., FERNANDEZ-MENDIOLA P.A., GARCIA-MONDEJAR J. (1995).- An unusual poriferan community in the Albian of Mares (north Spain): Palaeoenvironmental and tectonic implications.- Palaeogeography, Palaeoclimatology, Palaeoecology 119: 47-61.- FC&P 25-1, p. 54, ID=3072^Topic(s): assemblages, ecology, geography; Porifera communities; Systematics: Porifera; Stratigraphy: Cretaceous Alb; Geography: Spain N^The discovery of a well preserved Lower Cretaceous siliceous sponge community in Islares (Cantabria, north Spain) is documented. Lower Albian sponges crop-out in great abundance as a rich necrocoenosis embedded in a marly matrix. Demosponges make up

- the bulk of an 11 m thick succession, which is interpreted as having formed in a slope setting. The sponges show body preservation and were buried "in situ". All types of growth forms are present; they grew so tightly that they often fused secondarily. Shape polarity suggests steady low energy, predominantly easterly palaeocurrents. The main factor limiting the community seems to have been space competition. A preliminary documentation of the systematic palaeontology is presented: only taxa from the families Tetracladinidae, Megamorinidae and Corallistidae were found. Geometrical restoration of the platform-basin transect allows estimation of a depth of approximately 40 m for the lithistid sponges. Sea-level variations driven by block-faulting controlled the available accommodation space. Sponges occur just below and above a sequence boundary and are associated with a major tectonic event linked with the opening of the Bay of Biscay.^1";
- 1195 s[1192] = "HERM D., HOFLING R. (1994).- Kieselschwämme als Riflbildner in der Oberkreide des regenburger Golfes.- Jahresbericht 1993 und Mitteilungen Freunde Bayerische Staatsslg. Palaeont. Hist. geol. 22: 34-46. [in German].- FC&P 24-1, p. 74, ID=4505^Topic(s): reefs; Porifera; Systematics: Porifera; Stratigraphy: Cretaceous U; Geography: Germany, Regenburger Golf^1";
- 1196 s[1193] = "OLSZEWSKA-NEJBERT D., SWIERCZEWSKA-GLADYSZ E. (2009).- The phosphatized sponges from the Santonian (Upper Cretaceous) of the Wielkanoc Quarry (southern Poland) as a tool in stratigraphical and environmental studies.- Acta Geologica Polonica 59, 4: 483-504.http:// www.geo.uw.edu.pl/agp/index.html.- FC&P 36, p. 38, ID=6405^Topic(s): preservation, ecology; Porifera; Systematics: Porifera; Stratigraphy: Cretaceous Sant; Geography: Poland S^Phosphatized sponges from the Santonian of the Wielkanoc Quarry are represented by 11 species of Hexactinosida and 16 species of Lychniscosida. The taxonomic composition is most similar to the Micraster coranguinum Zone fauna (Middle Coniacian-Middle Santonian) of England. Three preservational groups of sponges are distinguished: "white", "beige" and "dark". They are infilled by phosphatized foraminiferal/foraminiferal-calcisphere wackestone and are contained in the marly calcareous inoceramid packstone. The sponges indicate a calm and relatively deep (> 100m) life environment. After burial, phosphatization and exhumation, the fossil sponges were redeposited in Upper Santonian strata. The "white" and "beige" groups were displaced a very short distance or represent only lag deposits. The rolled and crushed sponges of the "dark" group were exhumed and phosphatized more than once. They could be redeposited (reworked) nearly in the same place and/or transported from some longer distances (but not from outside of the Cracow Swell). The phosphatized wackestone infilling the sponges, and the phosphatized clasts, are the only remains of the deposits, which formed on the Cracow Swell after the late Early Coniacian but before the Late Santonian.^1";
- 1197 s[1194] = "BROMLEY R.G., KEDZIERSKI M., KOLODZIEJ B., UCHMAN A. (2009).- Large chambered sponge borings on a Late Cretaceous abrasion platform at Cracow, Poland.- Cretaceous Research 30: 149-160.- FC&P 36, p. 122, ID=6569^Topic(s): borings of; sponges, ichnology; Systematics: Porifera; Stratigraphy: Cretaceous U; Geography: Poland, Cracow^A new ichnospecies of the bioeroding sponge ichnogenus Entobia, i.e., E. cracoviensis isp. n., is distinguished by having a single, large, isolated chamber and radiating canals. It occurs in a rockground surface on a Turonian or Santonian abrasion platform that is cut into Oxfordian limestones as exposed at Bonarka, Cracow. The morphology of the new ichnospecies is compared with fossil and modern sponge boring morphologies. [abbreviated abstract]^1";
- 1198 s[1195] = "SWIERCZEWSKA-GLADYSZ E. (2006).- Late Cretaceous siliceous sponges from the Middle Vistula River Valley (Central Poland) and their

palaeoecological significance.- *Annales Societatis Geologorum Poloniae* 76, 3: 227-296. BUS7-0001-0058.- FC&P 35, p. 47, ID=2330^Topic(s): ecology; Porifera, Silicispongiae; Systematics: Porifera; Stratigraphy: Cretaceous U; Geography: Poland, Middle Vistula^Siliceous sponges are extremely abundant in the Upper Campanian-Maastrichtian opokas and marls of the Middle Vistula River Valley, situated in the western edge of the Lublin Basin, part of the Cretaceous German-Polish Basin. This is also the only one area in Poland where strata bearing the Late Maastrichtian sponges are exposed. The presented paper is a taxonomic revision of sponges collected from this region. Based both on existing and newly collected material comprising ca. 1750 specimens, 51 species have been described, including 18 belonging to the Hexactinosida, 15 - to the Lychniscosida and 18 - to Demospongiae. Among them, 28 have not been so far described from Poland. One new genus Varioporospongia, assigned to the family Ventriculitidae Smith and two new species Varioporospongia dariae sp. n. and Aphrocallistes calciformis sp. n. have been described. Comparison of sponge fauna from the area of Podilia, Crimea, Chernihov, and Donbas regions, as well as literature data point to the occurrence of species common in the analysed area and to the basins of Eastern and Western Europe. This in turn indicates good connections between particular basins of the European epicontinental sea during the Campanian-Maastrichtian. Analysis of the taxonomic composition of the Middle Vistula assemblage suggests that the occurring sponge fauna is transitional between the faunas of Eastern and Western Europe, what may be linked with the central location of the Lublin Basin in the European epicontinental sea. The gradual upward decrease of taxonomic diversity of the Hexactinosida and Lychniscosida in the studied succession points to gradual basin shallowing, what is consistent with the global regressive trend by the end of the Cretaceous. The domination of the Hexactinellida over the lithistids in terms of diversity and abundance in the entire section allows us to estimate the maximum depth of the Late Campanian basin as 200-250 m and to constrain the minimum depth during the latest Maastrichtian as about 100 m.^1";

1199 s[1196] = "SACHS O. (2002).- Der Diapir von Penacerrada (Sierra de Cantabria, Provinz Alava, Nordspanien). Stratigraphie, Fossilinhalt, Fazies, Tektonik und ein Impaktit-ähnlicher Diamikt vom Südrand des Diapirs.- *Documenta naturae* 147, pp i-ix + 1-172, 39 pls.- FC&P 33-2, p. 35, ID=1171^Topic(s): diapir associated; reefs; Systematics: ; Stratigraphy: Cretaceous Apt / Alb; Geography: Spain, Cantabrian Mts^The studied field area is located in northern Spain in the Álava province south of the town of Vitoria-Gasteiz. In this region the Tertiary Ebro Basin is accompanied by a small mountain chain named the Sierra de Cantabria. In this mountain chain the southern part of the Penacerrada salt diapir was mapped at 1:10000 within a 6.1 km² sized area. During the Lower Cretaceous, sedimentation was dominated by input from a deltaic shelf. After a first delta phase a small scale marine ingression occurred. During the first diapiric uprising of the Upper Triassic evaporites, a small patch reef complex was formed until lower Aptian times. With the break through of the diapir, coral growth stopped. The second delta phase (Reitner & Wiedmann 1982) started from Albian times with sand and conglomerate deposits. [from the abstract, shortened; some early Cretaceous corals are depicted; Loeser]^1";

1200 s[1197] = "WITTNER F., KAPLAN U., SCHEER U. (1999).- Zwei stratigraphisch bedeutsame Aufschlüsse im Santon (Oberkreide) des westlichen Ruhrgebietes.- *Dortmunder Beiträge zur Landeskunde* 33: 133-136.- FC&P 33-2, p. 39, ID=1182^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Cretaceous Sant; Geography: Germany NW^A locality close to the autobahn 2 close to Gelsenkirchen in the northwest Ruhr area (SW Münsterland) is reported under stratigraphic aspects. The Late Santon

- transgression could be correlated with the Recklinghaeuser Sandmergels on the base of the occurrence of the crinoid *Uintacrinus socialis* for the first time. In the fossil list, the coral *Micrabacia coronula* is mentioned from the base of the Late Santonian¹;
- 1201 s[1198] = "REITNER J. (1982).- Die Entwicklung von Inselplattformen und Diapir-Atollen im Alb des Basko-Kantabrikums (Nordspanien).- N. Jb. Geol. Palaeont. Abh. 165: 87-101.- FC&P 16-2, p. 27, ID=2064Topic(s): atolls; reefs; Systematics: ; Stratigraphy: Cretaceous Alb; Geography: Spain N¹";
- 1202 s[1199] = "KOCH T., REITNER J. (1989).- Aufbau und Genese eines Slope Mud Mounds aus dem Mittelalb von La Gandara (Nordspanien).- Berliner geowissenschaftliche Abhandlungen A106: 243-265.- FC&P 18-2, p. 45, ID=2502Topic(s): mud mounds; reefs; Systematics: ; Stratigraphy: Cretaceous Alb; Geography: Spain N¹Within the Urgonian facies from the middle Albian of La Gandara, micritic mud mounds occur on the slope of a carbonate platform constructed of rudists and scleractinian corals. The mud mounds are mainly constructed of floatstones and boundstones formed by lithistid sponges and crusts of cyanobacteria and other autotrophic organisms. The mound is located on the weakly dipping margin of the rudist carbonate platform. The margin of the rudist platform is built up by layers of platform debris which are fixed by *Bacinella irregularis* and *Lithocodium aggregatum*. The rudist carbonate platform progrades over the sponge mud mound. On the former southern margin of the mound the platform debris are settled by coralline algae, corals, stromatoporoid chaetetids and other sponges. On the northern part of the buried mound a deltaic environment was established. Reef biota are not observed within this particular environment.¹";
- 1203 s[1200] = "WILMSEN M. (1996).- Flecken-Riffe in den Kalken der Formacion Altamira" (Cenoman, Cobreces / Tonanes-Gebiet, Prov. Kantabriens, Nord-Spanien): Stratigraphische Position, fazielle Rahmenbedingungen und Sequenzstratigraphie.- Berliner geowissenschaftliche Abhandlungen E18: 353-373.- FC&P 25-2, p. 55, ID=3155Topic(s): stratigraphy, microfacies; reefs; Systematics: ; Stratigraphy: Cretaceous Cen; Geography: Spain, Cantabrian Mts¹Biohermal structures within the "Altamira formation" of a Lower Cenomanian age are described in view of their stratigraphy and microfacies. From the coral-sponge-rudistid patch reefs ten coral species of the genera *Paretaionia*, *Latiastrea*, *Pseudomyriophyllia*, *Actinaraea*, *Heterocoenia*, *Phyllocoenia*, *Dimorphastrea*, *Synastrea* and *Thamnarea* are reported.¹";
- 1204 s[1201] = "SCHOLLHORN E. (1998).- Geologie und Palaeontologie des Oberapt im Becken von Organya (Nordspanien).- Coral Research Bulletin 06: 1-139.- FC&P 27-2, p. 34, ID=3977Topic(s): geology, fossils; geology paleontology; Systematics: ; Stratigraphy: Cretaceous Apt; Geography: Spain N¹During the Late Mesozoic, thick successions of marls and limestones were sedimented. The basin was situated at the northern margin of the Iberian Peninsula and its formation was influenced mainly by the opening of the Bay of Biscaya in the northwest. During the Aptian homoclinal carbonatic ramps were developed with biohermal buildups mainly of rudists and corals. Parts of the ramps were preserved in the Boixols thrust sheet, which is situated in the central Catalanian Pyrenees, in the middle part of the Segre valley. Biostratigraphical indications showed that the carbonate ramps were of Upper Aptian age. Selected sections provided data on the sedimentology, microfacies and palaeontology of the ramp. The development of the facies and fossil assemblages is described. The formation of bioconstructions is discussed in detail. The association of corals and rudists shows clear distribution patterns of middle and inner ramp areas. whilst rudists lived on the shallowest parts of the ramp, corals preferred slightly deeper environments. In ranges of a changing sedimentation rate, corals and rudists settled in the same area. Corals show three types of

colonization: shallow coral meadows, lens-shaped biostromal buildups and coral banks (bound-and framestones). Their various morphotypes indicate a clear adaption to soft bottoms and changing sedimentation rates. The formation of bioconstructions is mainly due to regional factors, less to global ones. For two time spans (Senyis and Font Bordonera Formation), palaeogeographical reconstructions are provided. Based on the microfacies and the distribution of fossils, the sea level changes in the Basin of Organya are documented. [part of extensive summary]^1";

1205 s[1202] = "ZITT J., NEKVASILOVA O., BOSAK P., SVOBODOVA M., STEMPROKOVA-JTROVA D., (1997).- Rocky coast facies of the Cenomanian-Turonian boundary interval at Velim (Bohemian Cretaceous Basin, Czech Republic) 1.- Vestnik Ceskeho geologickeho ustavu 72, 1: 83-100.- FC&P 28-2, p. 31, ID=4026^Topic(s): facies, rocky shore; rocky coast facies; Systematics: ; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Bohemian Massif^The Velim locality represents a prime example of a nearshore sedimentary environment of the Cenomanian-Turonian boundary interval, in the Bohemian Cretaceous Basin. This extraordinary locality highlights the rocky-bottom morphology with its distinct lithology; carbonate microfacies; clay mineralogy; phosphates; and macrofaunal characteristics. Eight geological sections represented by depression fillings and rocky-bottom coverings, were studied. Micropaleontological studies, discussion and interpretations are included into a second paper (same journal).^1";

1206 s[1203] = "ZITT J., NEKVASILOVA O., HRADECKA L., SVOBODOVA M., ZARUBA B. (1999).- Rocky coast facies of the Unhost'-Tursko High (late Cenomanian-early Turonian, Bohemian Cretaceous Basin).- Acta Musei Nationalis Pragae (B) Historia Naturalis 54, 3/4: 79-116.- FC&P 28-2, p. 31, ID=4027^Topic(s): facies, rocky shore; rocky coast facies; Systematics: ; Stratigraphy: Cretaceous Cen Tur; Geography: Czech Republic, Bohemian Massif^A study of the Late Cretaceous rocky coast deposits of the Unhost'-Tursko High lying west-northeast of Prague is undertaken here. Based on the record of the rocky bottom characters, overlying sediments, phosphates, distribution of foraminifers, palynomorphs and macrofaunal taphocoenoses, two sedimentary settings each with its own phosphogenesis have been distinguished. The phosphogenic products are in part reworked and redeposited into younger beds. The older phosphatic remains are reported from the conglomerate in which the taphocoenose with Gisilina? rudolphi and Goniopygus cf. Menardi occurs. Parts of the two sections (Predboj and Cernovicky) characterized by this taphocoenose belong to the upper part of Metoicoceras geslinianum Zone and are discussed here in more detail. The younger phosphogenic episode is probably of the early Turonian age. Both the proper phosphogenic episodes and subsequent development of strata are correlated with the updip succession of the Pecinov Member and the Bila Hora Formation in the Pecinov quarry. The palaeoenvironments of principal intervals are briefly discussed to elucidate problems of phosphogenesis and distribution of faunal remains.^1";

1207 s[1204] = "REITNER J., WILMSEN M., NEUWEILER F. (1995).- Cenomanian / Turonian sponge microbialite deep-water hardground community (Liencrees, northern Spain).- Facies 32: 203-212.- FC&P 24-2, p. 104, ID=4617^Topic(s): hardground biocoenoses; hardground biocoenosis; Systematics: ; Stratigraphy: Cretaceous Cen / Tur; Geography: Spain N^A benthic community of sessile metazoans dominated by coralline sponges (e.g. Acanthochaetetes and Vaceletia) is found within a Cenomanian-Turonian deep water hardground succession cropping out at the coastal area of the Bay of Biscay near Santander. The characteristic K-strategic community exhibits a very close taxonomic relationship with modern communities from the Pacific realm, which allows for a comparison with Recent environmental conditions. The sponge community was associated

- with automicrites, microbialites, and thin mineralized limonitic biofilms. This biofacies is typically found in cryptic niches of reefal buildups (telescoping). The iron-rich biofilms had a strong electrochemical corrosive ability which explains the distinct submarine dissolution patterns. The hardground conditions are controlled, in part, by strong contour current regimes linked with extremely oligotrophic water masses. This system was established during the drowning of a distal carbonate ramp during the early Middle Cenomanian (A. rhotomagense zone). In the uppermost portion of the hardground (Late Cenomanian, upper R. cushmani zone) the coralline sponge community was replaced by thick limonitic stromatolites with numerous encrusting foraminifera (Miniacina-type) and by colonies of the problematic iron bacterium Frutexites. This event is accompanied by an increase of terrigenous influx and detrital glauconite, indicating a fundamental change in food web, and terminates the sponge dominated basal hardground interval. The hardground was buried by hemipelagic sediments during the Middle Turonian (upper R. kallesi zone).¹;
- 1208 s[1205] = "PASCAL A. (1974).- Un facies type de l'Urgonien cantabrique (Espagne): les micrites à Rudistes.- C. R. Acad. Sci. Paris 279, 1, sér. D: 57-40.- FC;P 3-2, p. 46, ID=4979Topic(s): carbonates facies; Urgonian facies; Systematics:; Stratigraphy: Cretaceous L; Geography: SpainLes micrites à Rudistes, fréquentes dans le Crétacé inférieur cantabrique, ont en commun la même matrice fine, leur homogénéité, leur richesse en organismes autochtones (présence de Madréporaires signalée). Les variations dans leur disposition (bancs ou lentilles), dans les associations d'organismes (présence de Madréporaires signalée), traduisent cependant des nuances à l'intérieur d'un type de milieu de sédimentation.";
- 1209 s[1206] = "NEUWEILER F. (1993).- Development of Albian Microbialites and Microbialite Reefs at Marginal Platform Areas of the Vasco-Cantabrian Basin (Soba reef Area, Cantabria, N. Spain).- Facies 29, 1-2: 231-250.- FC;P 23-1.1, p. 87, ID=6846Topic(s): carbonates microbial; microbialites; Systematics:; Stratigraphy: Cretaceous Alb; Geography: Spain, Cantabrian Mts^1";
- 1210 s[1207] = "LELOUX J. (2002).- Type specimens of Maastrichtian fossils in the National Museum of Natural History, Leiden.- NNM Technical Bulletin 4: 1-40; Leiden.http://www.repository.naturalis.nl/document/44314.- FC;P 32-2, p. 67, ID=7160Topic(s): type specimens; fossils; Systematics:; Stratigraphy: Cretaceous Maas; Geography: NetherlandsThe type specimens of Maastrichtian invertebrate fossils from Limburg, The Netherlands present in the National Museum of Natural History, Leiden, are listed. The Upper Cretaceous plant type specimens from Limburg of Miquel that were once part of the Staring collection present in the Palaeobotanical Museum of the Utrecht University are also included. Specimens of species described by Bosquet are also listed, since they possibly include type material. Short biographies of some of the important collectors and investigators are presented. [original abstract; presented are among others genera Montlivaltia, Montastrea, Dimorphastrea, Placosmia, Favia, Columastrea and Montipora]^1";
- 1211 s[1208] = "BUSQUETS P., ALVAREZ G., SOLE DE PORTA N., URQUIOLA M.M. (1994).- Low sedimentation rate aphotic shelves with Dendrophyllia and sponges - Bartonian of the easternmost sector of the Ebro Basin.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 265-273.- FC;P 23-1.1, p. 21, ID=4083Topic(s): aphotic shelf; corals, sponges; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: Eocene Bart; Geography: Spain, Ebro BasinLarge surfaces colonized by sponges occur among Bartonian shelf deposits (Vie Marl

Fm.) in the NE sector of the Ebro Basin. Sponges developed in the aphotic zone during periods of low sedimentation rate. These surfaces are overlain by bioclastic accumulations almost exclusively composed of remains of the coral, Dendrophyllia. These remains are in a calcareous mud, siliciclastic silt and sand matrix. Pollen/spore dinoflagellate ratios are similar both in Dendrophyllia packstones, wackestones and sandy deposits and in sponge-colonized surfaces. Dendrophyllia *in situ* are not preserved. We interpret these deposits as corresponding to the accumulation of Dendrophyllia corals periodically eroded from hard substrates by high density/low viscosity currents. The features of these deposits suggest them to be the deepest shelf environments recorded in this sector of the Ebro Basin.¹;

- 1212 s[1209] = "ALVAREZ PEREZ G. (1991).- Paleoecologia y sistematica de dos hidrozoos y tres octocorallarios del Eoceno superior de Igualada (Barcelona).- Revista Espanola de Paleontologia, extraordinario: 87-94.- FC&P 23-1.1, p. 72, ID=4155^Topic(s): ; Hydrozoa, Octocorallia; Systematics: Cnidaria; Hydrozoa Octocorallia; Stratigraphy: Eocene; Geography: Spain, Catalonia^Three octocorallian and two hydrozoan species from the reef facies of the Upper Eocene in the Catalan basin (Igalada area, Barcelona) are studied. Two new species (Corallium portai, Millepora renzii) are described.¹;
- 1213 s[1210] = "REICH M., SCHNEIDER S. (2000).- Seefedern-Reste (Octocorallia: Pennatulacea) aus dem Oligozän Brandenburgs.- Terra Nostra 2000, 3: 169.- FC&P 32-2, p. 68, ID=1409^Topic(s): ; Octocorallia, Pennatulacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Oligocene; Geography: Germany N^^1";
- 1214 s[1211] = "CHERCHI A., SCHRODER R. (1989).- Ueber Delheidia (Weigelts "schwimmender Korallenstock") aus dem Mittel-Oligozaen von Kothen, DDR.- Zeitschrift der geologischen Wissenschaften 17, 2: 195-198.- FC&P 18-1, p. 45, ID=2284^Topic(s): ; Scleractinia, Delheidia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Germany, Kothen^^1";
- 1215 s[1212] = "REIG ORIOL J.M. (1988).- Tres nuevos generos y varias especies de madreporarios fosiles procedentes del Eoceno del nordeste de Espana.- published by the author?; 16 pp. [in Spanish, with English summary].- FC&P 20-1.1, p. 63, ID=2835^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Spain NE^[Introduces, among other taxa, the new genus Patelospammia of the family Eupsammidae, from Eocene of Puebla de Montova (Huesca)]^1";
- 1216 s[1213] = "REIG ORIOL J.M. (1990).- Madreporarios Eocenicos de Castelloli y de la Sierra de Malvals.- published by the author?; 7 pp. [in Spanish, with English summary].- FC&P 20-1.1, p. 64, ID=2839^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Spain^The goal in that work on fossil corals has been the identification of new genus. The research has been directed towards the identification of genus, as much through the rectification of incorrectly classified individuals as well through the creation of generic entities genuinely new. The list of new taxa at the level of genus, genus and species, or species, is the following: Stylophoropsis vidali n.sp., Anoiasmilia gasseri n.sp., Cricocyathus subannulathus n.sp.; Cri-cocyathus magnei n.sp.; Actinacis gallemii n.sp., Actinacis gomezalbai n.sp., Montipora danieli n.sp., Pseudodictyaraea rosi n.gen., n.sp., Goniaraea sphaeroidalis n.sp., Morchellastrea n.gen., Morchellastrea calzadai n.sp., Faviomorpha n.gen.; Cladangia viaderi n.sp., Agathiphyllia llopartii n.sp., Hydroserratopora viai n.gen., n.sp., Astreopora gasseri n.sp., Citarastrea n.gen., n.sp., Monomyces abadi n.sp., Trochocyathus moralejai n.sp., Procladocora viai n.sp., Septastrea catalaunica n.sp., Colliastrea guillermoi n.gen., n.sp.¹;
- 1217 s[1214] = "REIG J.M. (1996).- Tres nuevas especies de madreporarios

- eocenicos.- Batalleria 6: 35-38.- FC&P 25-2, p. 54, ID=3153^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Spain^The following species of Scleractinia are described: Strotogyra llansanai n.sp., Tarbellastraea castriaulensis n.sp. and Reussangia ilderdensis n.sp. Two former came from Bartonian of Castellolli, (Barcelona Prov.). The third one was collected in Ilerdian beds of Tendruy (Lerida Prov.).^1";
- 1218 s[1215] = "REIG ORIOL J.M. (1992).- Descripcio d'una nova especie del genere Gyrophyllia d'Orbigny (Madreporari Terciari).- Bulletin Centre d'Est. Natura B-N. 2, 2: 137-139.- FC&P 22-2, p. 89, ID=3531^Topic(s): revision; Scleractinia, Gyrophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Spain, Catalonia^From the Eocene of Aren (Catalonia, Spain) a new species of the genus Gyrophyllia is described. The genus Gyrophyllia is compared to the genus Anisoria, which is also know from Spain and distinguished from the latter.^1";
- 1219 s[1216] = "ALVAREZ PEREZ G. (1997).- New Eocene coral species from Igualada (Barcelona, NE of Spain).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 297-304.- FC&P 26-2, p. 17, ID=3692^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Spain, Ebro Basin^At the margins of the Tertiary Ebro Basin an alluvial-fan complex is well developed with an abundant and diversified marine fauna. Good reef bodies were developed and adapted to deltaic lobe paleogeography, associated with deltaic system progradation. This paper describes five new upper Eocene coral species from Igualada, in the western margin of the Ebro basin. This coral fauna has been dated as Bartonian. The coral fauna is notably diverse, with 43 and 35 species. (Alvarez 1993). The new coral species from Igualada are: Stylocoenia aurelii, Acropora bancellsae, Hariosmilia gasserii, Hariosmilia viai (all these can be found in back reefs of patch- and fringing-reefs and Desmophyllum castellolense (anchored in the sediment and dominant in marls with scarce corals).^1";
- 1220 s[1217] = "STOLARSKI J. (1997).- Scleractinia.- In: Atlas of guide and characteristic fossils. Geology of Poland, vol. T3a. Paleogene, 217-220; vol. T3b. Neogene, 627-238, pls. 175-179.- FC&P 27-2, p. 15, ID=3895^Topic(s): atlas of fossils; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleogene; Geography: Poland^^1";
- 1221 s[1218] = "ALVAREZ PEREZ G., BUSQUETS P., SOLE DE PORTA N., DEL MAR URQUIOLA M., (1993).- Dendrophyllia reguanti n.sp.: una especie de Escleractinio del Bartoniano de Vic (Barcelona, Espana). Su significado en los ambientes de plataforma externa afotico.- Revista Española de Paleontología, extraordinario: 140-150.- FC&P 23-1.1, p. 73, ID=4157^Topic(s): ecology; Scleractinia, Dendrophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Spain, Ebro Basin^Bioclastic accumulations almost exclusively constituted by remains of the coral Dendrophyllia reguanti n.sp. are described from the Ebro Basin. Detailed sedimentological, palynological and micropaleontological data help to interpret the paleoenvironmental as well as sedimentary processes of the Dendrophyllia-accumulations.^1";
- 1222 s[1219] = "ELIASOVA H. (1974).- Hexacorallia et Octocorallia du Paléogène des Carpates externes.- Sbornik geol. Ved, Paleont. 16: 105-156.- FC&P 4-1, p. 43, ID=5164^Topic(s): taxonomy, ecology; Scleractinia, Octocorallia; Systematics: Cnidaria; Scleractinia Octocorallia; Stratigraphy: Eocene; Geography: Czech Republic, Moravia^Le premier travail synthétique sur la systématique et la paléocologie de la faune corallienne éocène des unités de Zdanice et de Zdounky des Carpates externes en Moravie méridionale est exposé. 19 genres (dont 7 nouveaux)

et 25 espèces (dont 14 nouvelles) sont décrits. Outre les descriptions habituelles, l'étude comprend également les caractéristiques de la structure histologique qui est peu connue chez les coraux paléogènes. La faune trouvée est évaluée du point de vue paléoécologique par rapport à la sédimentation dans la zone de flysch où, en général, les récoltes de faune sont très rares.¹;

- 1223 s[1220] = "BIRENHEIDE R. (1969).- A new stromatopore from the Rupel Clay of Germany.- In Stratigraphy and Palaeontology: Essays in Honour of D. Hill; Austr. Nat. Univ. Press, Canberra: 45-49.- FC&P 1-2, p. 24, ID=4695Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Oligocene; Geography: GermanyDescription of Globostroma flottante nov. gen. nov. sp. from the Middle Oligocene of Koethen (Middle Germany).¹";
- 1224 s[1221] = "BARTA-CALMUS S., CHEVALIER J.P. (1980).- Les Cnidaires de l'Auvergnien de Baron (Oise). Remarques stratigraphiques et paleoecologiques.- Bulletin d'Information des Geologues du Bassin de Paris 17, 2: 57-61.- FC&P 10-1, p. 22, ID=5854Topic(s): biostratigraphy, ecology; Cnidaria; Systematics: Cnidaria; Stratigraphy: Paleogene; Geography: France, Paris BasinEtude préliminaire de la plus riche faune de Coraux reconnue à ce jour dans le Nummulitique du Bassin de Paris. Liste des espèces.¹";
- 1225 s[1222] = "MULLER W.E.G., ZAHN R.K., MAIDHOF A. (1982).- Spongilla gutenbergiana n.sp., ein Susswasserschwamm aus dem Mittel-Eozan von Messel.- Senckenbergiana lethaea 83, 5-6: 465-472.- FC&P 13-1, p. 13, ID=0389Topic(s): ; Porifera Spongilla; Systematics: Porifera; Stratigraphy: Eocene; Geography: Germany, Messel[fresh-water sponge from Eocene of Messel, Germany]¹";
- 1226 s[1223] = "BRUCKNER A., JANUSSEN D., SCHNEIDER S. (2003).- Eine neue Poriferen-Fauna aus dem Septarienton (Oligozan, Rupelium) von Bad Freienwalde (NE-Deutschland) und der erste fossil erhaltene Vertreter der nicht-rigiden Hexactinelliden-Gattung Asconema.- Paläontologische Zeitschrift 77, 2: 263-280.- FC&P 33-1, p. 74, ID=7220Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Oligocene Rup; Geography: Germany NEThe hexactinellid sponge fauna, which is described here for the first time, originates from the "Septarienton" (Rupelium, Oligocene) of the "Kirchenziegeleigrube" near Bad Freienwalde (NE Germany). This fauna includes Lyssacinosa, as well as hexactinosan species, represented by Asconema oligocaena n.sp. (Hexasterophora, Lyssacinosa), the first occurrence of this genus from the fossil record, Aphrocallistes sp. (Hexasterophora, Hexactinosa), and Hyalonema sp. (Amphidiscophora). The three-dimensional, pyritic body-preservation of these non-rigid sponges suggests fossilization by rapid burial. Episodic mudflows are suggested to be responsible for this. The environment of deposition is suggested to have been a moderately shallow shelf, possibly in the distal range of a delta, characterised by relatively low sedimentation rates and no turbulence, except when disturbed by episodic mudflows. Low energy conditions are a precondition for the settlement of the described Hexactinellida. [original English abstract]¹";
- 1227 s[1224] = "BUSQUETS P., PISERA A., REGUANT S., SERRA-KIEL J. (1997).- Biofacies of the outer continental shelf in the Bartonian of the Eastern part of the Ebro Basin (NE Spain).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 249-256.- FC&P 26-2, p. 30, ID=3717Topic(s): biofacies; biofacies; Systematics: ; Stratigraphy: Eocene Bart; Geography: Spain, Ebro BasinThe thick marly deposits of the Bartonian of the Vie area are very rich in various benthic fauna. The analysis of this fauna, especially sponges, bryozoans and larger foraminifera allows these deposits to be interpreted as having been

laid down in a deep, outer shelf setting. It is possible to distinguish in these deposits two groups of biofacies, euphotic and aphotic respectively. The biofacies of the deep euphotic shelf are characterized by the alternation of marls and marly limestones, and include abundant siliceous sponges, but also larger foraminifera, brachiopods, bivalves and crustaceans among other fauna. The fauna of the marls is less diverse and is represented almost exclusively by bryozoans. The deposits of the aphotic shelf are composed of marls, and different biofacies may be distinguished: small bryozoan bioherm biofacies; bryozoan mud mound biofacies; siliceous sponge bed biofacies, and siliceous sponge and ahermatypic coral bed biofacies. The sponge fauna is dominated by hexactinosan and lychniscosan sponges, but other hexactinellids are also present. The detailed characteristics of other faunal elements common in particular biofacies and the interpretation of each biofacies are also discussed.¹¹;

1228 s[1225] = "CAHUZAC B., CHAIX C. (1996).- Structural and faunal evolution of Chattian - Miocene reefs and corals in western France and Northeastern Atlantic Ocean.- Concepts in Sedimentology and Paleontology 5: 105-127.- FC&P 34, p. 72, ID=1310Topic(s): reefs, Anthozoa; reefs; Systematics: ; Stratigraphy: Oligocene Miocene; Geography: France w^Chattian and Miocene coral reefs and faunas of the western France basins are reviewed within a paleogeographic context. Several new outcrops have been discovered, and extensive new and historic collections have been studied. Coral diversity was very high in the Aquitaine basin during the Chattian(1) (ca. 150 species) and a little less so during the Early Miocene (110 species); during these times, relatively small reefal buildups formed in a tropical climate. The Mid-Miocene coral faunas show a marked decrease in diversity (some 75 species in all), with "subreefal" facies in the Langhian of southwestern and northwestern France. The Upper Miocene fauna is even poorer (just about 20 species) and only known in northwestern France. Throughout the Miocene, the proportion of hermatypic taxa also decreased notably; in the coral assemblages, these species were strongly predominant from Chattian to Burdigalian. Afterwards, the ahermatypic taxa became progressively predominant. Other northeastern Atlantic areas (Portugal, Morocco) are also investigated. Some biogeographic data sketch the evolutionary trend of these coral communities. During the Chattian, an (eastern and western) Atlantic-Mediterranean bioprovince was differentiated. During the Early Miocene, this bioprovince was restricted to eastern Atlantic and Mediterranean. From the Mid-Miocene, the coral faunas were disconnected from the Mediterranean, and an impoverished eastern Atlantic bioprovince became established without real renewal. A comparison with Mediterranean reefs shows that maximum coral building took place within the Mid-Miocene in the Mediterranean realm (with continuation of reefs in the Late Miocene), instead of Chattian (and Early Burdigalian) as in the Atlantic areas. [original abstract]¹¹;

1229 s[1226] = "CHEVALIER J.P., NASCIMENTO A. (1975).- Notes sur la Geologie et la Paleontologie du Miocene de Lisbonne.- Boletin Soc. Geol. Portugal 19, 3: 247-281 [contribution a la connaissance des madreporiaires et des facies recifaux du Miocene Inferieur].- FC&P 6-1, p. 28, ID=0083Topic(s): geology, reefs; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Miocene; Geography: Portugal^A stratigraphic and paleontologic study of Miocene clays and limestones from three sections exposed in Lisbon describes 5 species of corals and a rich ostracod fauna. Tropical warm water 60m deep in a sheltered environment is proposed for the paleoenvironment¹¹;

1230 s[1227] = "VENNIN E., ROUCHY J.-M., CHAIX C., BLANC-VALLERON M.-M., CARUSO A., ROMMEVAU V. (2004).- Paleoeological constraints on reef-coral morphologies in the Tortonian-early Messinian of the Lorca Basin, SE Spain.- Palaeogeography, Palaeoclimatology, Palaeoecology

213: 163-185.- FC&P 33-2, p. 47, ID=1211^Topic(s):reefs ecology; reefs ecology; Systematics:Cnidaria; Anthozoa; Stratigraphy:Miocene Tort - Mess; Geography:Spain SE^Coral reefs represent on of the main carbonate factories that contributed to the control of stratigraphic architecture of carbonate platforms, which had a widespread development during the late Miocene in the paleo-Mediterranean area. The late Miocene reef complexes of the Lorca basin in southeastern Spain are composed of five mixed siliciclastic/carbonate units, middle Tortonian to early Messinian in age. The development of coral reefs probably ceased when the first evaporite event occurred in the basin centre in the early Messinian.^1";

1231 s[1228] = "GORKA M. (2002).- The Lower Badenian (Middle Miocene) coral patch reef at Grobie (southern slopes of the Holy Cross Mountains, Central Poland), its origin, development and demise.- Acta Geologica Polonica 52, 4: 521-534.- FC&P 32-1, p. 30, ID=1736^Topic(s):reefs, coral patch reef; reefs; Systematics:Cnidaria; Anthozoa; Stratigraphy:Miocene; Geography:Poland, Holy Cross^The Lower Badenian (Middle Miocene) patch reef of Grobie (southern slopes of the Holy Cross Mountains, Central Poland) is the only coral buildup in the Polish Miocene. It contains four hermatypic coral taxa, of which *Tarbellastraea reussiana* (Milne Edwards & Haime) and *Porites collegniana* Michelin dominate, whereas *Montastraea* sp. and *Stylophora reussiana* Montanaro-Gallitelli & Tacoli are subordinate. Wide diversities of colony shapes in this coral assemblage reflect natural development of the reefal structure and/or energy of environment; it varies from platy colonies (first settlers on an unconsolidated, pebble-strewn substrate), through branching, to massive forms. Wave activity was the most significant factor that influenced the reef core and distribution of associated facies. Disintegration and removal of reef core sediment led to the formation of crack crevices in freshly lithified deposits. Redeposited sediment formed the back-reef talus, where its composition varied with distance from the reef core. Reef-associated molluscs and decapods are abundant, the bivalves being represented by high-energy resistant borers (*Lithophaga* sp., *Jouannetia* (J.) *semicaudata* Des Moulins) and the squatter *Sphenia* (S.) *anatina* (Basterot). Among 21 decapod taxa, the species *Dardania hungaricus* (Lorenthey, 1929) is reported from Poland for the first time. Recognition of the diversity of facies and their distribution enabled reconstruction of Grobie area during the Early Badenian transgression. Slowing and/or stopping of sealevel rise encouraged development of the patch reef, while the subsequent, rapid transgression pulse caused its demise. Shortly after all reefal deposits were buried, diagenetic processes of neomorphisation and/or dissolution of aragonitic skeletal elements took place. This diagenesis could have continued till the Late Miocene and Pliocene, synchronously with rapid erosion that progressed since the Early Sarmatian until the Pleistocene glaciation.^1";

1232 s[1229] = "BALUK.W., PISERA A. (1984).- A new species of sea pens, *Graphularia transaedina* sp.n. from the Korytnica Clays (Middle Miocene, Holy Cross Mountains, Central Poland).- Acta Geologica Polonica 34, 3-4: 203-211.- FC&P 14-1, p. 23, ID=6613^Topic(s):Octocorallia *Graphularia*; Systematics:Cnidaria; Octocorallia; Stratigraphy:Miocene; Geography:Poland, Korytnica^^1";

1233 s[1230] = "CHAIX C., CAHUZAC B. (2005).- Les faunes de Scléractiniaires dans les faluns du Miocene moyen d'Atlantique-Est (bassins de la Loire et d'Aquitaine): paléobiogéographie et évolution climatique.- *Annales de Paléontologie* 91, 1: 33-72.- FC&P 34, p. 54, ID=1274^Topic(s):biogeography; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Miocene; Geography:France W^The Aquitaine and Loire basins show in the Middle Miocene numerous marine littoral deposits, often shelly or crag-type. Scleractinia are present, with a distribution and

an abundance very variable according to the outcrops. A detailed study of all the available material, recently or historically cropped, allowed to draw up an accurate faunal inventory and to compare the distribution of taxa between the two basins. Out of 90 taxa in total, 62 are known in Aquitaine and 48 in Loire. In the Aquitaine Langhian, when is noted an obvious reduction of hermatypic taxa in comparison with the rich regional Burdigalian faunas, the association includes 44 species (25 reef-building ones). In the Serravallian, the reef-building taxa become significantly scarce and are residual (9 taxa out of 33 in Aquitaine, present in levels belonging to the lower sequence of the stage, and located in sheltered internal parts of the south-Aquitaine and central-Aquitaine gulfs). In the Loire basin, the corals are quite diversified in the Pontilevian facies (19 reef-building taxa out of 48), and much scarcer in the Lublean and Savignean facies. Globally, the Scleractinia are few abundant everywhere. If in the two basins hermatypic taxa persisted in the Langhian, indicating subreefal type facies, varied factors have impeded permanently the settlement of reefs. In comparison with the Burdigalian, the thermic deterioration gradient, evidenced since the Chattian on the northeastern Atlantic frontage, had an important influence, and the Langhian waters were only subtropical. Other factors acted, at least locally, as the hydrodynamics, the bathymetry, the kind of substratum, the salinity proparte. Moreover, a latitudinal gradient between the two basins is evidenced by the global species richness and by the ratio of hermatypicity, created here and defined as the fraction of hermatypic taxa reported to ahermatypic ones from a same basin. This ratio can be used at generic level or specific one as well. In the Serravallian, when the diversity was everywhere obviously lower, the influence of the climatic gradient went on, together with other unfavourable conditions (often abundant detritic supplies, high hydrodynamics, spatial biocompetition). Diverse biogeographic and paleogeographic data are also reported. A vast East-Atlantic coralline bioprovince, settled as early as the Chattian with a dispersion center located in Aquitaine, was still active in the Middle Miocene, when large transgressions favoured the faunal exchanges; its history was to be completed at the end of this period.¹;

- 1234 s[1231] = "CHAIX C., CAHUZAC B., CLUZAUD A. (1999).- Les Scléactiniaires du Serravallien de Pessac (Nord-Aquitaine, France); approche paléoécologique.- *Geobios* 32, 1: 33-62.- FC&P 35, p. 72, ID=2380Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: France, AquitaineAn abundant fauna of Scleractinian corals has been studied from a Mid Miocene (Serravallian) new outcrop in the North Aquitaine Basin (SW France). It consists of more than fifteen taxa, with a noticeable diversification in the genera Flabellum and Balanophyllia; 10 of these taxa are new in the Miocene of the Aquitaine Basin. This is probably the richest assemblage of the French Serravallian. The name Flabellum montanaroe nov. nom. is set. Biogeographically, the studied locality bears witness to Northern, Atlantic and Mediterranean influences. The ahermatypic content of the fauna agrees with the observed general trends to a gradual disappearance of reefal species and to a cooling in neritic waters during the Mid Miocene along the Northeastern Atlantic frontage. In terms of paleoecology, the corals-rich deposit contains an abundant malacofauna, which indicates an infralittoral, euhaline, and fairly calm environment, with a marly-sandy substrate; this biofacies looks like the muddy facies of the modern assemblage SFBC ("Sables Fins Bien Calibrés").^1;
- 1235 s[1232] = "STOLARSKI J. (1992).- Transverse division in a Miocene scleractinian coral.- *Acta Palaeontologica Polonica* 36, 4: 413-426.- FC&P 21-2, p. 42, ID=3339Topic(s): transverse division; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene M; Geography: Poland, Holy

- Cross^The asexual reproduction in form of transverse division is well known from several solitary coral genera. On the base of a large population of such corals from the Middle Miocene of Korytnica the morphology stages of this kind of reproduction is given. A new genus, *Truncatocyathus*, closely related to *Peponocyathus*, is described with regard to its manner of reproduction.^1";
- 1236 s[1233] = "CABRERA L. (1973).- *Thegioastraea multisepta* (Sismonda), primer coralarío colonial del Mioceno marino de Montjuich (Barcelona).- *Acta Geologica Hispanica* 8, 5: 148-150.- FC&P 4-1, p. 42, ID=5160^Topic(s): ; Scleractinia, *Thegioastraea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Spain, Catalonia^^1";
- 1237 s[1234] = "HLADIL J. (????).- *Diversita sestictetnych Korálu z nekterých lokalit Badenských sedimentů v Karpatské Přebhlubni na Morave* [Diversity of hexacorals of some Badenian locations of Carpathian foredeep in Moravia].- *Rev. Univers. J.E. Purkyne v Brne* 75, 1: 49-59.- FC&P 4-1, p. 43, ID=5167^Topic(s): diversity; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Bad; Geography: Czech Republic, Moravia^^1";
- 1238 s[1235] = "WEYER D. (1974).- *Tortoflabellum Squires 1958* (Scleractinia) in Miozaen von Borac (Tertiaer der West Karpaten, CSSR).- *Zeitschrift der geologischen Wissenschaften* 02, 4: 507-515.- FC&P 4-2, p. 54, ID=5250^Topic(s): ; Scleractinia, *Tortoflabellum*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Czech Republic, Moravia^Tortoflabellum sp. occurs in the Lanzendorf series ("Lower Tortonian") of Borac near Brno (Moravia). This species has a prominent tabularium, hitherto not known from any member of the family Flabellidae. Tabulae are formed by centripetal growth within interseptal chambers.^1";
- 1239 s[1236] = "HLADIL J. (1976).- *Sesticetni koráli badenu karpatske prehlubne na Morave*. [Badenian Scleractinia of the Capathian foredeep in Moravia; in Czech].- Purkyne University at Brno, unpublished M.Sc. Thesis.- FC&P 8-1, p. 12, ID=5688^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Bad; Geography: Czech Republic, Moravia^^1";
- 1240 s[1237] = "BALUK W., RADWANSKI A. (1984).- The regeneration in some caryophyllid corals from the Korytnica Clays (Middle Miocene; Holy Cross Mountains, Central Poland).- *Acta Geologica Polonica* 34, 3-4: 213-221.- FC&P 14-2, p. 39, ID=0924^Topic(s): regeneration; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Poland, Holy Cross^A common case of regeneration from very small fragments (composed even of those containing at least one entoseptum) is reported in some scleractinian corals coming from a specific, solitary-coral-dominated community of the near-to-shore facies of the Korytnica Clays (Middle Miocene, Badenian; Holy Cross Mountains, Central Poland). It concerns the specifically indeterminable caryophyllids, some individuals of which underwent regeneration twice. The regeneration itself (growth from tiny fragments of the primary individual) is discussed in its relation to the reparation (a repair of an injury within the animal's skeleton). The whole population of the regenerated caryophyllids, which dominated a near-to-shore community within the Korytnica Basin, characterizes by the size distinctly smaller than that of normal individuals. This event is compared to that recognized in some populations of the present-day and ancient free-living bryozoans, those inhabiting the Korytnica Basin including. In both these groups (caryophyllid corals, and free-living bryozoans) the regeneration is discussed as an important mean of some selected reproduction of these species, and as an immanent biological feature of some selected taxa. (Original summary)^1";
- 1241 s[1238] = "STOLARSKI J. (1991).- Miocene Scleractinia from Holy Cross

- Mountains, Poland; Part 1. Caryophylliidae, Flabellidae, Dendrophylliidae and Micrabaciidae.- Acta Geologica Polonica 41, 1: 37-67.- FC&P 21-2, p. 41, ID=3338^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Poland, Holy Cross^An ahermatypic coral fauna from the Middle Miocene of central Poland is recognized. 14 species representing 12 genera are described and illustrated. The paper includes a partial revision of Dembinska-Rozkowska (1932).^1";
- 1242 s[1239] = "BRAGA J.C., MARTIN J.M., RIDING R. (1996).- Internal structure of segment reefs: Halimeda algal mounds in the Mediterranean Miocene.- Geology, 10, 347-361.- FC&P 27-1, p. 8, ID=3780^Topic(s): Halimeda bioherms; reefs; Systematics: algae; Stratigraphy: Miocene; Geography: Spain SE^We report from the Messinian (Upper Miocene) of the Sorbas Basin in SE Spain the only known Halimeda bioherms older than Holocene. Their internal structure consists of Halimeda segments early lithified by microbial micrite and later submarine cements. Corals (Porites) only constitute a small proportion of components.^1";
- 1243 s[1240] = "PISERA A. (1985).- Paleoecology and lithogenesis of the Middle Miocene (Badenian) algal-vermetid reefs from the Roztocze Hills, southeastern Poland.- Acta Geologica Polonica 35, 1-2: 89-155.- FC&P 14-2, p. 23, ID=0941^Topic(s): reefs ecology; reefs ecology; Systematics: algae Mollusca; Stratigraphy: Miocene; Geography: Poland, Roztocze^The reefs are built mostly of laminar crusts of coralline algae, shells of sessile gastropods Petaloconchus intortus (Lamarck), and of detrital internal sediments. The secondary encrusters of a reef frame are bryozoans, serpulids, foraminifers and cirripedes Verruca. Seven species of coralline algae are common among 21 species found in reef deposits. Corallines show most species in common with the Ukraine and only some with the Vienna Basin.^1";
- 1244 s[1241] = "MARTIN J.M., BRAGA J.C., RIDING R. (1997).- Late Miocene Halimeda algal-microbial segment reefs in the marginal Mediterranean Sorbas Basin, Spain.- Sedimentology 44: 441-456.- FC&P 27-1, p. 9, ID=3784^Topic(s): reefs, history; reefs algal-microbial; Systematics: algae Monera; Stratigraphy: Miocene U; Geography: Spain, Sorbas Basin^This is a description of the environmental setting and stratigraphic evolution of the Halimeda reefs of the Sorbas Basin. These reef grew on calcarenites and silts on the shelf break and slope of the southeastern margin of the basin.^1";
- 1245 s[1242] = "BRIMAUD C., VACHARD D. (1985).- Indications paleoecologiques fournies par les spongiaires du Miocene superieur d'Espagne.- Bulletin du Museum national d'histoire naturelle Paris ser. 4, C, 7: 3-11.- FC&P 18-2, p. 47, ID=2512^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Miocene U; Geography: Spain^^1";
- 1246 s[1243] = "BRIMAUD C., VACHARD D. (1986).- Les spongiaires siliceux du Tortonien des B'tiques (Mioc'ne de l'Espagne du Sud): esp'ces nouvelles ou peu connues. 1 Choristides et Lithistides.- Bulletin du Museum national d'histoire naturelle Paris ser. 4, C, 3: 293-341.- FC&P 18-2, p. 47, ID=2513^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Miocene Tort; Geography: Spain S^^1";
- 1247 s[1244] = "ALI O.E. (1977).- Growth dynamic and stratigraphy of Sant Pau d'Ordal Miocene patch-reef (Prov. of Barcelona, Catalonia).- Bureau Recherches Geologiques et Minieres Memoir 89: 367-377 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P ???, p. , ID=0077^Topic(s): biology, geology; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Spain, Catalonia^^1";
- 1248 s[1245] = "BARRIER P., ZIBROWIUS H., LOZOUET P., MONTENAT C., OTT

d'ESTEVOU P., SERRANO F., SOUDET H.-J., (1992).- Une faune de fond dur du bathyal superieur dans le Miocene terminal des Cordilleres Betiques (Carboneras, SE Espagne).- Mesogee [Bulletin du Museum d'histoire naturelle de Marseille] 51: 3-13.- FC&P 21-1.1, p. 40, ID=3210^Topic(s): benthos; bathial benthos; Systematics: ; Stratigraphy: Miocene Mess; Geography: Spain, Betic Cordillera^The Carboneras area is located at the NE of the Miocene volcanic massif of Cabo de Gata. The "red breccia" is an olistostrome that resulted from mass sliding, in bathyal environment, of a large volcanic structure, in which fissures opened by traction. The fissures preserved an upper bathyal hard ground fauna, and foraminiferans indicating a Messinian age. The fauna is remarkable by its diversity, comprising notably calcified sponges, stylasterids, scleractinians, gorgonians (Isididae, Primnoidae, Corallium), various gastropods (some of them living associated with corals), stalked crinoids. Various genera that seem to be faunal elements from Tethys, no longer exist in the Mediterranean and the NE Atlantic. With at least 14 species in at least 8 genera, the stylasterids from Carboneras are the most diversified fossil assemblage presently known of this group, and comparable to Recent upper bathyal faunas of the Indo-Pacific (e.g. of New Caledonia). Three types of stylasterid symbionts, or their traces, have been recognized: the gastropod Pedicularia, a polynoid polychaete and a siphonostomatoid copepod, the two latter causing characteristic galls. Polynoid galls have also been found on Corallium, and an ascothoracid gall (of the Isidascus type) on an isidid gorgonian (the latter from the marls of La Atalaya de Mazarron, a deposit of similar age).^1";

1249 s[1246] = "BRAGA J.C., JIMENEZ A.P., MARTIN J.M., RIVAS P. (1996).- Coral-oyster, Middle Miocene reefs (Murchas, Granada, S Spain).- In: Franseen E., Esteban M., Ward B. & Rouchy J.M. (eds): Models for Carbonate Stratigraphy from Miocene Reef Complexes of the Mediterranean Regions; SEPM, Tulsa: 131-139.- FC&P 27-1, p. 8, ID=3781^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Spain, Granada^we describe the composition, structure, and sedimentary setting of Middle Miocene reefs in southern Spain. They are small patches made up of corals (mostly Heliastrea) and oysters (Hyotissa) which grew seaward of bioclastic bars on the first platform developed around the emergent Betic reliefs.^1";

1250 s[1247] = "BRAGA J.C., MARTIN J.M. (1996).- Geometries of reef advance in response to relative sea-level changes in a Messinian (uppermost Miocene) fringing reef (Cariatiz reef, Sorbas Basin, SE Spain).- Sedimentary Geology 107: 61-81.- FC&P 27-1, p. 9, ID=3783^Topic(s): cyclicality; reefs; Systematics: ; Stratigraphy: Miocene Mess; Geography: Spain SE^As suggested by the title, we report the changes in depositional geometries of a prograding Messinian fringing reef in response to sea-level oscillations. Two orders of sea-level cyclicality are reflected in upward and downward shifts of reef facies. During lowstands no reef growth took place. Deduced sea-level changes are of magnitudes similar to the ones recognised in the Quaternary.^1";

1251 s[1248] = "ALVAREZ G., BUSQUETS P., PERMANYER A., VILAPLANA M. (1977).- Growth dynamics and stratigraphy of Sant Pau d'Ordal Miocene patch-reef (Prov. of Barcelona, Catalonia).- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 367-377.- FC&P 6-1, p. 27, ID=5522^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Spain, Catalonia^^1";

1252 s[1249] = "ESTEBAN M., GINER J. (1980).- Messinian coral reefs and erosion surfaces in Cabo de Gata (Almeria, SE Spain).- Acta Geologica Hispanica 15, 4: 97-104.- FC&P 10-2, p. 78, ID=6108^Topic(s): geology; reefs; Systematics: ;

- Stratigraphy: Miocene Mess; Geography: Spain SE^Excellent exposures in Cabo de Gata area reveal two major Messinian depositional sequences, the Reef Complex and the Terminal Complex, which are overlying a complicated erosional morphology with several terraces on the volcanic basement. A typical Porites reef developed on the 200m platform and originated extensive fore slope deposits adosed to the terraced volcanic basement. This Reef Complex is severely truncated by an important erosion surface, which also presents a terraced morphology (80, 160, 220m) and follows similar trends than the erosion surface on the volcanic basement. This intra-Messinian erosion surface is onlaped by the Terminal Complex, consisting in alternating layers of oolites, stromatolites and Porites thickets. Hypothetically, layers of evaporites could had been associated to the stromatolites in the lower section of the Terminal Complex before the pre-Pliocene erosional episode. [original summary]^1";
- 1253 s[1250] = "TABERNER C., SANTISTEBAN C. (1983).- Shallow marine and continental conglomerates derived from coral reef complexes after desiccation of a deep marine basin: the Tortonian Messinian deposits of the Fortuna basin, SE Spain.- Journal of the Geol. Soc. of London 140, 3: 401-411.- FC&P 12-2, p. 20, ID=6204^Topic(s): reefs; conglomerates, reef complexes; Systematics: ; Stratigraphy: Miocene U; Geography: Spain SE^^1";
- 1254 s[1251] = "HELM C., DROGE M. (2000).- Flabellum vaticani Ponzi - Erstnachweis aus Twistringen.- Fossilien 2: 105-107. [??? nr].- FC&P 29-1, p. ???, ID=1479^Topic(s): Scleractinia, Flabellum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent?; Geography: Germany N, Twistringen^^1";
- 1255 s[1252] = "CRISTOBO F.J., RIOS P., URGORRI V. (1999).- Remarks on the status of Myxilla (Porifera: Poecilosclerida) on the Galician coast (NW Iberian Peninsula).- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 101-124.- FC&P 28-2, p. 8, ID=6942^Topic(s): systematics; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Spain^^1";
- 1256 s[1253] = "GUGEL J. (1999).- Ecological adaptations of a freshwater sponge association in the River Rhine, Germany (Porifera: Spongillidae).- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 215-225.- FC&P 28-2, p. 8, ID=6953^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Germany, Rhine^^1";
- 1257 s[1254] = "PEREJON A. (1984).- Revision de la coleccion de Arqueociatos del Museo del Instituto Geologico y Minero de Espana.- Boletin Geologico y Minero 95, 4: 337-353. [revision] - FC&P 14-1, p. 59, ID=6623^Topic(s): revision; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: Spain^^1";
- 1258 s[1255] = "HERGARTEN B. (1988).- Conularien in Deutschland.- Aufschluss 39: 321-356.- FC&P 17-2, p. 39, ID=2202^Topic(s): distribution; Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: ; Geography: Germany^As an introduction general information is given about the species of Conulata especially about the stratigraphic spread of the different species. The structure of the Conulata is explained and its importance for the systematics is shown. Finally a presentation of the Conulata found in Germany registered stratigraphically is given.^1";
- 1259 s[1256] = "SHURYGINA M.V. (1992).- O cheshujchatoy goloteke rugoz Urala [on sqamous holotheca in Rugosa of the Urals].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatoporoids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3376^Topic(s): structures holotheca; Rugosa; Systematics:

- Cnidaria; Rugosa; Stratigraphy: ; Geography: Russia, Urals^^1";
- 1260 s[1257] = "IVANOVSKIY A.B., SHURYGINA M.V. (1975).- A revision of the Rugose Corals of Ural Mts.- Nauka, Novosibirsk; 44 pp.- FC&P 4-2, p. 57, ID=5272^Topic(s): ; revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Russia, Urals^After revision of collections of T.T. Chernyshev (1885, 1895), E.D. Soshkina (1957) and T.V. Nikolaeva (1949) and studying of numerous topotypes, the systematic position and stratigraphical distribution of many Silurian and Devonian Rugose Corals from Ural is revised. Neotypes for some corals, described by Lonsdale (1845), and other paleontologists are chosen.^1";
- 1261 s[1258] = "LELOUX J. (1998).- Korallen.- Grondboor & Hamer 52, 4/5: 106-107 [Fossielen van de St. Pietersberg].- FC&P 29-1, p. ???, ID=1482^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: Netherlands^^1";
- 1262 s[1259] = "HELM C., ELBRACHT J. (1998).- Oberjurassische Korallen-Geschiebe (Thamnasteria concinna) aus einer Kies-/Sandgrube bei Freden/Leine (Leinebergland).- Mitteilungen aus dem Geologischen Institut der Universitat Hannover 38: 115-121.- FC&P 27-2, p. 58, ID=3921^Topic(s): Jurassic U; Scleractinia, Thamnasteria; Systematics: Cnidaria; Scleractinia; Stratigraphy: Quaternary erratics; Geography: Germany N^Upper-Jurassic geschiebe-corals (Thamnasteria concinna) from a gravel-/sandpit at Freden/Leine are described. They are slightly bored by bivalves (Gastrochaenolites) and worms (Trypanites). Some oysters (Nanogyra) encrusted the surface. The corals grew as massiv head-like (bulbous) colonies in a "multicolumnar growth form"; with a ragged outline. Similar shaped colonies are reported from East-European Upper Jurassic (Pomerania), but are never reported from NW-Germany. Beds in which the coral-geschiebe were found - Drenthe stage in age - contain a high content of local geschiebe material. The low degree of abrasion of the coral-geschiebe indicates short glacial transportation. It is possible, that the drift material originates from the Heersumer Schichten from Selter to Thiister Berg. [modified abstract]^1";
- 1263 s[1260] = "BOGOYAVLENSKAYA O.V., FYODOROV M.V. (1984).- Analiz Amfiporovykh soobshchestv v boksitonosnykh otlozheniyakh Urala [analysis of Amphipora assemblages in bauxite-bearing strata of the Urals].- Trudy Sessiyi vsesoyuznogo Paleontologicheskogo Obshchestva 26: 125-130.- FC&P 15-2, p. 43, ID=0740^Topic(s): ; Stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: Russia, Urals^^1";
- 1264 s[1261] = "BOGOYAVLENSKAYA O.V. (1985).- Usloviya nakhozhdeniya fauny v mednokolchedannykh (?) mestorozhdeniyakh Urala [Conditions of occurrence of the fauna in the massive sulfide deposits of the Urals].- Geologiya rudnykh mestorozhdeniy 27, 1: 114-117; see also: Geological Review 27, 5: 611-614.- FC&P 17-1, p. 39, ID=2151^Topic(s): ; Stroms, Anthozoa; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: ; Geography: Russia, Urals^[stromatoporoids and corals have been replaced by massive sulfide ores]^1";
- 1265 s[1262] = "BULTYNCK P., COEN-AUBERT M., DEJONGHE L., GODEFROID J., HANCE L., LACROIX D., PREAT A., STAINIER P., STEEMANS P. STREEL M., TOURNEUR F., (1991).- Les Formations du Devonien moyen de la Belgique.- Memoires pour servir a l'Explication des Cartes Geologiques et Minieres de la Belgique 30: 1-106.- FC&P 20-2, p. 30, ID=2889^Topic(s): lithostratigraphy; Systematics: ; Stratigraphy: ; Geography: Ardennes^The authors present proposals to standardize the subdivision into formations of the Middle Devonian strata of the Dinant Synclinorium, the Namur Synclinorium and the Vesdre Massif. They recognize ten formal formations, and one informal, in the Couvinian (uppermost Emsian and Eifelian) and the

Givetian strata of the southern flank of the Dinant Synclinorium. These formations are from older to younger : the St.-Joseph Fm, the Eau Noire Fm, the Couvin Fm, the Jemelle Fm, the Lomme Fm, the "X" Formation at Wellin, the Hanonet Fm, the Trois-Fontaines Fm, the Terres d'Hauris Fm, the Mont d'Hauris Fm and the Fromelennes Fm. The Middle Devonian succession of the northern flank of the Dinant Synclinorium and of the southern flank of the Namur Synclinorium comprises the Riviere Fm, the Nevremont Fm and the Le Roux Fm. On the northern flank of the Namur Synclinorium, the Middle Devonian is represented by the Bois de Bordeaux Fm. In the Middle Devonian succession of the Vesdre Massif, the authors recognize the Vicht Fm, the Pepinster Fm, the Nevremont Fm and the Le Roux Fm. The authors describe and figure a stratotype and, in some cases, an other reference section for each formation. Lateral changes and age of the formations are also discussed.^1";

- 1266 s[1263] = "BOULVAIN F., COEN-AUBERT M., DUMOULIN V., MARION J.M. (1994).- La Formation de Philippeville a Merlemont: contexte structural, comparaison avec le stratotype et paleoenvironnements.- Service geologique de Belgique, Professional Paper 1994, 2, 269: 30 pp.- FC&P 25-1, p. 2, ID=2982^Topic(s): lithostratigraphy; Systematics: ; Stratigraphy: ; Geography: Ardennes^After considering the dolomite quarry of Merlemont North in its structural and stratigraphic context, palaeontological (rugose corals) and sedimentological observations are presented. A palaeoenvironmental reconstruction is proposed and the section is compared to the stratotype of the Philippeville Formation.^1";
- 1267 s[1264] = "BOULVAIN F., COEN-AUBERT M., MANSY J.L., PROUST J.N., TOURNEUR F. (1995).- Le Givetien en Avesnois (Nord de la France) : paleoenvironnements et implications paleogeographiques.- Bulletin de la Societe belge de Geologie 103, 1-2: 171-203.- FC&P 25-1, p. 3, ID=2983^Topic(s): geology; Systematics: ; Stratigraphy: ; Geography: France, Avesnois^The Glageon quarry in northern France is situated west of the classical Givetian outcrops on the southern margin of the Dinant Synclinorium. Because of its location and the excellent outcrop, a detailed sedimentological and paleontological study has been carried out. Sixteen carbonate microfacies, ranging from open marine to supratidal environments have been described. The Terres d'Hauris, Mont d'Hauris and Fomelennes Formations are relatively similar to their equivalents from the Givet type area. However, the Trois-Fontaines Formation is partly different, due to the absence of a lagoonal complex above the first biostrome. Sequential analysis shows that sedimentation is controlled by three orders of paleobathymetric cycles. The diagenetic sequence has been established. The burial diagenesis is very important, after a brief distal meteoric cementation phase.^1";
- 1268 s[1265] = "BOULVAIN F., COEN M., COEN-AUBERT M., BULTYNCK P., CASIER J.G., DEJONGHE L., TOURNER F., (1993).- Les formations Frasnienues du Massif de Philippeville.- Service geologique de Belgique, Professional Paper 259; 37 pp.- FC&P 22-2, p. 24, ID=3474^Topic(s): lithostratigraphy; Systematics: ; Stratigraphy: ; Geography: Ardennes^[lithostratigraphical framework of the Frasnian of the Phillipeville Massif, Dinant Synclinorium, Southern Belgium, with description of the succession of the rugose and tabulate coral faunas]^1";
- 1269 s[1266] = "BOULVAIN F., COEN-AUBERT M., BULTYNCK P., CASIER J.G., DEJONGHE L., TOURNEUR F. (1993).- Les Formations Frasnienues du Massif de Philippeville.- Service Geologique de Belgique, Professional Paper 259, 1: 2-37.- FC&P 22-2, p. 78, ID=3491^Topic(s): lithostratigraphy; Systematics: ; Stratigraphy: ; Geography: Ardennes^^1";
- 1270 s[1267] = "CALZADA S., URQUIOLA M.M. (1992).- Catalogo de los holotipos conservados en el Museo Geologico del Seminario de Barcelona.- Trabajos del Museo Geologico del Seminario 223; 127 pp.- FC&P 22-2,"

- p. 88, ID=3524^Topic(s): type specimens; fossils; Systematics: ; Stratigraphy: ; Geography: Spain^The rich illustrated catalogue lists 337 holotypes kept in the Geological Museum of the Seminary of Barcelona. Among other fossils 68 Cretaceous and 20 Eocene coral species are reported from this collection. They all belong to species established by Alloiteau, Batailler and Reig Oriol.^1";
- 1271 s[1268] = "BETZLER C., BRACHERT T.C., BRAGA J.C., MARTIN J. (1996).- Depositional Models and Sequence Stratigraphy of Non-Tropical Carbonates: The Miocene of the Agua Amarga Basin (SE Spain).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke1 F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 31, ID=3584^Topic(s): carbonates non-tropical; Systematics: ; Stratigraphy: ; Geography: Spain SE^The lower Tortonian and upper Tortonian / lower Messinian carbonates of the Agua Amarga Basin in Southern Spain (Prov. Almeria) provide examples for neritic non-tropical, "Mediterranean-type" carbonates, which occur alternating with subtropical to tropical chlorozoan reefs. The carbonate factory of the non-tropical depositional systems was situated in a shallow water area around wave base. Main carbonate producing organisms were nodular and robust bryozoans, bivalves, and red algae. We demonstrate that sequence stratigraphy of these non-tropical carbonates markedly differs from the established sequence stratigraphy models of tropical carbonates. The non-tropical carbonate depositional sequences display many features of siliciclastic depositional sequences. In addition, we show that the intrinsic link of surface water temperature fluctuations and sealevel changes has a high potential to shape carbonate depositional sequences.^1";
- 1272 s[1269] = "CALZADA S., URQUIOLA M.M. (1997).- Primer suplemento al catalogo de holotipos del Museo Geologico del Seminario de Barcelona.- Scripta Musei Geologici Seminarii Barcinonensis 228: 1-40.- FC&P 28-2, p. 28, ID=4020^Topic(s): type specimens; fossils; Systematics: ; Stratigraphy: ; Geography: Spain^A first supplement on the Catalogue of Holotypes housed in the Geological Museum of Seminary of Barcelona is offered. The first Catalogue was issued in 1992 and 148 new taxa are listed here. Mainly these new taxa are dealing with Scleractinia, Gastropoda, both from Cretaceous until Eocene, Miocene Crustacea, Bryozoa, etc. Some new data and opinions concerning several taxa erected before 1992, are given.^1";
- 1273 s[1270] = "MOTHS H. (1994).- Der Glimmerton-Aufschluß Gross Pampau (Herzogtum Lauenburg / N Germany; Langenfeldium, Obermiozaen), seine Entwicklung und Fossilfuehrung.- Geschiebesammler 27, 4: 143-183.- FC&P 24-1, p. 69, ID=4495^Topic(s): geology, paleontology; paleontology; Systematics: ; Stratigraphy: erratics; Geography: Germany, Gross Pampau^Es wird ueber die zeitliche Entwicklung und die Fossilfuehrung in den Aufschlussen Gross Pampau I und II mit 65 bisher hier nicht beobachteten Molluskenarten, 2 Korallenarten, 10 Knorpelfischarten, 16 Knochenfischarten und ueber einige Walreste berichtet und diese teilweise abgebildet. Aus den neuen Fundergebnissen werden die stratigraphisch-paloeologischen Folgerungen diskutiert. Die Korallenfauna. Massenhaft tritt die kleine Einzelkoralle Ceratocyathus granulatus (Goldfuss 1826) auf und vereinzelt finden sich sehr große Exemplare von Flabellum vaticani Ponzi 1876, beschaerakt auf die unteren Lagen von Gross Pampau II. Besonders E. vaticani, bekannt nur aus dem mediterranen Raum und aus dem Mittelmiozaen des Nordseebeckens wie Twistingen und Dingden, die hier eine Kelchbreite von 5cm erreichen, kommt in Gross Pampau II in sehr grossen Exemplaren mit ueber 10cm Kelchbreite vor. Offensichtlich hatte diese Art hier optimale Lebensbedingungen! Besonders die Wassertemperatur, aber natuerlich auch Licht, Reinheitsgrad des Wassers und ein gutes

- Nahrungsangebot sind entscheidend fuer gutes wachstum. welche Wassertemperaturen sind im Obermiozaen zu erwarten? Am Niederrhein wird mit einem Mittelwert von 15° C im festlandischen Obermiozaen gerechnet. [extracted from original paper]^1";
- 1274 s[1271] = "KREBS W. (1974).- Devonian carbonate complexes of Central Europe.- SEPM Special Publication 18 [L. Laporte (ed.): Reefs in Time and Space]: 155-208.- FC&P 4-1, p. 20, ID=5061^Topic(s): carbonate platforms; carbonate complexes; Systematics: ; Stratigraphy: ; Geography: Europe, Central^1";
- 1275 s[1272] = "CAPOTE R., PEREJON A., VILAS L. (1983).- Presencia de estructuras estromatolíticas en las calizas cristalinas de Santa Maria de la Alameda (Provincia de Madrid, Sistema Central Espanol).- Cuadernos de Geologia Ibérica 7 (1981): 625-632.- FC&P 14-1, p. 25, ID=6615^Topic(s): stromatolites; stromatolites; Systematics: ; Stratigraphy: ; Geography: Spain central^1";
- 1276 s[1273] = "FLUGEL E., ZANKL H. (1987).- Bericht über das Marburger Rundgespräch über Riff-Forschung in der Bundesrepublik Deutschland.- FC&P 16, 1: 25-44.- FC&P 16-1, p. 25, ID=6760^Topic(s): reef research project; reef research; Systematics: ; Stratigraphy: ; Geography: Germany^Am 12.12.1986 fand im Rahmen des Annual Meeting der International Society for Reef Studies am Institut für Geologie und Paläontologie der Universität Marburg ein von E. Flügel (Erlangen) und H. Zankl (Marburg) organisiertes Gespräch über Riff-Forschung in Deutschland statt. An dem Gespräch nahmen etwa 100 Wissenschaftler aus etwa 30 Instituten aus der Bundesrepublik und aus der Schweiz teil. Im Anschluß an einen Überblick über die aktuellen Forschungsaktivitäten im Hinblick auf die Bearbeitung fossiler und rezenter Riffe wurde ein Arbeitskreis'Riff-Forschung' unter der vorläufigen Federführung von E. Flügel und H. Zankl gegründet. [first part of a report on extensive research project]^1";
- 1277 s[1274] = "HERBIG H.-G. (1984).- Rekonstruktion eines nicht mehr existenten Sedimentations-raumes - Die Kalkgerolle im Karbon-Flysch der Malagiden (Betische Kordillere, Sudspanien). [reconstruction of a lost sedimentary realm - limestone boulders in the Carboniferous of the Malaguides (Betic Cordillera, Southern Spain; in German, with English summary].- Facies 11: 1-108.- FC&P 16-1, p. 56, ID=6766^Topic(s): sedimentology, redeposited fossils; sedimentology; Systematics: ; Stratigraphy: ; Geography: Spain S^[Rugose and tabulate corals as well as heterocorals are mentioned; their taxonomic description are in Herbig, 1986]^1";
- 1278 s[1275] = "JANSEN U., STEININGER F.F. (2002).- Die paläontologischen Sammlungen in Deutschland - Inhalte, Erfassungen und Gefährdung.- Kleine Senckenberg-Reihe 42: 1-101; Stuttgart. ISBN 3-510-61337-6.- FC&P 31-2, p. 38, ID=7133^Topic(s): collections of fossils; paleontology; Systematics: ; Stratigraphy: ; Geography: Germany^Prof. F.F. Steininger und Dr. U. Jansen vom Forschungsinstitut Senckenberg versuchten deshalb seit 1998, die deutschen paläontologischen Sammlungen systematisch zu erfassen, wobei reine Privatsammlungen natürlich nicht berücksichtigt werden konnten. Die vorliegende Schrift stellt die erste Auswertung der gesammelten Daten dar. Ihr Zweck besteht darin, die Situation der paläontologischen Sammlungen in Deutschland darzustellen. Die Liste soll der Politik und der Öffentlichkeit vor Augen führen, wo finanzielle, technische und personelle Hilfen nötig sind. Die Auflistung der Daten repräsentiert zugleich eine Informationsquelle für den Geowissenschaftler zur Lokalisierung bestimmter Sammlungen und Sammlungsobjekte. [fragment of "Inhaltsbeschreibung"]^1";
- 1279 s[1276] = "BOGOYAVLENSKAYA O.V., DANSHINA N.V., FYODOROV M.V. (1986).- Opyt izucheniya amfiporovykh soobshchestv (Stromatoporata) v silure-devone Urala i volgogradskogo Povolzhiya [Amphipora communities

in the Silurian-Devonian of the Urals and in the Volgograd district].- Teoriya i opyt ekostratigrafii [Kalio D. E. (ed.); Akad. Nauk, Est. SSR, Tallinn]: 201-206.- FC&P 17-1, p. 39, ID=2155^Topic(s): ; Stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian; Geography: Russia, Urals, Povolzhiye^^1";

- 1280 s[1277] = "SIMAKOVA M.A. (1986).- Tetracorals - Rugosa.- Ministerstvo Geologii SSSR, Trudy Vsesoyuznogo Ordena Lenina Nauchno-Issledovatel'skogo Geologicheskogo Instituta A. P. Karpinskogo, Novaya Seriya 331: 11-12 [in Russian].- FC&P 18-1, p. 38, ID=2261^Topic(s): atlas of fossils; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Russia, Urals, Russian Platform^^1";
- 1281 s[1278] = "RODRIGUEZ S., SOMERVILLE I.D. (2007).- Comparisons of rugose corals from the Upper Viséan of SW Spain and Ireland: implications for improved resolutions in late Mississippian coral biostratigraphy.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 275-305.- FC&P 35, p. 57, ID=2346^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Spain SW, Ireland^^1";
- 1282 s[1279] = "HANCE L., POTY E. (2004).- Sequence stratigraphy of the Belgian Lower Carboniferous - Tentative correlation with the British Isles.- Canadian Society of Petroleum Geologists, Memoir 19: 41-51.- FC&P 33-2, p. 11, ID=1101^Topic(s): sequence stratigraphy; stratigraphy, correlation; Systematics: ; Stratigraphy: Carboniferous L; Geography: Ardennes, British Isles^The Lower Carboniferous of Southern Belgium (Dinantian Subsystem) is well documented and serves as reference for the Tournaisian and Visean Series. Hundreds of sections and boreholes were measured bed by bed and collected for faunas. Biostratigraphy relies mainly on information on foraminifers, conodonts and corals, but most of other fossils groups typical of platform carbonates are abundant and diversified. Despite this great amount of data, many correlations remained questionable, mainly due to rapid facies changes and scarcity of fossils in some levels. During the Tournaisian and the Lower Visean, these changes are related to the facies evolution from nearshore to outer shelf with building of a distant waulsortian barrier during Upper Tournaisian. Moreover, extensional synsedimentary faulting during Lower Visean, have played a major role, controlling subsidence and facies distribution. During Middle to Upper Visean (up to the base of the Upper Warnantian), spectacular cyclothem sedimentation developed over a large area, reflecting a quite regular paleotopography, that later reduced in surface under the influence of the early phase of Variscan deformation. The uppermost part of the Visean was not deposited. Re-evaluation of the former Dinantian biostratigraphical pattern in a sequence stratigraphical approach gives new insight, particularly for the Tournaisian-Visean transition. From the base of the Tournaisian to the base of the Upper Warnantian (=Brigantian), 9 third-order sequences have been recognized in southern Belgium. Most of the lowstand systems tracts (LST) are lacking, probably because the high rate of eustatic variation exposed of the studied areas. One of the most striking events is the important sea level fall followed by a relatively low rise, at the time of the T-V transition, with deposition of the transgressive systems tract (TST) and the highstand systems tract (HST) of a third-order sequence (sequence 5, corresponding to most of the Sovet Formation) only in the deeper part of the outer shelf. The recognition of this sequence and of its corresponding stratigraphic gap on the shallow shelf allows a better understanding of the T-V boundary and, therefore, merited reinvestigation (Devuyst, XIV ICCP). The duration of the Dinantian third-order sequences are variable, including different amounts of parasequences (fourth and fifth order) and resulting in the variable

- thickness of the sequences. Several sequences defined here have been recognized in the Bristol area of England and are more tentatively correlated with the cycles of Ramsbottom (1979) established for the Lower Carboniferous of Great Britain. These however do not correspond exactly with the third-order sequences.¹¹;
- 1283 s[1280] = "COURJAULT-RADE P., DEBRENNE F., DORE F., GANDIN A. (1990).- Timing and sedimentary modalities of Archaeocyathan limestone deposition in Normandy (Northern France), Montagne Noire-Cevennes (Southern France) and Southwestern Sardinia (Italy).- Third Internat. Symposium on the Cambrian System. Novosibirsk 1990, p. 83.- FC&P 20-1.1, p. 81, ID=2886^Topic(s):biostratigraphy, ecology; Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:France, Italy^^1";
- 1284 s[1281] = "FEDOROWSKI J., BAMBER E.W. (2007).- Remarks on lithostrotionid phylogeny in western North America and western Europe.- Österreichische Akademie der Wissenschaften. Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 251-273.- FC&P 35, p. 51, ID=2335^Topic(s):phylogeny; Rugosa, Lithostrotionidae; Systematics:Cnidaria; Rugosa; Stratigraphy:Carboniferous; Geography:Europe W, America NW^^1";
- 1285 s[1282] = "KOSSOVAYA O.L. (1996).- Correlation of Uppermost Carboniferous and Lower Permian Rugose Coral Zones from the Urals to Western North America.- Palaios 11, 1: 71-82.- FC&P 25-2, p. 37, ID=3118^Topic(s):biozonation; stratigraphy, Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Carboniferous U / Permian L; Geography:Russia, Urals, America W^More than 40 species of uppermost Carboniferous and Lower Permian rugose corals collected from 5 areas on the Russian Platform and the Ural Mountains permit eight coral zones to be erected. They are the (1) Timania dobroljubovae zone, (2) Arctophyllum minimum zone, (3) Ferganophyllum sp.nov. 1 zone and its analogue in Timan, the Timania sp. 1- Heritschioides aff. H. carneyi zone, (4) Kleopatrina (K.) pseudoelegans-Tschussovskenia captiosa zone and its partial analogue in Timan, the Lophbillidium zone, (5) Timania schmidti-Kleopatrina (K.) magnifica zone, (6) Protolonsdaleiastraea biseptata zone, (7) Protolonsdaleiastraea longiseptata zone, and (8) Protolonsdaleiastraea juresanensis zone. Several of these zones can be extended to Spitsbergen and North America. Especially important for international correlation are four levels at which major changes in the assemblages of rugose corals occur. These are (1) at the base of the Timania dobroljubovae zone, (2) at the base of the Kleopatrina (K.) pseudoelegans-Tschussovskenia captiosa zone, (3) at the base of the Protolonsdaleiastraea biseptata zone, and (4) at the top of the Protolonsdaleiastraea juresanensis zone.¹¹;
- 1286 s[1283] = "POTY E. (1999).- Famennian and Tournaisian recoveries of shallow water Rugosa following late Frasnian and late Strunian major crisis, southern Belgium and surrounding areas, Hunan (South China) and the Omolon region (NE Siberia).- Palaeogeography, Palaeoclimatology, Palaeoecology 154, 1-2: 11-26.- FC&P 29-1, p. 58, ID=1679^Topic(s):recovery; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian Fam / Carboniferous Tour; Geography:Ardennes, China S, Siberia NE^The Rugosa remained almost totally absent from the platform environments of southern Belgium and surrounding areas, Hunan and Omolon during the long time interval between the end-Frasnian crisis and the early part of the late Famennian (marginifera Zone), probably owing to cool climatic conditions. They first appear in the Upper marginifera Zone, but are uncommon and poorly diversified. Few of them belong to pre-Famennian genera. It is only near the beginning of Strunian time that rugose corals radiated and became common. Their morphological and allometric variabilities were very large, indicating their high potential for adaptation to free niches. This first radiation was

abruptly terminated by an extinction event, and a second radiation quickly began, mainly from new taxa and only from a few previously known ones. In western Europe and in Hunan, this second radiation was also stopped abruptly, while species were evolving, by the Hangeberg event at the end of the Strunian. In Omolon, where the position of the Devonian-Carboniferous boundary is doubtful, the second radiation may have been completed before the end of the Strunian, and probably the corals affected by the end-Famennian event were new ones, resulting from a third radiation. In the three regions and at each recovery, the rugose corals are endemic, indicating that marine connections were poor. After Hangenberg event, surviving Rugosa reappeared almost immediately (except in South China) and were widespread, indicating good marine connections. However, they remained poorly diversified, sometimes until the late Tournaisian. The two major extinctions (end-Frasnian and end-Famennian) and the Strunian ones were responsible for the major taxonomic differences between pre-Famennian and post-Famennian Rugosa. ^1";

- 1287 s[1284] = "POTY E. (1985).- A rugose coral biozonation for the Dinantian of Belgium as a basis for a coral biozonation of the Dinantian of Eurasia.- Tenth International Congress of Carboniferous Stratigraphy and Geology, Comptes Rendus 4: 29-31.- FC&P 15-1.2, p. 31, ID=0811^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Ardennes, Eurasia^Rugose Corals are fairly common in the Strunian to Uppermost Visean deposits of Belgium and neighbouring areas. They complement the stratigraphic informations yielded by Foraminifera and Conodonts. A Rugose Coral biozonation of the Dinantian of Belgium including 8 zones is proposed here. This biozonation is based on taxonomic assemblages, which can be "translated" into morphological assemblages. These morphological assemblages are used for the creation of several "morphozones" which can be traced not only throughout western Europe but also in other Eurasian areas. (Original summary)^1";
- 1288 s[1285] = "SPASSKIY N.Ya. (1971).- Two new Devonian genera of colonial Tetracorals from the Ural-Tianshan province.- Zapiski Leningradskogo ordenov Lenina i trudovogo Krasnogo Znameni Gornogo Instituta im. G.V. Plekhanova 59, 2, Paleontology (1971): 23-25.- FC&P 2-1, p. 23, ID=4737^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, China, Ural-Tien-Shan province^^1";
- 1289 s[1286] = "SPASSKIY N.Ya., KACHANOV Ye.I. (1971).- New primitive Lower Carboniferous Corals from Urals and Altay.- Zapiski Leningradskogo ordenov Lenina i trudovogo Krasnogo Znameni Gornogo Instituta im. G.V. Plekhanova 59, 2, Paleontology (1971): 48-64.- FC&P 2-1, p. 23, ID=4740^Topic(s): new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Russia, Urals, Altay^^1";
- 1290 s[1287] = "MISTIAEN B., MILHAU B., KHATIR A., HOU H.-F., VACHARD D., WU X.-T. (1998).- Uppermost Famennian (Strunian) fauna from Etroeungt (Avesnois, North of France) and Etaoucun (Guangxi, South China). Paleogeographical implications founded on Stromatoporoids and Ostracoda.- Annales de la Societe geologique du Nord 06 (2eme serie): 97-104.- FC&P 30-1, p. 34, ID=1522^Topic(s): biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: France, China^Foraminifera, stromatoporoids, tabulate and rugose corals, brachiopods, ostracodes, conodonts, and vertebrate microremains have been investigated in two sections of the Strunian in the "Calcaire d"Etroeungt" section (Avesnois, North of France) and the Etaoucun section (Guilin of Guangxi, South China). Except for the foraminifera which allow good correlations, the other benthic fossil groups present very few taxa in common between the two sections. This supports the endemism of the South China Strunian

- faunas, already underlined by some authors.^1";
- 1291 s[1288] = "COPPER P. (1996).- Davidsonia and Rugodavidsonia (new genus), cryptic Devonian atrypid brachiopods from Europe and South China.- Journal of paleontology 70, 4: 588-602.- FC&P 25-2, p. 16, ID=3074^Topic(s): cryptic biota; Systematics: Stratigraphy: Geography: Europe, China^These two genera are typical Devonian reef dwellers, one genus found cementing to the undersides of corals, the other as inter-coral forms with large pedicles. Davidsonia typically occurs underneath platy alveolitids, demonstrating that these coral taxa were elevated from the substrate (like platy modern Acropora hyacinthus), contrary to general illustrations, which show them resting or cemented to the substrate. The Davidsoniina (suborder: Devonian, but as old as late Silurian, Pridoli) are nearly always reefal or peri-reefal in their distribution.^1";
- 1292 s[1289] = "LAFUSTE J. (1978).- Modalites de passage des lammelles aux fibres dans la muraille des tabules (Micheliniidae) du Devonien et du Permien.- Geobios 11, 3: 405-408.- FC&P 8-1, p. 54, ID=0234^Topic(s): microstructures; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian - Permian; Geography: France, Pakistan, Salt Range^A layer of minute lunulae is intercalated between the undulate lamellae and the embossed fibres. This lunular layer is precisely localised in the corallum, e.g. between the inner middle line and the outer fibrous layers. Attention is drawn to the importance of the relation between the various types of microstructure for the tabulate systematics. The species under study are &Beaumontia& guerangeri Milne-Edwards & Haime 1851, from the Lower Devonian of France and Michelinia indica waagen & Wentzel 1896, from the Middle Permian of Virgal, Salt Hange, India.^1";
- 1293 s[1290] = "MISTIAEN B. (1991).- Dendropora explicita Michelin 1846 et D. briceae nov. sp. (Tabulata) dans leur localite-type du Boulonnais. Presence du genre en Afghanistan.- Geobios 24, 2: 141-155.- FC&P 23-2.1, p. 42, ID=4238^Topic(s): taxonomy; Tabulata, Dendropora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: France, Boulonnais, Afghanistan^Dendropora explicita Michelin 1846 has only been known until now, in the Boulonnais, by the two small specimens from the Michelin's collection discovered and described by Lafuste (1981). Eighty-two new specimens have been picked out recently in the type stratum of the type area (Frasnian of Ferques area, bottom of the Patures Member, Beaulieu Formation). A new species Dendropora briceae nov. sp., very similar to D. explicita is particularly abundant (180 specimens) in the Givetian of the Boulonnais and is also present in the Givetian of the Avesnois (19 specimens). D. briceae differs fundamentally from the former type species D. explicita by closer calices. The study of those samples brings new information about the morphological features of the genus Dendropora (reticulate rhombic network); some structural characteristics (few distal tabulae, pores) are specified; the particular microstructure of the genus is confirmed. The stratigraphic distribution of the two species is specified. Moreover, the genus Dendropora is also recognized in the Givetian and the Frasnian of Afghanistan.^1";
- 1294 s[1291] = "SCHRODER S. (2004).- Devonian (Givetian/Frasnian) coral biostratigraphy of the Rhenish Mountains. A Moroccan Perspective?.- Devonian neritic - pelagic correlation and events. Abstract volume, 4 MS-S.; Rabat. [IUGS Subcommittee on Devonian stratigraphy (SDS) & Institut Scientifique, Rabat].- FC&P 33-2, p. 22, ID=1130^Topic(s): biostratigraphy; stratigraphy, Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv Fra; Geography: Germany, Rhenish Mts, Morocco^^1";
- 1295 s[1292] = "WEYER D. (1997).- News about Famennian Heterocorallia in Germany and Morocco.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 145-151.- FC&P 26-2, p.

12, ID=3680^Topic(s): systematics, biology; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Germany, Morocco^The genera Oligophylloides and Mariaephyllia are widely distributed in Lower to Upper Famennian strata of the cephalopod facies (Cheiloceras, Platyclymenia, Clymenia, and Wocklumeria genozones), abundant records now extend to the German Rhenish, Thuringian and Upper Franconian Mountains and to the Moroccan Anti-Atlas (Tafilalt), with additional discoveries in France (Montagne Noire) and Poland (Sudetes Mountains / Lower Silesia). New morphological features are described, including: large colonies with corallites fused by heterothecal layers; lateral talon structures for temporary attachment to possible sea-weed; the probable anomalous occurrence of an aseptal early ontogenetic phase with preseptal heterotheca.^1";

- 1296 s[1293] = "WEYER D. (1995).- Heterocorallia aus Famenne-Cephalopodenkalken im Rheinischen Schiefergebirge und Tafilalt.- Abhandlungen und Berichte für Naturkunde 18: 103-135.- FC&P 24-2, p. 88, ID=4584^Topic(s): cephalopod facies, new taxa; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: Germany, Morocco^New records of heterocorals from the wocklumeria stage are given for the German localities Oberrodinghausen (railroad cut), Hasselbach valley near Hohenlimburg, Ense, Dasberg, Effenberg, Muessenberg, and Wocklum. Eight specimens of the three first mentioned sections are described: Oligophylloides pachytecus Rozkowska 1969, Oligophylloides tenuicinctus Rozkowska 1969, Oligophylloides parvulus n.sp., Mariaephyllia famenniana (Rozkowska 1969), Mariaephyllia aff. famenniana (Rozkowska 1969). The Moroccan locality Bordj Est near Erfoud yielded Oligophylloides sp. and Mariaephyllia n.sp. II from the Wocklumeria stage, and Mariaephyllia n.sp. I from the Cheiloceras stage. Heterocorals mostly come from dysphotoc cephalopod limestones (together with large-eyed trilobites), rarely from aphotic environments (accompanied by blind trilobites). The enlarged knowledge of distribution (within the cephalopod facies) indicates a cosmopolitan habitat during the Famennian, surely favoured by the postulated pseudoplanctonic mode of juvenile life. Concerning the Mid-European Variscan Mountains, both Oligophylloides and Mariaephyllia now are known in the Rhenohercynian zone (Holy Cross Mountains, Rhenish Mountains), and in the Saxothuringian zone (recent collections from Dzikowiec, Polish Sudetes, and from Schuebelhammer, Upper Franconia). * Intensive serial sectioning provides new morphological data, above all about ontogenetics of heterocorals (with insertions and reductions of septa). The complete 12-septal apparatus of Oligophylloides occurs already at a minimum diameter of 0.4 mm. A completely aseptal initial stage is surprising: it consists of a larval fixing talon and a hollow tube of purely tabular heterotheca. The original collection of the famous Heterocorallian study of Schindewolf (1941) was used for a revision of his fundamental error (upside down, with presumed concave tabulae) in corallite orientation.^1";
- 1297 s[1294] = "DEBRENNE F. (1981).- Méduses et traces fossiles supposées précambriennes dans la Formation de Sarrabus, SE de la Sardaigne.- Bulletin de la Société géologique de France 1: 23-31.- FC&P 11-1, p. 55, ID=6120^Topic(s): Medusae; Systematics: Cnidaria; Stratigraphy: Ediacaran?; Geography: Italy, Sardinia^[first occurrence of soft bodied fossils in SW Europe]^1";
- 1298 s[1295] = "ZLATARSKI V. (1977).- List of papers on Bulgarian Fossil Anthozoans.- FC&P 6, 2: 24-29.- FC&P 6-2, p. 24, ID=5550^Topic(s): bibliography; coral bibliography; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: Bulgaria^[bibliography of fossil corals in Bulgaria]^1";
- 1299 s[1296] = "DERMITZAKIS M. (1978).- Bibliography of Greek fossil corals.- FC&P 7, 2: 23-24.- FC&P 7-2, p. 23,

- ID=5653^Topic(s): bibliography; coral bibliography;
Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil;
Geography: Greece^^1";
- 1300 s[1297] = "MIHALY S. (1979).- Fossilische Anthozoa-Literatur von Ungarn (bis Jahre 1978).- FC&P 8, 1: 20-43.- FC&P 8-1, p. 20, ID=5681^Topic(s): bibliography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: Hungary^[bibliography, in stratigraphic order, with revised lists of taxa]^1";
- 1301 s[1298] = "GEISTER J. (1984).- Catalogue preliminaire des types et originaux de Scleractiniaries fossils conserves au Muséum d'Histoire Naturelle de la Ville de Genève.- FC&P 13, 2: 66-72.- FC&P 13-2, p. 66, ID=6385^Topic(s): collection of fossils; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: fossil; Geography: Switzerland^Les collections de cnidaires fossiles conservés au musée de Genève comprennent plus de 2000 échantillons dont 1160 dans la très riche "Collection Pictet" du XIX siècle (voir Bechon et al. 1981). La plus grande partie de ces échantillons est constituée par des scléactiniaries du Mésozoïque (principalement du Crétacé inférieur). * En outre, il y a un bon nombre d'échantillons de l'Eocène des Alpes et du Bassin de Paris ainsi que du Miocène de l'Italie du Nord. Quelques coraux du Paléozoïque (surtout Dévonien de l'Allemagne et de l'Angleterre) complètent les collections. La liste suivante comprend exclusivement les types (holotypes, syntypes et types figurés) des cnidaires fossiles du musée de Genève. Ils sont tous du Mésozoïque et à l'exception de la "Collection Martin" et de la "Collection Salève" ils ont été exclusivement décrits dans les monographies classiques de Koby. * Les listes sont établis à partir des données fournies par Mme Danielle Decrouez, Genève. [from introductory part of the catalogue]^1";
- 1302 s[1299] = "anonymous (1976).- Collections of fossil and extant corals in Switzerland. Naturhistorisches Museum Bern.- FC&P 5, 1: 25-26.- FC&P 5-1, p. 25, ID=6293^Topic(s): collections of fossils; corals collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil & living; Geography: Switzerland^[presented is the collection of Naturhistorisches Museum der Burgergemeinde Bern, with, among others, Jurassic material of Koby (preserved also in other Swiss collections, listed in the present note) and Recent corals of Studer]^1";
- 1303 s[1300] = "GANDIN A., DEBRENNE F. (1984).- Lower Cambrian bioconstructions in Southwestern Sardinia (Italy).- Geobios 8: 231-240.- FC&P 13-2, p. 49, ID=0579^Topic(s): reefs; reefs; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Italy, Sardinia^Calcareous bodies embedded in the terrigenous deposits of the Matoppa Member (Nebida Formation) are the result of the activity mainly of algae (Girvanella, Epiphyton and Renalcids) and Archaeocyatha.The bioconstructions vary in shape from associated massive bowl forming complex lenses, to flat bedded bodies. Boundaries are sharp; talus-like deposits are seldom observed.^1";
- 1304 s[1301] = "DEBRENNE F., GANDIN A. (1985).- La Formation de Gonnese (Cambrien SW Sardaigne): biostratigraphie, paleogeographie et paleoecologie des Archeocyathes.- Bulletin de la Societe geologique de France . 531-540.- FC&P 15-1.2, p. 47, ID=0800^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Italy, Sardinia^The discovery of Archaeocyathan faunas in the Gonnese Formation (Cambrian, SW Sardinia) gives for the first time the age of its two members. In the "Dolomia rigata" Member, a scarce fauna of small sized Regular Archaeocyathan fauna of Botomian age was found in an oncolitic horizon. In the "Calcareo ceroid" Member a scarce Archaeocyathan fauna of Toyonian age (Elankian Auct.) was discovered

- only along the outer rim of the Iclesiente platform. The presence of these faunas confirms the existence of a more open western basin either in an arid-hot climate, during the deposition of the Dolomia rigata Member or the supposed bahamian-like deposition in an humid tropical climate of the Calcare cerroide Member.¹¹;
- 1305 s[1302] = "DEBRENNE F., GANDIN A., PILLOLA G.L. (1989).- Biostratigraphy and depositional setting of Punta Manna Member type section (Nebida Formation, Lower Cambrian, SW Sardinia, Italy).- Rivista Italiana di Paleontologia e Stratigrafia 94, 4; 22 p. 5 pls, 6 figs.- FC;P 18-1, p. 54, ID=2314Topic(s): biostratigraphy; fossils Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Italy, SardiniaThe first description of the Punta Manna Member type section given by Rasetti (1972) is revised and completed by the detailed description of the lithofacies and the Archaeocyathan faunas - Trilobites lists are reactualized.¹¹;
- 1306 s[1303] = "ABAD A. (1989).- El Cambrico inferior de Terrades (Gerona). Estratigrafia, Facies y Paleontologia.- Batalleria 2, 1980: 47-56.- FC;P 19-1.1, p. 70, ID=2709Topic(s): geology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Spain, PyreneesArchaeocyatha are recorded for the first time in Pyrenees mountains; they have been recently discovered in the Spanish part of Oriental Pyrenees (Gerona area, Terrades). They belong to the genera Rasetticyathus, Coscinocyathus, Porocoscinus, Protopharetra and Anthomorpha, very similar to the Sardinian Matoppa member and the Montagne Noire upper part of the Orbiel Formation (Lower Botomian). Epiphyton, Renalcis and Girvanella are associated and contribute to build reef mounds.¹¹;
- 1307 s[1304] = "DEBRENNE F., GANDIN A., DEBRENNE M. (1993).- Calcaires a archeocyathes du Membre de la vallee de Matoppa (Formation de Nebida), Cambrien inferieur du Sud-Ouest de la Sardaigne (Italie).- Annales de Paléontologie 79, 2: 77-118.- FC;P 22-2, p. 96, ID=3555Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Italy, Sardinia¹¹;
- 1308 s[1305] = "DEBRENNE F. (1972).- Nouvelle faune d'Archéocyathes de Sardaigne.- Annales de Paléontologie 58 : 169-188.- FC;P 1-2, p. 24, ID=4697Topic(s): new taxa; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Italy, SardiniaPremière découverte de l'association Archéocyathe - Trilobite en Sardaigne par le Pr. F. Rasetti. Les Archéocyathes, de petite taille, montrent de nettes affinités avec la faune des biohermes (calcaire I) des autres régions de l'île.¹¹;
- 1309 s[1306] = "DEBRENNE F., DEBRENNE M., ULZEGA A. (1976).- Osservazioni geologiche e fauna del Cambrico di Guardia Manna (Teulada, Sardegna sud occidentale).- Bolletino della Societa Geologica Italiana 94, 1975: 1505-1517.- FC;P 6-1, p. 31, ID=5525Topic(s): geology, fossils; geology paleontology; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Italy, Sardinia¹¹;
- 1310 s[1307] = "DEBRENNE F., GANDIN A., SIMONE L. (1979).- studio sedimentologico comparato di tre Iclesiente e Sulcis (Sardegna sud-occidentale).- Mem. Soc. Geol. Ital. 20: 379-393.- FC;P 10-1, p. 60, ID=6023Topic(s): sedimentology; sedimentology, Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Italy, Sardinia¹¹;
- 1311 s[1308] = "FROEHLER M., BECHSTAEDT T. (1992).- Calcimicrobial - archaeocyathan buildups at the instable northwestern platform margin of the Lower Cambrian Gonnese Formation.- Neues-Jahrbuch fuer Geol. und Palaeont. Monatshefte 1992, 5: 269-278.- FC;P 22-2, p. 97,

- ID=3556^Topic(s): reefs; reefs; Systematics: Porifera Monera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Italy, Sardinia^1";
- 1312 s[1309] = "HUBMANN B. (2002).- Palaeozoic corals in Austria: state of knowledge after 150 years of research.- Coral Research Bulletin 7: 73-086. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 33, ID=7101^Topic(s): research history; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Austria, Alps^This paper gives a brief review of coral taxa from Austria cited in literature and their tectonic position within the Alpine mountain belt. The presence of corals in Palaeozoic rocks of this Alpine region is known for more than 150 years. With the exception of a single poorly preserved steinkern of an Ashgillan Streptelasmatic, corals occur from the Lower Silurian to the Lower Permian. Ten genera and 125 taxa (81 Rugosa, 33 Tabulates and 11 Heliolitids) on species level were described for the first time from Austria. [original summary]^1";
- 1313 s[1310] = "HUBMANN B. (1995).- Anthozoa palaeozoica: Tabulata (inklusive Chaetetida und Heliolitida).- Catalogus Fossilium Austriae. Ein systematisches Verzeichnis aller auf Österreichischem Gebiet festgestellten Fossilien, IVc/lb [H.W. Flügel & H. Zapfe H. (eds)]; 111pp; Wien.- FC&P 24-2, p. 87, ID=4582^Topic(s): catalogue of taxa; Tabulata, Heliolitida, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Heliolitida Chaetetida; Stratigraphy: Paleozoic; Geography: Austria^The main data of the mentioned species are given: typus, synonyma, locus typicus, stratum typicum, locality, stratigraphy, material and remarks. It is one of the important catalogues of tabulate corals.^1";
- 1314 s[1311] = "FLUGEL H.W. (2000).- Das Paläozoikum von Graz (Steiermark, Österreich), Kenntnisstand 2000.- Sitzungsberichte, Österreichische Akademie der Wissenschaften, Mathematisch-naturwissenschaftliche Klasse, Abteilung I, Biologische Wissenschaften und Erdwissenschaften 206: 3-10.- FC&P 30-1, p. 22, ID=7077^Topic(s): geology; geology; Systematics: ; Stratigraphy: Paleozoic; Geography: Austria, Styria^1";
- 1315 s[1312] = "FLUGEL H.W., HUBMANN B. (2000).- Das Paläozoikum von Graz: Stratigraphie und Bibliographie.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 13: 1-118.- FC&P 30-1, p. 23, ID=7078^Topic(s): geology; geology; Systematics: ; Stratigraphy: Paleozoic; Geography: Austria, Styria^1";
- 1316 s[1313] = "FLUGEL H.W. (1995).- Korallen aus dem oberen Ordoviciem SW-Sardiniens.- Sitzungsber. Oesterr. Akad. Wiss., math.-naturwiss. Kl., Abt I, 1995, 202: 139-149.- FC&P 25-1, p. 33, ID=3012^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: Italy, Sardinia^Sogdianophyllum sardinianum n.sp., Lambelasma sp.?, Celolasma sp. and Nyctopora sp. from the Upper Ordovician of SW-Sardinia are at present the eldest Rugosa of the Mediterranean region. Together with brachiopods the fauna supported the assumption of warm water conditions for this region at this time suggested by Brachiopods.^1";
- 1317 s[1314] = "PICKETT J.W. (2007).- Late Silurian rugose corals from the Cellon and Raichkofelboden Sections (Carnic Alps, Austria).- Jahrbuch der Geologischen Bundesanstalt 47, 3+4: 545-550. www.geologie.ac.at/filestore/download/JB1473_545_A.pdf.- FC&P 35, p. 55, ID=2343^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Austria, Carnic Alps^1";
- 1318 s[1315] = "DIENI I., GIORDANO D., LOYDELL D.K., SASSI F.P. (2005).- Discovery of Llandoverly (Silurian) graptolites and probable Devonian corals in the Southalpine Metamorphic Basement of the Eastern Alps

- (Agordo, NE Italy).- Geological Magazine 142, 1: 1-5.- FC&P 34, p. 93, ID=1352Topic(s): metamorphosed; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Alps E, ItalyWe report the discovery of Aeronian (Middle Llandovery) graptolites, and corals of probable Devonian age, in boudins hosted by greenschists, within the Southalpine Metamorphic Basement. These discoveries provide key constrains to the depositional age range of the protoliths. This remarkable occurrence of almost undeformed graptolites and compound corals in boudins within a metamorphic shear zone indicates very marked strain partitioning.¹"
- 1319 s[1316] = "IORDAN M. (1974).- Studiul faunei Devonian inferioare din Dealurile Bujoarele (Unitatea de Macin - Dobrogea N).- Inst. geol., Dari de Seama ale Sedintelor 1974, 60, 5: 35-70; Bucarest.- FC&P 4-2, p. 57, ID=5270Topic(s): paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: Romania, DobrogeaStudy of the Lower Devonian fauna in the Bujoarele Hills (Macin Unit, North Dobrogea). Described and figured are 45 species of invertebrates (4 corals). The identified species show the Siegenian-Emsian age of the deposits occurring here in the Rhenish facies.¹"
- 1320 s[1317] = "PAVLOVICJA P., KOSTICJ-PODGORSKA V. (1975).- Localisation des calcaires du Dévonien moyen à l'Est de Dorf Kalna, dans le Sud de la Serbie. [en serbe] .- Ann. Geol. Penins. Balkan. 58: 155-166.- FC&P 4-2, p. 60, ID=5288Topic(s): geology, reefs; geology; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian M; Geography: SerbiaDescription d'Heliolites (Heliolites) porosus porosus. Des fragments de Crinoïdes, de Stromatoporidaea, de Tabulés et de Foraminifères caractérisent un milieu récifal.¹"
- 1321 s[1318] = "STEVANOVIC P., KOSTIC V. (1974).- Ester Fund von Mitteldevon mit Heliolites porosus Lindstroem an der Westkueste des Ohrid-Sees (Mazedonien).- Bulletin Sci., Cons. Acad. Yougosl. A 1974, 19, 11-12: 550-552.- FC&P 4-2, p. 62, ID=5294Topic(s): Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Devonian M; Geography: Macedonia Republic of¹"
- 1322 s[1319] = "FLUGEL H.W., HUBAKER N. (1984).- Torusphyllum n.g., eine neue Rugosa aus dem Mitteldevon des Hochlantsch.- Mitteilungen der naturwissenschaftlichen Vereinigung Steiermark 114: 77-82.- FC&P 14-1, p. 46, ID=0962Topic(s): new taxa; Rugosa, Torusphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Austria, Hochlantsch¹"
- 1323 s[1320] = "KUSTER P. (1987).- Nachweis von Frasnium durch Scruttonia julli (Pedder 1986) in den Flachwasserkalken der zentralen Karnischen Alpen.- Muenster. Forsch. Geol. Palaeont. 66: 33-56 [in German, English summary].- FC&P 16-1, p. 61, ID=1964Topic(s): biostratigraphy; Rugosa, Scruttonia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Austria, Carnic AlpsScruttonia julli (Pedder 1986) is described from shallow-water limestones of the central Carnic Alps and thus there is evidence of Upper Devonian in this region. Hence it follows a discussion concerning the stratigraphical range of the Middle / Upper Devonian reef-complex of the Kellerwand and Hohe warte area. The Chinese subgenus Billingsastraea (Sichuanastraea) He 1978 is proven to be a junior synonym of Scruttonia Cherepnina 1974, and is abandoned.¹"
- 1324 s[1321] = "ULITINA L.M. (1986).- Pervaya nakhodka roda Microcyclus Meek et worthen (Rugozy) v Devone Zakavkazya.- Paleontologicheskii Zhurnal 1986, 3: 112-115 [first finding of the genus Microcyclus in the Devonian of Transcaucasus; in Russian].- FC&P 16-1, p. 63, ID=1968Topic(s): new records; Rugosa, Microcyclus; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: TranscaucasusThe new species Microcyclus aequus

- Ulitina 1986, from the Middle Devonian (Eifelian, Mucrospirifer deluvianoides-zone) from the western slope of the Kazma Mountain (Dzhaanam-Deres-River) is described.¹¹";
- 1325 s[1322] = "OEKENTORP-KUSTER P., OEKENTORP K. (1992).- Rugose Korallenfaunen des Mittel- und Ober-Devons der zentralen Karnischen Alpen.- Jb. Geol. B.-A. 135, 1 [Schoenlaub H.P. & Daurer A. (eds): Neuergebnisse aus dem Palaeozoikum der Ost- und Suedalpen]: 233-260.- FC&P 21-1.1, p. 43, ID=3216^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M U; Geography: Austria, Carnic Alps^A rugose coral fauna is described from thick shallow-water deposits on top of the Kellerwand - Hohe warte area (central Carnic Alps). Its stratigraphic use is discussed with respect to the Middle / Upper Devonian boundary. The systematic studies were made with special regard to diagenetic transformations in the microstructure of the coral skeleton which are subject to a special chapter. [original summary] The following taxa are described: Dendrostella trigemme (Quenstend 1879), Battersbyia sp., Acanthophyllum concavum (Walther 1928), Grypophyllum sp., Stringophyllum sp. A, Alaiophyllum jarushevskyi Gorjanov 1961, A. wirbelauense (Pickett 1967), Temnophyllum cf. latum Walther 1928 and Pexiphyllum sp. Investigation of the microstructure was especially done with Dendrostella and Battersbyia specimens.¹¹";
- 1326 s[1323] = "FLUGEL H.W. (1971).- Einige biostratigraphisch wichtige Rugosa aus den Calceola-Schichten des Hochlantsch (Grazer Palaeozoikum).- Mitt. naturwiss. Ver. Steiermark 100: 72-83.- FC&P 1-2, p. 13, ID=4638^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Austria, Styria^^1";
- 1327 s[1324] = "JOSEPH J., TSIEN H.-H. (1975).- Calcaires m'osod'evoniens et leurs faunes de t'etracoralliennes en haute vall'e d'Ossau (Pyren'es atlantiques).- Bulletin Soc. Hist. natur. de Toulouse 111, 1-2: 179-205.- FC&P 4-2, p. 58, ID=5273^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: France, Pyrenees^Dans la partie m'ridionale de la vall'e du Gave d'Ossau (zone axiale des Pyren'es occidentales) affleurent plusieurs 'difices calcaires m'osod'evoniens: deux successions stratigraphiques caract'ristiques sont d'crites ici, ainsi que la faune de T'etracoralliennes qu'on y observe.¹¹";
- 1328 s[1325] = "JOSEPH J., TSIEN H.-H. (1977).- Les Pyrenees dans la paleogeographie devonienne. Nouveaux jalons fournis par les Tetracoralliennes.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 112-115.- FC&P 6-1, p. 19, ID=5495^Topic(s): biogeography; Rugosa, biogeography; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Pyrenees^[the majority of the Pyrenean rugose coral species show European affinities]^1";
- 1329 s[1326] = "JOSEPH J., TSIEN H.-H. (1976).- Rugosa du Couvinien et du Givetien des Pyrenees Bearnaises. Affinites avec les faunas d'Europe occidentale.- Annales de la Societe geologique du Nord 97: 45-48.- FC&P 7-2, p. 20, ID=5628^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif Giv; Geography: France, Pyrenees^[brief account of Middle Devonian Pyrenean rugose coral faunas and their affinities]^1";
- 1330 s[1327] = "FLUGEL H.W. (1980).- Neaxon sp. aus der Goniclymenia-Stufe von Gratwein bei Graz.- Mitt. naturwiss. Ver. Steiermark 110: 55-56; Graz.- FC&P 10-1, p. 48, ID=5987^Topic(s): ; Rugosa, Neaxon; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: Austria, Graz^[description of Neaxon sp. which is the first find of a representative from the Cyathaxonia-fauna in the Upper Devonian of Graz, Austria]^1";
- 1331 s[1328] = "FLUGEL H.W. (1980).- Calceola sandalina aus den

- Hubenhalt-Kalken der Teichalpe (Grazer Palaeozoikum, Eifelium).- Mitt. naturwiss. Ver. Steiermark 110: 57-58; Graz.- FC&P 10-1, p. 48, ID=5986Topic(s): ; Rugosa, Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Austria, Graz^[from the "Calcareous slate of Hubenhalt" (Eifelian) underlying the "Calceola beds" Calceola sandalina is recorded for the first time]^1";
- 1332 s[1329] = "BUCHROITHNER M.F., FLUGEL E., FLUGEL H.W., STATTEGGER K. (1980).- Die Devon Gerolle des Palaeozoischen Flysch von Menorca und ihre palaogeographische Bedeutung.- Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen 159: 172-224.- FC&P 9-2, p. 50, ID=0364Topic(s): pebbles; Stroms, Stachyodes; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Spain, Menorca^Some of the limestone pebbles are characterized by Stachyodes crassa.^1";
- 1333 s[1330] = "BOGOYAVLENSKAYA O.V. (1983).- Srednedeviskie Stromatoporaty Zakavkaz'ya [Middle Devonian stromatoporates of Transcaucasus].- Nizhnii yarus srednego devona na teritorii SSSR: 30-39 [Nauka, Moskva].- FC&P 14-1, p. 54, ID=1033Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: Transcaucasus^1";
- 1334 s[1331] = "RANTITSCH G. (1992).- Fazies und Diagenese devonischer Riffkalke des Seeberger Aufbruches (Kaernten, Oesterreich).- Jb. Geol. B.-A. 135, 1 [Schoenlaub H.P. & Daurer A. (eds): Neuergebnisse aus dem Palaeozoikum der Ost- und Suedalpen]: 173-285.- FC&P 21-1.1, p. 57, ID=3269Topic(s): reefs, facies, diagenesis; Strom-renalcid reefs; Systematics: Porifera Cyanophyta; Stromatoporoidea; Stratigraphy: Devonian; Geography: Austria, Carintia^Devonian limestones of the "Seeberger Aufbruch" (Karawanken) has been subdivided into eight microfacies types, all of them being related to near-reef-environments. A Stromatoporoid-Renalcid-facies represents the reef-core-facies. The diagenetic succession has been subdivided in five phases by means of cementstratigraphy and the cathodoluminescence.^1";
- 1335 s[1332] = "HLADIL J. (1974).- Tabulate corals from the Paleozoic basement of the Carpathian Foredeep (borehole Nitkovice-2).- Vestnik Ustredniho ustavu geologickeho 49: 219-222.- FC&P 9-2, p. 47, ID=0356Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv Fra; Geography: Slovakia, Carpathians^Rich fauna of tabulate corals of Caliapora Schlueter, Crassialveolites Sokolov, Crassialveolitella gen.n. and Seoliopora Lang, Smith & Thomas, is limited to the Givetian limestones while, within the Frasnian limestones, only branching coralla of the genus Scoliopora have been found.^1";
- 1336 s[1333] = "MIHALY S. (1982).- Eine neue Tabulata-Art aus dem Mitteldevon von Szendro (NO-Ungarn).- Magyar all. foldt. Intez. evi. Jel. 1980: 261-266.- FC&P 12-1, p. 41, ID=0561Topic(s): taxonomy, stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Hungary NE^The new tabulate species Squameoalveolites iveni n.sp. is described from the Szendro mountains, being of stratigraphic significance in the subdivision of the Devonian sequence of the mountains. The age is Middle Devonian: Eifelian to lower Givetian. This species is known from Hungary (Mihaly 1978: Alveolites sp.) as well as from the Rheinisches Schiefergebirge (Iven 1980: Squameoalveolites sp.).^1";
- 1337 s[1334] = "KOSTIC V., RATCEVIC D. (????).- Fund eines devonischen Tabulatenkoralls Caliapora in Vulkanogeno-Sedimentgesteinen oestlich von Rudna Glava.- Ann. Geol. Penins. Balkan. 37, 2: 59-68; Belgrade.- FC&P 3-1, p. 26, ID=4883Topic(s): ; Tabulata, Caliapora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Serbia^Schwachmetamorphosierte Vulkanogeno-Sedimentgebilde haben eine regionale Verbreitung im Rahmen des Karpato-Balkanischen Bogens. Auf diesen Schluss weisen die

Resultate neuerer Forschungen in Jugoslawien und in Rumaenien hin, da die erwaehnten Gebilde vom untersuchten Getaende mit Unterbrechungen in Richtung NNW bis zur Donau verfolgt werden koennen, wo sie im Guertel von Boljetin und dem Kozicafluss die Grundlage fuer die bisher bekannten Gebilde des unteren Karbons bilden. In Richtung SSO wurden analoge Gebilde im Rahmen der Serie von Crgn Vrh und der Inovischen Serie beobachtet, woraus zu schliessen ist, dass es sich auch hier um Devongebilde handelt, die ihre Fortsetzung in Bulgarien im Rahmen von Belogradzik und der Berkovantiklinale finden. Die Vulkano-Sedimentgebilde haben unter den Bedingungen der Zeolithfazies ihre Metamorphose erfahren. * Ihr Alter wurde auf Grund des Tabulatenkoralls *Caliapora* sp. indet. - mittleres Devon bestimmt. Die palaeontologische Angabe ist bedeutend, da sie auf die Entstehungszeit herzynischer Orogenese und initialer basischer Magmate hinweist.¹;

- 1338 s[1335] = "MIHALY S. (1978).- Mittel-devonischen Tabulaten des Szendro Gebirges. [Ungarisch und deutscher Text].- Geol. Hung. Ser. Geol. 18: 117-191.- **FC**;P 8-1, p. 43, ID=5683**Topic(s):** Tabulata; **Systematics:** Cnidaria; Tabulata; **Stratigraphy:** Devonian M; **Geography:** Hungary^The publication works out in detail the Tabulata coming from the only known Middle Devonian Hungarian locality. The following species are dealt with: *Chaetetes magnus* Lec., *Heliolites porosus* (Goldf.), *Favosites goldfussi goldfussi* (d;Orb.), *Favosites goldfussi eifeliensis* (Pen.), *Favosites robustus* Lec., *Favosites antipertusus* Lec., *Favosites* sp., *Pachyfavosites polymorphus* (Goldf.), *Caliapora* cf. sp., *Thamnopora reticulata* (Blainv.), *Thamnopora* cf. *micropora* Lec., *Thamnopora* sp., *Gracilopora* cf. *acuta* Chud., *Striatopora* sp., *Alveolites fornicatus* Schlut., *Alveolites minutus* Lec., *Alveolites taenioformis* Schlut., *Syringopora eifeliensis* Schlut., *Syringopora crispa* Schlut., *Tabulata* sp. indet.¹;
- 1339 s[1336] = "MIHALY S. (1978).- Neue palaeontologische Angaben zur Kenntnis des Devons von Szendro. [in Ungarisch, mit deutschen Resume].- Magy. All. Földt. Int. Evi. Jelentese 1976: 95-112. [wpisac !].- **FC**;P 8-1, p. 44, ID=5684**Topic(s):** Tabulata; **Systematics:** Cnidaria; Tabulata; **Stratigraphy:** Devonian M; **Geography:** Hungary^The paper deals with new data about the Middle Devonian Tabulata based upon the new specimens coming from drilling holes. The described species are: *Heliolites vulgaris* Chernyshev, *Favosites goldfussi* d;Orb., *Pachyfavosites polymorphus* (Goldf.), *Alveolites fornicatus* Schlut., *Alveolites minutus* Lec., *Alveolites megastomus* Stein., *Thamnopora reticulata* (Blainv.), *Caliapora battersbyi*, *Thamnopora boloniensis* (Gossl.).¹;
- 1340 s[1337] = "FLUGEL E., FLUGEL H.W. (1979).- Tabulata, Sclerospongia und Stromatopora aus dem Devon von Menorca.- Mitt osterr. geol. Ges. 70, 1977: 49-73.- **FC**;P 11-1, p. 49, ID=1767**Topic(s):** Tabulata, Porifera; **Systematics:** Cnidaria Porifera; Tabulata; **Stratigraphy:** Devonian Giv; **Geography:** Spain, Menorca^Description of Tabulata, Sclerospongia and Stromatoporoids (list p. 63) of probably Givetian age from Menorca. The fossils occur together with Rugosa and different Frasn-limestones in form of gravels and components of Framennian (?) mud flows within a flysch-sequence. The coral fauna is very similar to coral faunas of analogous sequences of the Great Kabyle, whereas the Stromatoporoid fauna shows a cosmopolitan character. The problem of the origin of the fossil-bearing !?.! gravels is unsolved. ¹;
- 1341 s[1338] = "HUBMANN B. (1997).- Reaktionen favositider Korallen auf Sedimentbelastung: Fallstudie aus dem Devon des Grazer Palaeozoikums, Oesterreich.- Zentralblatt für Geologie und Paläontologie I. 1996, 5/6: 415-421.- **FC**;P 26-2, p. 59, ID=3737**Topic(s):** ecology; Tabulata, Favositida; **Systematics:** Cnidaria; Tabulata; **Stratigraphy:** Devonian; **Geography:** Austria, Styria^Tabulate corals may play an important role in estimating the

- history of sedimentation within a depositional area. Special reactions of the coral colonies as well as reactions of single corallites may indicate the size and rate of the sediments which were introduced into their habitat. Examples from the Devonian of the Graz Palaeozoic (Austria) are demonstrated.¹¹";
- 1342 s[1339] = "HUBMANN B. (1991).- Alveolitidae, Heliolitidae und Helicosalpinx aus den Barrandeikalken (Eifelium) des Grazer Devons.- Jb. Geol. B.-A. 134, 1: 37-51. [in German, with English summary].- FC&P 20-2, p. 61, ID=2953Topic(s): taxonomy; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Devonian Eif; Geography: Austria, StyriaRepresentatives of tabulate corals (Squameoalveolites and Platyaxum), Heliolitids and hard-substrate-tracefossils in favositid corals are described from the Barrandei Limestones (Middle Devonian, Eifelian) of the Palaeozoic of Graz, which are new for this succession. [original summary; the described taxa are: Squameoalveolites robustus (Pradacova 1938), Platyaxum (Roseoporella) taenioforme gracile n.ssp., Heliolites Typus A, Heliolites Typus B, Heliolites Typus C, Helicosalpinx asturiana Oekentorp 1969 and Favosites cf. radiceformis Frech]^11";
- 1343 s[1340] = "SYTOVA V.A., CHUDINOVA I.I., ULITINA L.M. (1974).- Devon. Tetrakorally, Tabulaty i Geliolitoidi. [in Russian].- Atlas iskopaemoy fauny Armyanskoy SSSR [atlas of fossil fauna of the Armenian SSSR; in Russian]; AN Arm. SSR: 31-45, pls 1-11; Erevan. [atlas of fossils] - FC&P 3-1, p. 14, ID=6256Topic(s): ; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian; Geography: Armenia^11";
- 1344 s[1341] = "MAY A., POHLER S.M.L. (2009).- Corales y estromatopôridos de Devônico Inferior de los Alpes Cárnicos.- Comunicaciones de las XXV Jornadas de la Sociedad Espanola de Paleontologia. [abstract] - FC&P 36, p. 80, ID=6487Topic(s): taxonomy, facies; Tabulata, Rugosa, stroms; Systematics: Cnidaria Porifera; Tabulata Rugosa Stromatoporoidea; Stratigraphy: Devonian L; Geography: Alps, Carnic^11"; Aunque en el Devonico Medio los arrecifes tenian una amplia distribucion (casi mundial), durante el Praguense (Devonico Inferior), los arrecifes fueron escasos. En la formacion "Calizas de Hohe warte" en el Macizo de Seewarte y Hohe warte en los Alpes Cárnicos (Hubmann et al., 2003). en la frontera entre Austria e Italia esta represenatado uno de estos pocos arrecifes praguenses. * Se estudia la formacion "Calizas de Hohe warte" en los afloramientos situados en la base del acantilado de la Seewarte. Esta formacion representa al Praguense y una parte del Emsiense inferior (Hubmann et al., 2003). La secuencia empieza con calizas de crinoideos; sobre ellas se desarrollan estructuras arrecifales; especialmente en la parte superior se observan arrecifes parches bien desarrollados. Los bioconstructores son estromatopôridos, corales tabulados, corales rugosos y Fistullella undosa Shuysky, que se interpreta como un hidrozoo problemático. La facies de las "Calizas de Hohe warte" ha sido descrita por Pohler et al. (2007). A continuacion, se proporciona una lista con los fosiles identificados en las laminas delgadas: * corales tabulados: Heliolites aff. wernerii Oekentorp & Brühl, 1999, Helioplasma aff. aliena Galle, 1973, Favosites styriacus Penecke, 1894, Platyaxum (Roseoporella) altechedatense (Dubatolov, 1959), Scoliopora (Protoscoliopora) puberulus (Janet in Dubatolov et al., 1968) (muy frecuente), Coenites falsus Dubatolov, 1963, Aulopora (Mastopora) sp. * corales rugosos: Fasciphyllum sp., Stauromatidium aff. marylandicum (Swartz, 1913), Cystimorpha indet. * estromatopôridos: Actinostroma? ex gr. clathratum Nicholson, 1886?, Plectostroma latens (Pocta, 1894) (muy frecuente), Schistodictyon? sp., estromatopôridos indet. * microproblematica: Fistullella undosa Shuysky, 1973 (muy frecuente), Renalcis granosus Vologdin, 1932.^11";
- 1345 s[1342] = "GALLI G. (1985).- Depositional Environments in the Devonian

Limestone Succession of the Cima Ombladet (Carnic Alps, Italy).- Facies 12: 97-112.- **FC&P 14-1**, p. 66, ID=1080^**Topic(s):** **carbonates; carbonates; Systematics;** **Stratigraphy:** **Devonian; Geography:** **Italy, Carnic Alps**^This study deals with a paleoenvironmental analysis of the shallow-water limestones in the Cima Ombladet succession (Carnic Alps, Italy), which range in age from Givetian to Frasnian. The major depositional environments are reef flat, open lagoon, semirestricted lagoon and sand cays. Their vertical and lateral variations suggest a regressive sequence. Rocks deposited within these sub-environments can be subdivided into twelve sub-units on the basis of lithological and faunal content. Rocks of the reef flat consist of an alternation of sparitic facies (detrital crinoidal facies, detrital crinoid-stromatoporoid facies, and detrital Thamnopora facies) and micritic facies (crinoidal facies, micritic Thamnopora facies). The open lagoon is characterized by Stringocephalus-Trypanopora facies, a thin-shelled brachiopod facies and a detrital brachiopod facies. The semirestricted lagoon environment includes the dark Amphipora facies and the dark ostracod-calcisphere micrite facies, which underwent reworking by means of lagoonal storms (detrital Amphipora facies). The sand cay consists of an intraclastic facies. The facies interrelationships can be explained by a general change in water energy responsible for the progradation of bioclast-intraclast sand bodies and the shift into the lagoons. This process has a modern analogue in most of the reefs inside the Great Barrier Reef, Australia. (Original Summary)^1";

1346 **s[1343]** = "KREUTZER L.H. (1990).- Mikrofazies, Stratigraphie und Palaeogeographie des Zentralkarnischen Hauptkammes zwischen Seewarte und Cellon.- Jb. Geol. B.-A. 133: 275-343. [in German, with English summary].- **FC&P 20-1.1**, p. 68, ID=2850^**Topic(s):** **carbonates; carbonates; Systematics;** **Stratigraphy:** **Devonian; Geography:** **Austria, Alps**^By a combination of microfacies analysis, stratigraphical and tectonical methods, the Devonian of the central Carnic Alps between Seewarte and Cellon was investigated in comparison with neighbouring areas. 14 profiles were taken, which were only accessible by alpinistic methods. 10 microfacies-types with 7 subtypes could be distinguished. Conodont samples and reef-fossils provided data for stratigraphical classification. Previous workers suggest that the Devonian rocks in the western Seewarte area developed in subtidal facies and in the eastern Cellon area, in forereef to pelagic facies. The central Kellerwand and Hohe warte was believed to represent an east-west orientated transition between the different facies types. The influence of the two subordinate nappes (Cellon subordinate-nappe and Kellerwand subordinate-nappe) was considered unimportant. As a result all further workers suggested a facies differentiation from the west to the east. New investigations discussed in this paper indicate that both the subordinate nappes are facies nappes: The Kellerwand nappe is developed in intertidal, back-reef or reef facies with more than 150 meters of Givetian reefs, the Cellon nappe in transition or pelagic facies. Overthrusting came from the south-southwest. After moving back the complicated tectonics (Abb. 33) there is a obvious north-south differentiation of facies. In comparison the facies change from the west to the east in the area is unimportant. Based upon facies differentiation, stratigraphy, tectonics and with analogies to neighbouring areas, a paleogeographical reconstruction for the central Carnic Alps was developed (Abb. 33-35). In spite of the difficulties encountered while sampling vertical walls and the destruction of fossils and sediment structure by diagenesis, an important gap was filled in the geology of the Carnic Alps.^1";

1347 **s[1344]** = "HUBMANN B. (1995).- Middle Devonian shallow marine deposits of the Graz Palaeozoic: fact and fiction for deposition under ecological stress.- Beiträge zur Paläontologie 20: 107-112.- **FC&P 25-2**, p. 69, ID=3172^**Topic(s):** **reefs, ecology;**

reefs; Systematics: ; Stratigraphy: Devonian;
 Geography: Austria, Styria^Physical / chemical ecoparameters
 which may have prevented the creation of a flourishing reef ecosystem
 within a Middle Devonian fossil rich coral-stromatoporoid succession
 are evaluated and factors responsible for development past a biostromal
 pioneer stage are discussed.^1";

1348 s[1345] = "HUBMANN B. (1993).- Ablagerungsraum, Mikrofazies und
 Palaeoekologie der Barrandeikalk-Formation (Eifelium) des Grazer
 Palaeozoikums.- Jb. Geol. B.-A. 136, 2: 393-461.- FC&P
 23-1.1, p. 60, ID=4128^Topic(s): carbonates microfacies;
 Systematics: ; Stratigraphy: Devonian Eif; Geography:
 Austria, Styria^The "Barrandei Limestone"; Formation of
 the Palaeozoic of the Graz area (Austria) represents a highly
 fossiliferous sequence whose stratigraphic boundaries are not clearly
 identifiable at this stage. Locally the sequence may range from Upper
 Emsian to lower Givetian. In this paper the depositional conditions of
 the formation are discussed. Four types of microfacies and thirteen
 types of submicrofacies have been recognized. The comparison of
 Wilson's types of microfacies with the Barrandei Limestone
 sequence suggests that this limestone was deposited in restricted,
 semirestricted and open platform environments and on the platform
 margin and foreslope. Microfacies and palaeoecological data indicate a
 depositional environment of very shallow water, with some biohermal and
 biostromal (reefal) development as well as areas of deeper water, i.e.
 quiet depositional conditions. Distribution patterns and growth habits,
 i.e. skeletal morphology and shape of colonies, especially of
 stromatoporoids and tabulate corals (favositids) and special
 composition of the faunal content (e.g. Thamnopora-Amphipora
 associations) indicate typical back reef biocoenoses. Also trace
 element concentrations support the sedimentological and
 palaeoecological evidence of the depositional environment. Deposition
 of higher energy mud facies is predominant. Also characteristic are
 sequences with a "muddying-upward trend"; which indicates
 sedimentation under stormy conditions ("tempestites"). The
 introduction into the system of large amounts of fine grained clastic
 material is a cyclic event that accounts for the alternating deposition
 of limestones, marls and shales and for the highly variable amounts of
 acid-insoluble residue in the limestone sequence itself. It is
 suggested that the cyclicity is a function of eustatic fluctuations
 (transgressions and regressions) as observed from the "Rheinische
 Schiefergebirge". Some taxa indicate palaeobiogeographical
 connections with the Rhenohercynian basin and the Aquitaine-Cantabrian
 terrane.^1";

1349 s[1346] = "KREUTZER L.H. (1992).- Photoatlas zu den variszischen
 Karbonat-Gesteinen der Karnischen Alpen (Oesterreich / Italien).-
 Abhandlungen der Geologischen Bundesanstalt 47: 1-129.- FC&P
 21-2, p. 58, ID=3360^Topic(s): carbonates; carbonates;
 Systematics: ; Stratigraphy: Variscan orogeny;
 Geography: Austria, Italy, Alps S^The Carnic Alps of Southern
 Austria and Northern Italy represent one of the very few localities on
 the Earth in which an uninterrupted fossiliferous sequence is exposed
 and well documented from Ordovician to Middle Triassic times. This
 paper describes and illustrates the Lower Paleozoic part of the
 mountain chain and in particular the Central Carnic Alps, where
 fieldwork only was possible by alpinistic methods (Kreutzer 1986,
 1990). During the Devonian in the Carnic Alps an ecological reef
 complex occurs with all facies belts ranging from intertidal to pelagic
 environments following upon an Ordovician / Silurian carbonate
 platform with pioneer fauna. The Lower Paleozoic rocks are
 chronologically documented and illustrated on 46 plates. The
 paleogeographical implications of the tectonically complicated Carnic
 Alps are presented in an updated version. Important sections are shown
 with stratigraphical specifications.^1";

- 1350 s[1347] = "AKOPIAN T. (ed.) (1974).- Atlas de la faune fossile de RSS d'Arménie [en Russe].- Académie des Sciences de la RSS d'Arménie, Eravan: 838 pp., 199 pls.- FC&P 3-1, p. 14, ID=5083^Topic(s): atlas of fossils; atlas of fossils; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian - Cretaceous; Geography: Armenia^36 articles traitant de la stratigraphie de l'Arménie et de la plupart des groupes d'Invertébrés du Dévonien au Quaternaire, ainsi que de quelques Mammifères. * Articles sur les Cnidaires: - Dévonien: Tetracoralla, Tabulata et Heliolitoidea, par V. A. Sytova, I. I. Chudinova et L. M. Ulitina: pp 31-45, pls 1-11; - Carbonifère: Anthozoa (Syrinoporida, Streptelasmata, Columnariida, Cystiphyllida), par A. S. Papoian et I. I. Chudinova: pp 69-76, pls 24-30; - Permien: Anthozoa (Tabulata, Tetracoralla), par T. G. Iiyina et I. I. Chudinova: pp 103-110, pls 43-48; - Trias: Tabulata, Tetracoralla, par I. I. Tchudinova: pp 149-150, pl. 68; - Crétace: Hexacoralla (Scleractinia), par E. I. Kuzmicheva: pp 208-211, pl. 95.^1";
- 1351 s[1348] = "PAPOYAN A.S. (1977).- The coral complexes of the Early Carboniferous in the South Transcaucasus and its relation with some biogeographical provinces.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et récifs coralliens fossiles; Paris, 1975]: 197-202.- FC&P 6-1, p. 26, ID=0063^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Transcaucasus^Recognizes 4 stratigraphically-restricted coral complexes in Transcaucasian province, which is an area of mixed Eurasiatic faunas.^1";
- 1352 s[1349] = "FERRARI A., PERRI C., VAI G.B. (1977).- Middle Carboniferous corals and conodonts from the Hercynian Farma "Massif" Tuscany, Italy.- Giornal. Geol., Ann. Mus. geol. Bologna ser. 2, 42, 1: 133-164.- FC&P 10-2, p. 70, ID=0806^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Italy, Tuscany^^1";
- 1353 s[1350] = "DELVOLVE J.J. (coord.) (1998).- Carbonifere a facies culm.- Synthese geologique et geophysique des Pyrenees 1, Cycle Hercynien [A. Barnolas & J. C. Chiron (coord.), 730 pp; Edition BRGM - ITGE, Orleans & Madrid]: 303-338.- FC&P 28-1, p. 13, ID=4243^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Pyrenees^[contains section on corals by Pierre Semenoff-Tian-Chansky (p. 307, tab. 7.4)]^1";
- 1354 s[1351] = "KOSTIC B., PAJIC V. (1972).- Die Mikrofauna und Korallen der Baschkirstufe des mittleren Karbons in Westserbien.- Ann. Geol. Penins. Balkan. 37, 1: 101-107.- FC&P 2-2, p. 17, ID=4804^Topic(s): microfossils; paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Bashk; Geography: Serbia w^^1";
- 1355 s[1352] = "MIHALY S. (1973).- Revision der Unterkarbonischen Korallen des Koeszar-Hegy von Szabadttyan.- Magyar Allarmi Foeltd Int. évi. Jelent. 1971: 249-276 [in Hungarian, with German summary].- FC&P 3-1, p. 27, ID=4885^Topic(s): revision; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: Hungary ^Die Fauna, die in den beiden Strukturbohrungen von 1969-1970 angetroffen worden ist, hat die Revision der fruheren Ergebnisse berechtigt. Im Kalkstein des bituminoesen Kalkstein Komplexes - dessen Maechtigkeit auf Grund der Bohrungen zwischen 40 und 70m variiert - wurden 10 Anthozoa-Arten gefunden, von denen 3 Arten den Tabulaten, 6 Arten der Pterocorallien, 1 Art den Heterocorallien angehoren. Besonders wichtige Angerbe fuer die Stratigraphie ist die grosse Anzahl der Heterocorallia Art Hexaphyllia mirabilis (Duncan) denn dies beschraenkt das Alter des Sedimentes eindeutig auf die Visee-Stufe des Unter Karbons, genauer gesagt auf die Dibunophyllum - 2 biozone des oberen Viseen. Auf Grund

- der stratigraphischen Reichweite der anderen Arten ist jedoch wohl moeglich, dass der ganze Komplex dem Viseen + der Basis des unteren Namur angehoert. Fuer die Richtigkeit der Altersbestimmung spricht auch des Vorhandensein der Art Gigantoproductus transdanubiana (Foeldvari).^1";
- 1356 s[1353] = "FELSER K.O., FLUGEL H.W. (1976).- Nachweis von Hexaphyllia sp. in den Vise1-Kalken der Magnesitlagerstatte Ycitsch [??] (Steirische Grauwackenzone).- Osterreichische Akad. Wissenschaften, Mathematisch-naturwissenschaftliche Klasse, Anzeige 9: 125-127.- FC&P 6-2, p. 16, ID=0127^Topic(s): taxonomy; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous Vise; Geography: Austria, Styria^Describes one specimen^1";
- 1357 s[1354] = "FELSER K.O. (1976).- Dibunophyllum cf. bipartitum (McCoy) aus dem schiefrigen Kalk des Haiiselberges bei Leoben (Oestliche Grauwackezone).- Osterreichische Akad. Wissenschaften, Mathematisch-naturwissenschaftliche Klasse, Anzeige 11: 189-192.- FC&P 6-2, p. 16, ID=0126^Topic(s): Rugosa, Dibunophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Austria, Leoben^Describes one specimen.^1";
- 1358 s[1355] = "FLUGEL H.W., FLUGEL E. (1996).- Umwachsung eines Gastropoden durch eine rugose Koralle: Ein Hinweis auf die primare Skelettmineralogie der Rugosa.- Palaentologische Zeitschrift 70, 1-2: 53-65.- FC&P 25-1, p. 28, ID=3000^Topic(s): mineralogy, calcite vs aragonite; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Austria, Carnic Alps^A primary calcitic skeleton mineralogy is indicated for the rugose coral Geyerophyllum carnicum Heritsch from the Late Carboniferous of the Carnic Alps (Austria) by the partial inclusion of a juvenile gastropod shell within the skeleton of the coral and by the carbonate cement sequence within the coral skeleton.^1";
- 1359 s[1356] = "FLUGEL H.W. (1972).- Revision der von I. Heritsch 1918, 1934 und A. Kuntschnig 1926 aus dem Unterkarbon von Noetsch (Noetschgraben-Gruppe) beschriebenen Rugosa.- Osterreichische Akad. Wissenschaften, Mathematisch-naturwissenschaftliche Klasse, Anzeige 1973, 109: 43-50.- FC&P 1-2, p. 13, ID=4640^Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Austria, Noetsch^1";
- 1360 s[1357] = "PERRET M.F., SEMENOFF-TIAN-CHANSKY P. (1971).- Coralliaires des calcaires carbonifères d'Ardengost (Hautes-Pyrénées).- Bulletin Soc. Hist. natur. de Toulouse 107, 3-4: 567-594.- FC&P 1-2, p. 17, ID=4660^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: France, Pyrenees^L'ensemble des Calcaires carbonifères d'Ardengost (H.-P.) se caractérise par la présence d'une faune assez variée et bien conservée de Coralliaires dont sont décrites les formes les plus significatives; il s'agit essentiellement de Tétracoralliaires appartenant aux Lithostrotionidae, Aulophyllidae, Cyathopsidae, Axophyllidae. Des indications sont données quant aux affinités et à l'âge de ces organismes qui relèvent pour la plupart du viséen supérieur.^1";
- 1361 s[1358] = "PAPOYAN A.S. (1975).- O sistematiceskom polozhenii roda Cystophrentis iz Nizhnecamennougol'nykh otlozheniy yuzhnogo Zakavkaz'ya (Armeniya). [systematics of Cystophrentis from the Lower Carboniferous of South Transcaucasus (Armenia)] .- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 205-210.- FC&P 5-1, p. 29, ID=5359^Topic(s): systematics; Rugosa, Cystophrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Armenia^[morphology of one species and systematic relationships of the genus]^1";

- 1362 s[1359] = "PLUSQUELLEC Y. (1989).- Increase in Turnacipora (Tabulata), from the Tournaisian of Transcaucasia.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 99-107.- FC&P 20-1.1, p. 61, ID=2527^Topic(s): increase; Tabulata, Turnacipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: Transcaucasus^Study of increase in a specimen of Turnacipora using serial acetate peels shows several types of increase within one corallum. All belong to the broad category of intravisceral increase but none begins with a simple basal mural pore (i.e. lateral increase). Of 4 cases of increase described 3 are variations on a basic type: 1, a basal mural pore partitioned by a structure derived from the wall, 2, a partitioned basal mural pore of mixed origin (partly angle mural pore), and 3, a basal mural pore derived from an angle mural pore (- intravisceral - poral increase). In the fourth case, the new wall stems partly from an altered tabella, partly from a pair of mural processes (- intravisceral - epitabular budding). This case may be teratological. Increase with a partitioned basal mural pore and/or screen-like basal mural pore may have evolved in the Michelininae during the Tournaisian.^1";
- 1363 s[1360] = "FLUGEL E., KRAINER K. (1992).- Allogenic and autogenic controls of reef mound formation: Late Carboniferous auloporid coral buildups from the Carnic Alps, Italy.- N. Jb. Geol. Palaeont. Abh. 185, 1: 39-62.- FC&P 21-2, p. 54, ID=3353^Topic(s): reefs; reefs; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U; Geography: Italy, Carnic Alps^The development of small-scaled auloporid coral mounds within the transgressive Late Carboniferous (early Kasimovian) highstand system tract of the Carnic Alps south of the Italian / Austrian border was chiefly controlled by global and regional conditions (rising sea-level and reduced terrigenous influx), rather than by autogenic biological factors. The tabulate coral Multithecopora did not framebuild but baffled homogenous micritic mud. This effect was enhanced by episodic slight increases of turbulence levels. Otherwise the mound sediment is the same as in background situations (calcareous siltite). This model differs from current reef mound models but may be applied to many fossil occurrences.^1";
- 1364 s[1361] = "PAPOYAN A.S., CHUDINOVA I.I. (1974).- Karbon. Korally (Syringoporida, Streptelasmata, Columnariida, Cystiphyllida). [in Russian].- Atlas iskopaemoy fauny Armyanskoy SSSR [atlas of fossil fauna of the Armenian SSSR; in Russian]; AN Arm. SSR: 69-76, pls 24-30; Erevan. [atlas of fossils] - FC&P 3-1, p. 14, ID=6255^Topic(s): Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Carboniferous; Geography: Armenia^^1";
- 1365 s[1362] = "PERRET M.F. (1973).- Rôle des organismes dans l'édification des dépôts carbonates de plate-forme: les calcaires carbonifères d'Ardengost.- Bulletin Centre Rech. Pau SNPA 7, 1: 239-244.- FC&P 3-1, p. 27, ID=4888^Topic(s): carbonate platforms; calcareous algae; Systematics: algae; Stratigraphy: Carboniferous Vise; Geography: France, Pyrenees^Parmi les nombreux organismes présents dans la formation calcaire carbonifère d'Ardengost, les Algues ont joué un rôle prépondérant en participant activement à la sédimentogenèse.^1";
- 1366 s[1363] = "NAKAZAWA K., ISHII K., KATO M., OKIMURA Y., NAKAMURA K., HARALAMBOUS D. (1975).- Upper Permian fossils from Island of Salamis, Greece.- Kyoto Univ., Faculty Science Mem., Ser. Geol. Mineral. 41, 2: 21-44.- FC&P 5-1, p. 29, ID=5358^Topic(s): paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian U; Geography: Greece, Salamis^[lists of corals are given; 3 species are described and illustrated]^1";
- 1367 s[1364] = "HOLZER H.-L., RAMOVŠ A. (1979).- Neue rugose Korallen aus

- dem Unterperm der Karawanken.- Geologija Razprave in Porocila 1: 1-20.- FC&P 9-2, p. 40, ID=0313^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: Alps, Karawanken^1";
- 1368 s[1365] = "KROPACHEVA G.S. (2000).- Novye vidy pozdnepermiskikh rugoz Zakavkaz'ya.- Sankt-Peterburgskiy Gosudarstvennyi Universitet 11 [Voprosy Palaeontologii]: 24-32.- FC&P 32-1, p. 22, ID=1719^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Transcaucasus^Description of the new taxa Lophocarinophyllum pulchrum, Ipciphyllum originale, Ipciphyllum araxense, Ipciphyllum admirabilis, Paraipciphyllum transcaasicum, wentzelophyllum grandivesiculosum, wentzelophyllum parvum, wentzelophyllum gnishikense from the Middle Permian (Guadalupian) Gnishik Horizon (Murgabian) of the Transcaucasus region, Armenia.^1";
- 1369 s[1366] = "ILYINA T.G., CHUDINOVA I.I. (1974).- Perm. Korally (Tabulata, Tetracoralla). [in Russian].- Atlas iskopaemoy fauny Armyanskoy SSSR [atlas of fossil fauna of the Armenian SSSR; in Russian]; AN Arm. SSR: 103-110, pls 43-48; Erevan. [atlas of fossils] - FC&P 3-1, p. 14, ID=6253^Topic(s): ; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Permian; Geography: Armenia^1";
- 1370 s[1367] = "FLUGEL E. (1987).- Reef Mound Entstehung: Algen-Mounds im Unterperm der Karnischen Alpen.- Facies 17: 73-90.- FC&P 16-2, p. 28, ID=2070^Topic(s): reefs, algal mounds; reefs; Systematics: algae; Stratigraphy: Permian L; Geography: Alps, Carnic^The coral patch-reef of Laisacker (Neuburg a.d. Donau, Southern Franconian Alb) exhibits three facies zones: the reef core consists of reef debris, there is almost no reef framework. The core facies, interfingering with the reef debris facies is built up by fine-grained reef detritus with intercalated coarse-grained layers of partly high porosity (up to 24%). They mainly consist of coral fragments (up to 83%) and reach 0.80 m in thickness. These coarse-grained layers have been formed by storms. The interreef facies corresponds to massive limestones. Destruction of the reef framework was favoured by bioerosion. The high still open porosity of the coarse-grained reef rubble was caused by high freshwater flow rates delimiting cementation and favouring dissolution.^1";
- 1371 s[1368] = "FLUGEL E., KOCHANSKY-DEVIOE V., RAMOVŠ A. (1984).- A Middle Permian calcisponge / algal / cement Reef: Straza near Bled, Slovenia.- Facies 10: 179-256.- FC&P 13-2, p. 54, ID=0595^Topic(s): reefs; reefs; Systematics: Porifera algae; Stratigraphy: Permian M; Geography: Slovenia^Middle Permian reef limestones exposed at the localities of the Straza quarry, Straza Hill and Bohinjska Bela near Bled (northwestern Slovenia) have been studied with respect to microfacies and paleontological criteria.Allochthonous carbonates (limestone breccia represented by cement-rich litho/bioclastic rudstones; matrix-rich poorly sorted litho/bioclastic rud/floatstones; coarse-grained lithoclastic packstones) are present in far greater quantities than autochthonous carbonates (calcisponge boundstones and Archaeolithoporella/calcisponge boundstones with syndimentary botryoidal carbonate cements; bioclastic crinoidal packstones) in the Straza quarry. Straza Hill is characterized by fine-arenitic bioclastic grainstones with foraminifers and algae.^1";
- 1372 s[1369] = "FLUGEL H.W. (1980).- Permosoma Jaekel 1918, ein Problematikum aus dem Perm Siziliens.- Palaeontographica A167, 1-3: 1-9.- FC&P 10-1, p. 51, ID=5992^Topic(s): problematic; ? Tabulata, Permosoma; Systematics: problematica; Stratigraphy: Permian; Geography: Italy, Sicily^Permosoma Jaekel 1918 consists of a chambered skeleton, the single chambers of which are connected. They have been closed externally by a movable operculum. within the chambers there

exists an inner skeleton (crypta) that seems to have consisted, originally, of organic material and that is separated from the walls of the chambers by an `"intervallum"`. Externally it opens in canals. A similar skeleton is shown by Khmeria Mansuy 1914. The systematic position of both is unknown. [original summary; Permosoma has also been recorded by Wendt (1977) from Permian strata in Tunisia and assigned to the tabulate corals]^1";

- 1373 s[1370] = "FLAJS G., HUSSNER H., FENNINGER A., HUBMANN B. (1996).- Upper Permian Richthofeniid Buildups of Chios Island (Aegean Sea) - Preliminary Report.- Jb. Geol. B.-Anst. 139, 1: 21-28.- FC&P 25-1, p. 52, ID=3064^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian U; Geography: Greece, Chios^Gymnocodiacean limestones of lower Upper Permian age from the northern part of the island of Chios (Greece) include mass occurrences of richthofeniid brachiopods. Paleobiological and ecological data indicate a calm water environment for these reefs. Field observations as well as conclusions from the investigation of thin sections provide new evidence for the mode of life of richthofeniids. In contrast to previous functional models favouring richthofeniids as encrustors or mudstickers, they are recliners according to our interpretation.^1";
- 1374 s[1371] = "FLAJS G., HUSSNER H., FENNINGER A., HUBMANN B. (1996).- A Richthofeniid-Microbial-Sponge Buildup in the Upper Permian of Chios (Greece).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 41, ID=3607^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian U; Geography: Greece, Chios^The "Gymnocodiacean Limestone" in the Upper Permian of Chios contains in its lower part abundant Richthofeniids. They are concentrated in the basal part of a reef-like buildup which is constructed in its upper part mainly by sponges and abundant microbial structures. The reef is interpreted as a shallow water buildup grown under low energy conditions. Our observations suggest that the Richthofeniids of Chios lived as recliners acting as substrate stabilizers and bafflers.^1";
- 1375 s[1372] = "FLUGEL E. (ed.) (1981).- Permian Reefs in the Southern Alps, Triassic Reef and Lagoonal Facies in the Northern Alps, Upper Triassic Basinal Facies in the Northern Alps, Upper Jurassic Platform and Basinal Facies.- Excursion Guidebook of the International Symposium on Triassic Reefs, 252 pp; Inst. f. Palaeontologie, Erlangen-Nuernberg Universitaet.- FC&P 10-2, p. 9, ID=6044^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian Triassic; Geography: Alps^[excursion guidebook]^1";
- 1376 s[1373] = "FLUGEL E. (1979).- Paleology and Microfacies of Permian, Triassic and Jurassic Algal Communities of Platform and Reef Carbonates from the Alps.- Bulletin Centre Rech. Explor.-Prod. Elf-Aquitaine 3, 2: 569-587; Pau.- FC&P 10-1, p. 26, ID=5905^Topic(s): reef carbonates, ecology, microfacies; reef carbonates; Systematics: ; Stratigraphy: Permian Triassic Jurassic; Geography: Alps^1";
- 1377 s[1374] = "RAMOVŠ A., TURNSEK D. (1991).- The Lower Norian (Latian) Development with Coral Fauna on Razor and Planja in the northern Julian Alps (Slovenia).- Razprave IV razr. SAZU 32: 175-213.- FC&P 21-2, p. 17, ID=3305^Topic(s): reefs; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic Nor; Geography: Slovenia, Julian Alps^Above Julian-Tuvalian bedded limestone the cephalopod limestone of Hallstatt facies (anatropites domain) follows which passes conformingly into bedded Dachstein limestone. It is overlain by Dachstein reef limestone, which is, on Razor and Planja, built of corals, sponges and spongiostromate encrusting formations as primary reef builders. Pelecypods, snails, brachiopods and crinoids are reef dwellers remaining in nests. Seven species of corals (among them three new: Protoheterastraea razorensis,

- Cyclophyllia raricorallita, Margarosmia nova) are described systematically. The bedded and reef Dachstein limestones are ranged to the Lower Norian (Latian).^1";
- 1378 s[1375] = "TURNSEK D., SENOWBARI-DARYAN B. (1994).- Upper Triassic (Carnian-Lowermost Norian) corals from the Pantokrator limestone of Hydra.- Abhandlungen der Geologischen Bundesanstalt 50: 477-507.- FC&P 23-2.1, p. 52, ID=4395^Topic(s): taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic Carn - Nor; Geography: Greece, Hydra Isl^From the Pantokrator limestone of the island Hydra, Greece, 24 species of corals belonging to 14 genera are described. Two genera and seven species are new. The corals confirm a Carnian to Lowermost Norian age of the studied localities. The found corals can be compared to south European localities like Italy, Slovenia, south Hungary, Romania and Turkey, and seem to predominate in southern shallows of the Tethys. Nevertheless, almost one third of the new species indicate special and somewhat different environments in Hydra during the Carnian period. ^1";
- 1379 s[1376] = "RONIEWICZ E. (1974).- Rhaetian corals of the Tatra Mountains.- Acta Geologica Polonica 24, 1: 97-116.- FC&P 4-1, p. 45, ID=5172^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic Rhaet; Geography: Poland, Tatra Mts^^1";
- 1380 s[1377] = "TURNSEK D., BUSER S., OGORELEC B. (1982).- Carnian Coral-sponge Reefs in the Amphiclina Beds between Hudajuzna and Zakriz (Western Slovenia).- Slovenian Academy of Sciences and Arts, Ljubljana 1-48.- FC&P 13-1, p. 49, ID=0531^Topic(s): reefs; reefs; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: Triassic Carn; Geography: Slovenia^The hydrozoans Disjectopora cf. dubia and Balatonia kochi are described and figured.^1";
- 1381 s[1378] = "KLEEMANN K. (1994).- Mytilid bivalve Lithophaga in Upper Triassic coral Pamiroseris from Zlambach Beds compared with Cretaceous Lithophaga alpina.- Facies 30: 151-134.- FC&P 23-1.1, p. 60, ID=4129^Topic(s): coral boring bivalves; Bivalvia lithofaga; Systematics: Mollusca Cnidaria; Anthozoa; Stratigraphy: Triassic U; Geography: Austria^The mytilid genus Lithophaga is confirmed for the Upper Triassic. The Rhaetian specimen, boring the dead part of a coral, is compared with the Senonian L. alpina, which is associated with live coral.^1";
- 1382 s[1379] = "SENOWBARI-DARYAN B., MATARANGAS D., VARTIS-MARTARANGAS M. (1996).- Norian-Rhaetian Reefs in Argolis Peninsula, Greece.- Facies 34, 1: 77-82.- FC&P 25-2, p. 76, ID=3183^Topic(s): reefs; reefs; Systematics: Porifera algae Cnidaria; Anthozoa; Stratigraphy: Triassic Nor - Rhaet; Geography: Greece, Argolis^Upper Triassic to Lower Jurassic shallow-water carbonate sequences of the'Pantokrator limestones' are widely distributed in the Argolis Peninsula, southern Greece. within this sequence are some reef or reefal structures. In the Mavrovouni Mountains, near Sarmeika, 6km SE of the ancient theatre of Epidavros (Argolis Peninsula), a Norian-Rhaetian reef complex has been identified. This is the first well-documented Norian-Rhaetian reef in Greece. The main reef builders are coralline sponges ('sphinctozoans,"inozoans', and sclerosponges), followed by dendroid, cerioid, and solitary corals, and algae. The reef type corresponds to a'sponge-coral reef.^1";
- 1383 s[1380] = "SENOWBARI-DARYAN B., SCHAFFER P. (1979).- Neue Kalkschwämme und ein Problematikum (Radiomura cautica n.g., n.sp.) aus Oberrhät-Riffen südlich von Salzburg (Nördliche Kalkalpen).- Mitt. oesterr. geol. Ges. 70: 17-42. [for 1977].- FC&P 10-1, p. 58, ID=6015^Topic(s): ; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Triassic Rhaet; Geography: Alps N^^1";
- 1384 s[1381] = "BIZZARINI F., BRAGA G. (1978).- Upper Triassic new genera

and species of fair and questionable bryozoa and chaetetida from S. Cassiano Formation of the Dolomites (Eastern Alps).- Bolletino della Societa Paleontologica Italiana 17: 28-48.- FC&P 8-1, p. 49, ID=0200Topic(s): microstructures, taxonomy; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Triassic U; Geography: Italy, Dolomites^Includes considerable discussion of the microstructures of chaetetids and sclerosponges and descriptions of two new genera.^1";

1385 s[1382] = "REITNER J., ENGESER T. (1989).- Chaetosclera klipsteini n.gen. n.sp. (Halichondriida, Demospongiae) aus dem Unterkarn der Cassianer-Schichten (Dolomiten, Italien).- Mitt. Geol.-Palaeont. Inst. Univ. Hamburg 68: 159-165. [in German, with English summary].- FC&P 20-1.1, p. 74, ID=2862Topic(s): structures, new taxa; Porifera, Demospongiae, Chaetosclera; Systematics: Porifera; Demospongiae; Stratigraphy: Triassic Carn; Geography: Italy, Dolomites^The new "coralline" sponge Chaetosclera klipsteini n.gen. n.sp. from the Early Carnian Cassian Beds (Dolomites, Italy) is described. The chaetetid basal skeleton is composed of aragonitic spherulites. The spicular skeleton consists of long styles which are arranged in groups of 3 to 4 inside of the skeleton walls or along the internal sides of the tubes. The scleres and the sclere arrangement indicates a halichondriid demosponge. It is the first record of a halichondriid demosponge with a basal skeleton from the Triassic.^1";

1386 s[1383] = "MASTANDREA A., RUSSO F. (1995).- Microstructure and diagenesis of calcified Demosponges from the Upper Triassic of the northeastern Dolomites (Italy).- Journal of Paleontology 69, 3: 416-431.- FC&P 24-2, p. 92, ID=4540Topic(s): microstructures, diagenesis; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Triassic U; Geography: Italy, Dolomites^The calcareous skeletons of 17 species of Triassic demosponges from the northeastern Dolomites have been analyzed for microstructure and diagenesis. The four microstructures recognized (irregular, spherulitic, penicillate aragonitic, and homogeneous granular Mg calcite) are described in terms of mineralogy; shape, dimension, and arrangement of microstructural elements; mode of growth; and possible biomineralization. The diagenesis in these sponge carbonate skeletons is of an aggrading type that occurred in diagenetic units, semi-closed systems, delineated by organic phragmas, which controlled the flux of diagenetic fluids. we tentatively interpret these phragmas as the remains of water-insoluble macromolecules for space delineation during the biomineralization process. In the aragonitic skeletons the preservation grade is correlated with Sr content, and the replacement of aragonite by calcite is marked by a Sr value around 4,000 p.p.m. Calcitized aragonite still retains a detectable amount of Sr. In Mg calcite skeletons the continuous and regular increase of grain size is inversely correlated with Mg content and directly with the distance from the organic phragmas.^1";

1387 s[1384] = "KRAINER K., MOSTLER H. (1992).- Neue Hexactinellide Poriferen aus der Suedalpinen Mitteltrias der Karawanken (Kaernten, Oesterreich).- Geol.-Palaeont. Mitt. Innsbruck 18 131-150.- FC&P 22-1, p. 49, ID=3419Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Triassic Anis; Geography: Austria, Alps S^In the southalpine Triassic of the central Karawanken Mountains (Carinthia, Austria) Late Anisian reef limestones at places are sharply overlain by a thin sequence of red pelagic limestones. These pelagic limestones are dated as Early Fassanian (Xenoprotrachyceras reitzi zone; Spongosilicarmiger italicus zone; Paragondolella trammeri praetrammeri zone) based on conodonts and radiolarians. The siliceous sponges from the red nodular limestone (Weisse Wand Member) of Early Fassanian age represent an autochthonous soft-ground fauna of an

aphotic pelagic environment. Demospongiae are represented by 42 types of spicules, three of them being new. They constitute only about 30% of the total fauna, the rest is comprised by the Hexactinellida. Calcisponges are lacking. The Hexactinellida are represented by 55 types of spicules, 11 of them are new. Three of them, monospecific genera, belonging to the Amphidiscophora, Hexactinosa and *Lyssakinosa* are described. Of importance is the first appearance of the genus *Farrea* (Clavulari), which till now could only be traced back to the Late Cretaceous and now must be taken back to the Fassinian. The same is true for the genus *Eurete*, whose oldest species have been reported from the Late Cretaceous till now. Finally the stratigraphic significance of the siliceous sponges is discussed to point out that distinct differences exist between siliceous sponges of the Early and Late Fassinian, although they are all derived from the same environment.¹¹;

- 1388 s[1385] = "KOLLAROVA-ANDRUSOWA V. (1983).- Obertriassische Heterastridien (Hydrozoa) in den Westkarpaten. [in German, with English abstract].- Geol. Carpathica 34, 2: 151-186.- FC#038;P 12-2, p. 45, ID=6244Topic(s): Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Triassic U; Geography: Slovakia, CarpathiansDie Arbeit enthält die erste palaontologische Bearbeitung ober-triassischer (sevatischer) Heterastridien (und die Beschreibung von Placites sp.ind.) aus Hallstätter Kalken des Slowakischen Karstes (Lokalität Silicka Brezova). Alle Exemplare des Einzelfundes werden zu der Unterart Heterastridiwn conglobatum conglobatum (Reuss 1865) gereiht. Die ersten Knollen der Gattung Heterastridiwn wurden in obertriassischen (Tisovec- ? Furmanec-) Riffkalken des Gebirges Stratsenske hory festgestellt.";
- 1389 s[1386] = "CUIF J.-P. (1976).- Recherches sur les Madreporaires du Trias IV. Formes cerio-meandroides et thamnasteroides du Trias des Alpes et du Taurus sudanatolien.- Sciences de la Terre 53, 65-195.- FC#038;P 6-1, p. 28, ID=0088Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Alps, TaurusMicrostructural study of Triassic cerioid-meandroid and thamnasterioid Scleractinians from the Ladino-Carniain of the Dolomites, the Norian of the Taurus Mountains and the Rhaetian of Austria. Unusually good preservation of microstructural detail in original aragonite has allowed a detailed analysis of the Stylinidae, Astreaeida and Thamnasteriidae and has shown these groups to be heterogenous with respect to their microstructure. A new grouping of genera to form higher taxa is suggested based on distinct microstructural types.";
- 1390 s[1387] = "CUIF J.-P. (1977).- Caracteres et affinites de Gallitellia, nouveau genre de Madreporaire du Carnien des Dolomites.- Bureau Recherches Geologiques et Minieres Memoir 89: 256-263 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC#038;P 6-1, p. 29, ID=0089Topic(s): taxonomy; Scleractinia, Gallitellia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Carn; Geography: Italy, Dolomites";
- 1391 s[1388] = "FANTINI-SESTINI N., MOTTA E. (1984).- I coralli del calcare di Zu (Triassico superiore) della Lombardia (Italia).- Rivista Italiana di Paleontologia e Stratigrafia 89, 3: 343-376.- FC#038;P 15-1.2, p. 37, ID=0832Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Italy, LombardyThe present study deals with a detailed taxonomic study of the Scleractinia from the middle and upper parts of the Calcare di Zu (Zu Limestone), a formation outcropping in the Central Lombardy and dated as Rhaetian (Late Triassic). The specimens examined belong to the Collections of the Natural History of the Cities of Bergamo and Milano. Some specimens deposited at the Museum in Milano belong to the original collection of

- 1392 Stoppani (figured by this author in 1857 to 1865 papers).^1";
s[1389] = "RONIEWICZ E., MICHALIK J. (2002).- Carnian corals from the Malé Karpaty Mountains, Western Carpathians, Slovakia.- *Geologica Carpathica* 53, 3: 149-157.- FC&P 32-1, p. 29, ID=1732^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Carn; Geography: Slovakia, Carpathians^Carnian small scleractinian coral fauna found in the Malé Karpaty Mts (Western Carpathians), is closely related to early late Carnian corals of the Dolomites (Southern Alps). The former fauna includes three new genera: Carpathiphyllia (type species: C. regularis n.sp.), Pontebbastraea (type-species: Stylophyllopsis pontebbae Volz), Protostylophyllum (type-species: Stylophyllum praenuntians Volz), and a new species of Volzeia (V. carpathica n.sp.). The Carnian age of the upper part of the Veterlin platform sequence proves the continuous development of Triassic carbonate platform, which was never interrupted by the Lunz/Rheingraben clastic interval (unlike to the Choc-and/or Lunz Nappe sequences).^1";
- 1393 s[1390] = "RONIEWICZ E., MANDL G.W., EBLI O., LOBITZER H. (2007).- Early Norian scleractinian corals and microfacies data of the Dachstein limestone of Feisterscharte, Southern Dachstein Plateau (Northern Calcareous Alps, Austria).- *Jahrbuch der Geologischen Bundesanstalt* 147, 3-4: 577-594.www.geologie.ac.at/filestore/download/JB1473_577_A.pdf.- FC&P 35, p. 83, ID=2403^Topic(s): microfacies; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Nor; Geography: Austria, Dachstein^This is the first report concerning an Early Norian coral fauna from the Northern Calcareous Alps. The coral-bearing limestones outcrop in the vicinity of the Feisterscharte, in the southern Dachsteinplateau. In this Alpine region, aside from the Dachsteinplateau, Early Norian corals have been recorded only from the Gosaukamm range, which is also a part of the Dachstein massif. The exposures at Feisterscharte show one of the most taxonomically diversified Early Norian coral assemblages known so far. In the assemblage, Carnian genera are prevailing in number, and Early Norian index species, Pachysolenia cylindrica Cuif and Pachydendron microthallos Cuif are frequent. The Early Norian age is proved by conodonts. Some remarks on microfacies and foraminifera content of the reef and associated limestones are given. The rocks represent the initial growth stage of the Norian to Rhaetian Dachstein carbonate platform.^1";
- 1394 s[1391] = "RONIEWICZ E. (1996).- Upper Triassic solitary corals from the Gosaukamm and other North Alpine regions.- *Oesterr. Akad. Wiss. math.-naturw. Kl. Sitzungsber. Abt.1* (1995) 202: 3-41.- FC&P 25-1, p. 10, ID=2996^Topic(s): ; Scleractinia, solitary; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Austria, Gosaukamm^^1";
- 1395 s[1392] = "RONIEWICZ E., MICHALIK J. (1991).- A new Triassic scleractinian coral from the High Tatra Mountains (Western Carpathians, Czecho-Slovakia).- *Geologica Carpathica* 42, 3: 157-162.- FC&P 21-1.1, p. 20, ID=3207^Topic(s): new taxa; Scleractinia, Meandrostylophyllum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Slovakia, Tatra Mts^This is a description of a stylophyllid coral, Meandrostylophyllum gen.n. related to Meandrostylis Frech.^1";
- 1396 s[1393] = "RONIEWICZ E., MICHALIK J. (1991).- Zardinophyllum (Scleractinia) from the Upper Triassic of the Central western Carpathians (Czecho-Slovakia).- *Geologica Carpathica* 42, 6: 361-363.- FC&P 21-1.1, p. 20, ID=3208^Topic(s): ; Scleractinia, Zardinophyllum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Rhaet; Geography: Carpathians w^Paper describes the first finding of Rhaetian Zardinophyllum. Earlier records of the genus were limited to the

- Carnian beds of the Alps.^1";
- 1397 s[1394] = "FANTINI-SESTINI N. (1990).- I Coralli del Calcare di Zu (Triassico Superiore) della Lombardia (Italia). Nuove Segnalazioni.- Rivista Italiana di Paleontologia e Stratigrafia 96, 1: 103-110.- FC&P 22-1, p. 42, ID=3407^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Italy, Lombardy^Three scleractinian coral species of the family Stylophyllidae from the late Triassic of the southern Alps are described.^1";
- 1398 s[1395] = "RONIEWICZ E. (1992).- Norian (Sevastian) scleractinian corals of the Gosaukamm Range (Alps, Upper Austria). Preliminary report.- Österreichische Akademie der Wissenschaften, mathematisch-naturwissenschaftliche Klasse, Anz. 129: 35-36.- FC&P 22-2, p. 28, ID=3487^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Nor; Geography: Austria, Gosaukamm^1";
- 1399 s[1396] = "RONIEWICZ E., MICHALIK J. (1998).- Rhaetian scleractinian corals in the western Carpathians.- Geologica Carpathica 49, 6: 391-399.- FC&P 28-2, p. 30, ID=4022^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Rhaet; Geography: Carpathians W^The paper presents the distribution and taxonomy of the Rhaetian coral fauna in the Tatric, Fatric, Hronic and Silicic paleogeographical zones of the western Carpathians. The taxonomic spectrum of the corals from the Fatric zone is the most typical of the Carpathians, and resembles that of the Alps in the abundance of reimaniphylliid corals and frequent phaceloid growth forms, but it differs from the Alpine spectrum in its lower generic diversity. The assemblage from the northernmost zone, formed by the Tatric Superunit, is closest to the Early Jurassic fauna from the British Isles. Two new species are described: Zardinophyllum carpathicum sp.n. and Stylophyllopsis bobrovensis sp.n.^1";
- 1400 s[1397] = "MONTANARO-GALLITELLI E. (1973).- Microstructure and septal arrangement in a primitive Triassic Coral.- Bolletino della Societa Paleontologica Italiana 12, 1: 8-22.- FC&P 3-2, p. 45, ID=4976^Topic(s): microstructures, taxonomy; Scleractinia, Protoheterastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Italy^A research through optical and electron scanning microscope has been developed on more than 120 specimens of an Alpine Triassic single or phaceloid coral, here still named Protoheterastraea leonhardi (Volz) (pars). The specimens are still preserved in their original mineralogical composition (aragonite, with high strontium content) and structure. * Bilateral symmetry of septal insertion, peripheral insertion of septa two-by-two, absolute predominance of protosepta, non cyclic insertion of metasepta, are all characters more reliable to the late Paleozoic Rugosa than to the Scleractinia. On the other hand, no pinnate septal insertion occurs, as in Rugosa, and a theca is constantly present as an essential element of the skeleton. * Theca is given by aragonitic fibrolamellae, longitudinally finely folded. Contiguous, terminal surfaces of c-axes of aragonitic aggregates of contiguous fibrolamellae [are] knit together and give origin to a typical fibrous tissue. * Septa - discontinuous, frequently spiny and inwardly inclined - seem to have a fibrolamellar microstructure too: they seem to arise from a progressive infolding of thecal fibrolamellae. This structure cannot be relied either to the Rugosa or to the Scleractinia. * Further investigations are in course on the peculiar structure of Protoheterastraea leonhardi (Volz) (pars).^1";
- 1401 s[1398] = "MONTANARO-GALLITELLI E. (1974).- Microstructure and septal arrangement in a primitive Triassic coral.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 327-344.- FC&P 4-1, p. 18, ID=5392^Topic(s):

- microstructures, septal arrangement; Scleractinia; Systematics:
 Cnidaria; Scleractinia; Stratigraphy: Triassic;
 Geography: Italy^^1";
- 1402 s[1399] = "SCHAFER P., SENOWBARI-DARYAN B. (1978).- Neue Korallen
 (Scleractinia) aus Oberrhaet-Riffkalken suedlich von Salzburg
 (Noerdliche Kalkalpen, Oesterreich).- Senckenbergiana lethaea 59, 1/3:
 117-135.- FC&P 10-1, p. 29, ID=5932^Topic(s): new
 taxa; Scleractinia; Systematics: Cnidaria; Scleractinia;
 Stratigraphy: Triassic, Rhaet; Geography: Alps N^^1";
- 1403 s[1400] = "SESTINI N.F. (1990).- I Coralli del Calcare di Zu (Triassico
 Superiore) della Lombardia (Italia). Nuove Segnalazioni.- Rivista
 Italiana di Paleontologia e Stratigrafia 96, 1: 103-110.- FC&P
 19-2.1, p. 37, ID=2756^Topic(s): taxonomy; Scleractinia,
 Stylophyllidae; Systematics: Cnidaria; Scleractinia;
 Stratigraphy: Triassic U; Geography: Italy, Lombardy^This
 paper deals with the description and illustration of three species of
 Stylophyllidae from the Calcare di Zu (Zu Limestone) of Late Triassic
 age. Stylophyllum paradoxum Frech, Stylophyllum polyacanthum Reuss and
 Stylophyllum pygmaeum Frech are found for the first time in the Bergamo
 area, associated to the large coral fauna, already described, commonly
 occurring in the same formation of the Southern Alps.^1";
- 1404 s[1401] = "STOLARSKI J., RONIOWICZ E., GRZYCUK T. (2004).- A model for
 furcate septal increase in a Triassic scleractiniamorph.- Acta
 Palaeontologica Polonica 49, 4: 529-542.- FC&P 33-2, p. 38,
 ID=1178^Topic(s): structures, furcate septa; Scleractiniamorpha;
 Systematics: Cnidaria; Scleractinia; Stratigraphy:
 Triassic; Geography: Italy, Dolomites^Triassic corals with
 septa that branch repeatedly and centripetally are here assigned to a
 new genus Furcophyllia. Septa of F. septafindens (Volz, 1896),
 re-described from the Italian Dolomites, are composed of 3-10 blades
 ("septal brooms"). Distances between adjacent septa and their
 branches are equal, and the thickness of all blades is approximately the
 same throughout ontogeny. However, none of the septal brooms show the
 same branching pattern. Proposed herein is a simple computer model that
 reproduces septal pattern, similar to that of Furcophyllia, based on a
 minimal set of rules: (i) uniform coverage of intra-calicular space;
 (ii) regular bifurcations following some probability; (iii) keeping
 some minimal distance between septal branches. The elaborate septal
 pattern of Furcophyllia suggests a distinct organization of the
 polyp's soft tissue, especially mesenteries whose appearance in
 modern corals is associated with insertion of sclerosepta. Hypothesis
 1 suggests that mesenterial pairs flanked only "septal brooms"
 and that septal branches functionally corresponded with septal
 microarchitecture. Hypothesis 2 suggests that mesenterial pairs
 developed between all septal branches that functionally correspond with
 conventional septa. Delicate menianae, which developed on Furcophyllia
 septal faces (and many other Triassic corals) resemble similar septal
 microarchitecture of the Recent agariciid Leptoseria fragilis and may
 be closely related to the suspension feeding strategy of this coral. The
 furcate septal arrangement in Furcophyllia is unique among Triassic
 corals, and generally, among Mesozoic and Cenozoic corals. The only
 analogous corals are Cretaceous aulastreaeopoids (e.g., Preverastrea,
 Paronastrea), Trochoidomeandra, and some Jurassic rhipidogyrids having
 secondary (apophysal) septal branches. In some Recent caryophylliids
 (Trochocyathus rhombocolumna, Phacelocyathus flos) primary septa may
 also split dichotomously and centripetally.^1";
- 1405 s[1402] = "FLUGEL E., SENOWBARI-DARYAN B., RIEDEL P. (1988).-
 Pantokratoria n.g. aus dem Karn (Obertrias) von Hydra (Griechenland)
 und der Dolomiten (Suedalpen) - eine Sclerospongie?.- Geologica et
 Palaeontologica 22: 73-79. [in German, with English summary].-
 FC&P 17-2, p. 35, ID=2197^Topic(s): ; Porifera
 Sclerospongiae; Systematics: Porifera; Sclerospongiae;
 Stratigraphy: Triassic Carn; Geography:

- Greece^Pantokratoria fasciculata n.g., n.sp., is described from the Carnian (Upper Triassic) Pantokrator limestone of the Greek island Hydra and the Cordevolian Cassian Beds of the Lago di Misurina (Dolomites, Italy). The possible systematic assignment of the species to sclerosponges is discussed.^1";
- 1406 s[1403] = "CUIF J.-P. (1974).- Rôle des Sclérosponges dans la faune récifale du Trias des Dolomites (Italie du Nord).- Geobios 7, 2: 139-154.- FC&P 4-1, p. 47, ID=5189^Topic(s): reefs; Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Triassic; Geography: Italy, Dolomites^^1";
- 1407 s[1404] = "REITNER J. (1987).- A new calcitic sphinctozoan sponge belonging to the Demospongiae from the Cassian Formation (Lower Carnian, Dolomites, northern Italy) and its phylogenetic relationships.- Geobios 20, 5: 571-589.- FC&P 17-1, p. 36, ID=2147^Topic(s): systematics; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Triassic Carn; Geography: Italy, Dolomites^A new species of a coralline sponge, Cassianothalamia zardinii n.gen. n.sp., from the Lower Carnian Cassian Beds (northern Italy) is described. The new species possesses a secondary thalamid basal skeleton with a spongocoel and the internal structure is constructed of horizontal elements (trabecula) and vesiculae. The microstructure of the basal skeleton is composed of an irregular high Mg-calcite. From the spicular skeleton aster-microscleres can be preserved. In rare cases, monaxonid megascleres can also be found. Therefore the new sponge is probably a representative of the demospongid order Hadromerida.^1";
- 1408 s[1405] = "RIEDEL P., SENOWBARI-DARYAN B. (1989).- Coelospongia ramosa n.sp. (Sphinctozoa, Porifera) aus karnischen Riffkalken der Westkarpaten (Ungarn) und den Pantokratorkalken der Insel Hydra (Griechenland).- Paläontologische Zeitschrift 63, 3-4: 183-191.- FC&P 19-1.1, p. 61, ID=2689^Topic(s): Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Triassic Kar; Geography: Hungary, Greece^^1";
- 1409 s[1406] = "SENOWBARI-DARYAN B., DI STEFANO P. (1988).- Amblysiphonella maxima n.sp., a new Sphinctozoan sponge from Upper Triassic reefs in Silicy.- Bolletino della Societa Paleontologica Italiana 27, 1: 17-21.- FC&P 19-1.1, p. 62, ID=2691^Topic(s): new taxa; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Triassic U; Geography: Italy, Sicily^^1";
- 1410 s[1407] = "MULLER-WILLE S., REITNER J. (1993).- Palaeobiological Reconstructions of selected Sphinctozoan Sponges from the Cassian Beds (Lower Carnian) of the Dolomites (Northern Italy).- Berliner geowissenschaftliche Abhandlungen E09: 253-281.- FC&P 22-2, p. 91, ID=3539^Topic(s): biology; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Triassic Carn; Geography: Italy, Dolomites^Palaeobiological models of four selected species of sphinctozoan coralline sponges from the Cassian Beds (Lower Carnian, Dolomites) have been established using, among others, luminescence technique. The latter has been successfully used to estimate the organic content and diagenetic history of skeletons. Recent investigations yield the differentiation of three steps in the secretion of the skeleton in coralline sponges, according to which skeletal elements can be classified. The identification of these elements renders information on the way of secretion of the basal skeleton, the relative position of the soft tissue, and the function of skeleton. Two basic types of sphinctozoan organisation can be distinguished: a matrix type, where a rigid framework, secreted in an organo-spicular matrix penetrates the soft tissue (as in stromatoporoid coralline sponges) and a cortex type, where the skeleton is secreted by a specialized subdermal layer (cortex) surrounding the sponge body. These organizational types bear no phylogenetic implication.^1";
- 1411 s[1408] = "SENOWBARI-DARYAN B. (1978).- Neue Sphinctozoen (segmentierte

- Kalkschwaemme) aus den oberrhaetischen Riffkalken der noerdlichen Kalkalpen (Hintersee, Salzburg).- *Senckenbergiana lethaea* 59, 4/6: 205-227.- **FC&P 10-1**, p. 27, ID=5913^**Topic(s):** ; Porifera, Sphinctozoa; **Systematics:** Porifera; Sphinctozoa; **Stratigraphy:** Triassic, Rhaet; **Geography:** Alps N^1";
- 1412 **s[1409]** = "SENOWBARI-DARYAN B. (1980).- Neue Kalkschwaemme (Sphinctozoen) aus obertriadischen Riffkalken von Sizilien.- *Mitt. Ges. Geol. Bergbaustud. Oesterr.* 26: 179-203; Wien.- **FC&P 10-1**, p. 27, ID=5915^**Topic(s):** ; Porifera, Sphinctozoa; **Systematics:** Porifera; Sphinctozoa; **Stratigraphy:** Triassic U; **Geography:** Italy, Sicily^1";
- 1413 **s[1410]** = "SENOWBARI-DARYAN B., DULLO W.C. (1980).- *Cryptocoelia wurmi* n.sp., ein Kalkschwamm (Sphinctozoa) aus der Obertrias (Nor) der Gesaeuseberge (Obersteiermark / Oesterreich).- *Mitt. Ges. Geol. Bergbaustud. Oesterr.* 28: 205-211; Wien.- **FC&P 10-1**, p. 27, ID=5917^**Topic(s):** ; Porifera, Sphinctozoa; **Systematics:** Porifera; Sphinctozoa; **Stratigraphy:** Triassic Nor; **Geography:** Alps^1";
- 1414 **s[1411]** = "SENOWBARI-DARYAN B., SCHAFFER P. (1978).- *Follicatena irregularis* n.sp., ein segmentierter Kalkschwamm aus den Oberrhaet-Riffkalken der alpinen Trias.- *N. Jb. Geol. Palaeont. Mh.:* 314-319.- **FC&P 10-1**, p. 28, ID=5918^**Topic(s):** ; Porifera, Sphinctozoa; **Systematics:** Porifera; Sphinctozoa; **Stratigraphy:** Triassic, Rhaet; **Geography:** Alps^1";
- 1415 **s[1412]** = "LELESHUS V.L. (2003).- Lavrusevich, Aleksandr Ivanovich (1930-1998).- *FC&P 32, 2:* 37-41.- **FC&P 32-2**, p. 37, ID=7156^**Topic(s):** biographical, bibliographical; Rugosa; **Systematics:** ; **Stratigraphy:** ; **Geography:** ^The scientific contribution of Aleksandr Ivanovich is considerable. He made important changes to the Ordovician, Silurian, and Devonian stratigraphy of Central Tadjhikistan. His stratigraphic schemes were widely accepted and used in the course of geological mapping. He demonstrated the large diversity of Upper Ordovician, Silurian, and Lower Devonian Rugosa in Central Asia. He established 22 new genera, most of which are widely accepted. In addition he identified about 100 Rugosa species that were previously unknown in Central Asia. 60 papers were published based on these studies. [excerpts from biographical note on A.I. Lavrusevich; attached is Lavrusevich's bibliography (compiled by Dieter Weyer)]^1";
- 1416 **s[1413]** = "SENOWBARI-DARYAN B., SCHAFFER P. (1983).- Zur Sphinctozoen-Fauna der obertriadischen Riffkalke ("Pantokratorkalk") von Hydra, Griechenland.- *Geologica et Palaeontologica* 17: 179-205.- **FC&P 13-1**, p. 53, ID=6355^**Topic(s):** ; Porifera, Sphinctozoa; **Systematics:** Porifera; Sphinctozoa; **Stratigraphy:** Triassic Carn; **Geography:** Greece, Aegean^The Sphinctozoa (segmented calcareous sponges) belong to the most important framebuilding organisms of the Pantokrator reef limestone on Hydra. At least 13 genera and more than 27 species occur, three of them are new: *Amblysiphonella minima* n.sp., *Cryptocoelia lata* n.sp. and *Zardinia cylindrica* n.sp. This fauna corresponds more to the Ladinian and Carnian faunas of the N-Tethys (Ladinian Wetterstein limestones of the Alps and the Carpathians; Carnian limestones of Slovenia, Murztal Alps and Cassian beds) than to those of Norian or Rhaetian age (Dachstein reefs in the Alps and in Sicily). The Pantokrator reef limestones of Hydra are mainly of Carnian age.^1";
- 1417 **s[1414]** = "WENDT J. (1975).- Aragonitische Stromatoporen aus der alpinen Obertrias.- *N. Jb. Geol. Palaeont. Abh.* 150, 1: 111-125.- **FC&P 4-2**, p. 64, ID=5306^**Topic(s):** aragonitic sponges; stroms; **Systematics:** Porifera; Stromatoporoidea; **Stratigraphy:** Triassic U; **Geography:** Alps S^Stromatoporoids did have an aragonitic skeleton, as can be demonstrated by material from the Cassian beds (Cordevolian, Southern

- Alps) that has suffered hardly any diagenetic alteration. Since their skeletal architecture and microstructure (irregular, clinogonal and orthogonal arrangements of aragonite needles) exhibits close similarities to certain calcareous sponges, they are regarded as a conservative order of the Calcispongiae closely related to Pharetronida.¹";
- 1418 s[1415] = "TURNSEK D., BUSER S., OGORELEC B. (1987).- Upper Carnian reef limestone in clastic beds at Perbla near Tolmin (NW Yugoslavia).- Raprave IV Rzedra SAZU 27, 3: 37-64.- FC&P 19-2.1, p. 42, ID=2780^Topic(s): taxonomy; stroms, Chaetetida; Systematics: Porifera; Stromatoporoidea Chaetetida; Stratigraphy: Triassic Carn; Geography: Yugoslavia NW^The stromatoporoids Disjectopora dubia and Stromatomorpha sp. and the chaetetids Atrochaetetetes alakirensis, Blastochaetetetes karashensis and Pamirochaetetetes stromatoides are briefly described and figured.¹";
- 1419 s[1416] = "CHUDINOVA I.I. (1974).- Trias. Tabulata, Tetracoralla. [?!; in Russian].- Atlas iskopaemoy fauny Armyanskoy SSSR [atlas of fossil fauna of the Armenian SSSR; in Russian]; AN Arm. SSR: 149-150, pl. 68; Erevan. [atlas of fossils] - FC&P 3-1, p. 14, ID=6252^Topic(s): ; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Triassic?; Geography: Armenia^^1";
- 1420 s[1417] = "SCHAFFER P., SENOWBARI-DARYAN B. (1980).- Globochaeten - Zoosporen aus obertriadischen Riffkalken suedlich von Salzburg (Noerdliche Kalkalpen).- Verh. Geol. B.-A. 1980, 2: 97-103.- FC&P 10-1, p. 27, ID=5911^Topic(s): zoospores; reef algae; Systematics: algae; Stratigraphy: Triassic U; Geography: Alps N^^1";
- 1421 s[1418] = "SENOWBARI-DARYAN B. (1978).- Pentaporella rhaetica n.g., n.sp., eine neue Kalkalge (Dasycladaceae) aus dem oberrhaetischen Gruber-Riff (Hintersee, Salzburg).- Palaontologische Zeitschrift 52, 1-2: 6-12.- FC&P 10-1, p. 27, ID=5912^Topic(s): new taxa; reef algae; Systematics: algae; Stratigraphy: Triassic, Rhaet; Geography: Alps N^^1";
- 1422 s[1419] = "SENOWBARI-DARYAN B., SCHAFFER P. (1979).- Distributional patterns of Calcareous Algae within Upper Triassic patch reef structures of the Northern Calcareous Alps (Salzburg).- Bulletin Centre Rech. Explor.-Prod. Elf-Aquitaine 3, 2: 811-820.- FC&P 10-1, p. 28, ID=5920^Topic(s): reefs, distribution; reefs algae; Systematics: algae; Stratigraphy: Triassic U; Geography: Alps N^^1";
- 1423 s[1420] = "SENOWBARI-DARYAN B., SCHAFFER P. (1980).- Abatea culleiformis n.g., n.sp., eine neue Rotalge (Gymnocodiaceae) aus den "oberrhaetischen" Riffkalken suedlich von Salzburg (Noerdliche Kalkalpen, Oesterreich).- Verh. Geol. B.-A. 1979, 3: 393-399.- FC&P 10-1, p. 28, ID=5921^Topic(s): reefs; reefs algae; Systematics: algae; Stratigraphy: Triassic, Rhaet; Geography: Alps N^^1";
- 1424 s[1421] = "SENOWBARI-DARYAN B., SCHAFFER P. (1980).- Paraeolisaccus endococcus n.g., n.sp., eine Alge (?) aus den obertriadischen Riffkalken von Sizilien / Italien.- Verh. Geol. B.-A. 1980, 2: 115-121.- FC&P 10-1, p. 28, ID=5922^Topic(s): reefs; reefs algae; Systematics: algae; Stratigraphy: Triassic U; Geography: Italy, Sicily^^1";
- 1425 s[1422] = "SCHAFFER P., SENOWBARI-DARYAN B. (1978).- Die Haeufigkeitsverteilung der Foraminiferen in drei oberrhaetischen Riffkomplexen der Noerdlichen Kalkalpen (Salzburg / Oesterreich).- Verh. Geol. B.-A. 1978, 2: 73-96.- FC&P 10-1, p. 27, ID=5910^Topic(s): reefs forams; reefs forams; Systematics: Foraminifera; Stratigraphy: Triassic, Rhaet; Geography: Alps N^^1";
- 1426 s[1423] = "LAGHI G.F., MARTINELLI G., RUSSO F. (1984).- Localization of minor elements by EOS microanalysis in aragonitic sponges from Cassian

beds, Italian dolomites.- Lethaia 17, 2: 133-138.- FC&P 13-2, p. 48, ID=0569Topic(s): aragonite, trace elements; sponges; Systematics: Porifera; Stratigraphy: Triassic; Geography: Italy, DolomitesThe minor elements Sr, S, K, Mg, Fe, and Mn were detected by electron microprobe EDS (electron dispersive spectrometer) in small regions of the skeletal tissue of the Triassic sponges Sestrostomella robusta (Zittel), Hartmanina involuta (Klipstein), Atrochetetes medius Cuif & Fischer, Ceratoporella sp., and Eudea polymorpha (Klipstein) from Alpe di Specie (St. Cassian Beds, Dolomites, Italy). Data were compared with analyses of the modern sponges Astrosclera willeyana Lister from the Mozambique Channel and Ceratoporella nicholsoni (Hickson) from the Bahamas. Sr content in Triassic sponges (mean value 9,300 ± 600 ppm) is similar to the Sr content of Recent samples (mean value 8,500 ± 1,500 ppm). This concentration of Sr shows very slight biochemical fractionation like oolitic aragonite. It is therefore possible to infer that the Triassic sea of the St. Cassian Beds had the same Sr/Ca ratio and equal aragonitic depositional conditions as those presently found in the Bahamas and the Channel of Mozambique, i.e. warm shallow waters. Generally, we did not observe a preferential distribution of minor elements with respect to structure. Only when a lower concentration in the center of spherules is observed does a preferential distribution pattern seem to exist. This could mean an initial stage of Sr leaking indicative of an incipient diagenetic process (excluding experimental errors or morphological effects). Excluding these exceptions, the Alpe di Specie spongal fauna is surely diagenetically unaltered. The Sr content shows that the micritic microstructure of Eudea polymorpha is not due to a diagenetic process either. The constant, clearly detectable occurrence of sulphur (mean value 1,000 ppm) was observed. In addition, the S content was found to be linearly correlated with the strontium content. Sulphur is probably of primary organic origin. [original abstract]^1";

- 1427 s[1424] = "RIEDEL P., SENOWBARI-DARYAN B. (1988).- Amblysiphonella gradinarui n.sp. (Porifera) aus der Obertrias (Lac 1-2) des Vascau-Plateaus (Rumaenien).- Geologija 30, 1987: 23-29.- FC&P 18-1, p. 50, ID=2293Topic(s): ; Porifera, Amblysiphonella; Systematics: Porifera; Stratigraphy: Triassic U; Geography: Romania^^1";
- 1428 s[1425] = "DIECI G., RUSSO A., RUSSO F. (1974).- Nota preliminare sulla microstruttura di spugne aragonitiche del Trias medio-superiore.- Bolletino della Societa Paleontologica Italiana 13, 1-2: 99-107.- FC&P 3-2, p. 52, ID=4990Topic(s): aragonite; Porifera; Systematics: Porifera; Stratigraphy: Triassic U; Geography: Italy, DolomitesPreliminary report on the microstructure of some aragonitic Upper Triassic Sponges. The microstructure of 8 species of calcisponges (Inozoina) found in St. Cassian strata (Dolomites region, Italy), has been studied. * Histologic study and mineralogic analyses show that the calcareous skeleton is entirely built by aragonite. * Three chief types of microstructure have been recognized: spherulitic, in which the aragonite crystals radiate out from a central point; penicillate, in which the aragonite crystals fan out from centers in "water jet" structures; micritic appearance, characterized by an aggregate of microcrystals isooriented. * A comparison with recent calcareous sponges is given. The skeletons of examined species bear a certain striking resemblances to that of Murrayonidae and particularly of Sclerospongiae.^1";
- 1429 s[1426] = "DULLO W.-C., LEIN R. (1980).- Das Karn von Launsdorf in Kärnten: Die Schwammfauna der Leckkogelschichten.- Verh. Geol. B.-A. 1980, 2: 25-61.- FC&P 10-1, p. 25, ID=5901Topic(s): ; sponges; Systematics: Porifera; Stratigraphy: Triassic Carn; Geography: Austria, Carinthia^^1";
- 1430 s[1427] = "UNGUREANU D. (2008).- Paleontological Update of Dealul

- Melcilor (Brasov, Romania).- Acta Palaeontologica Romaniae 6: 375-384.-
 FC&P 36, p. 46, ID=6423^Topic(s): paleontology;
 Porifera; Systematics: Porifera; Stratigraphy: Triassic;
 Geography: Romania^The study is an approach of the Jurassic and
 Triassic deposits in Dealul Melcilor (Brasov), from the paleontological
 point of view. Specimens were collected during two field trips in 2005
 and 2006. It is the first study dealing with the fauna there in the
 last 30 years, and after great landscape transformations. New organisms
 for the area are also mentioned within the fauna. A special attention
 is regarded to the Poriferans. A brief comparison with the St. Cassian
 type associations was made. [original abstract]^1";
- 1431 s[1428] = "KEUPP H., REITNER J., SALOMON D. (1989).- Kieselschwämme
 (Hexactinellida und "Lithistida") aus den Cipit-Kalken der
 Cassianer Schichten (Karn, Suedtirol).- Berliner geowissenschaftliche
 Abhandlungen A106: 221-241.- FC&P 18-2, p. 46,
 ID=2505^Topic(s): ; Porifera, Silicispongiae; Systematics:
 Porifera; Stratigraphy: Triassic Carn; Geography:
 Austria, Triol^^1";
- 1432 s[1429] = "SENOWBARI-DARYAN B. (1994).- Enoplocoelia? gosaukammensis -
 ein neuer thalamider Schwamm aus den obertriadischen Riffkalken des
 Gosaukammes (Noerdliche Kalkalpen, Oesterreich).- Jahrbuch der
 Geologischen Bundesanstalt 137, 4: 669-674. [in German, with English
 abstract].- FC&P 24-2, p. 93, ID=4600^Topic(s): new
 taxa; Porifera, Thalamida; Systematics: Porifera;
 Stratigraphy: Triassic U; Geography: Austria, N
 Calcareous Alps^A new thalamid sponge Enoplococaelia? gosaukammensis,
 is described from the Norian reef limestones of the Gosaukamm Range
 (Northern Calcareous Alps, Austria). The new sponge is one of the
 smallest thalamid sponges known until. Other sponges, foraminifera,
 microproblematica, spongiostromate crusts occurring together with
 Enoplocoelia? gosaukammensis indicate a biotope within the central reef
 area.^1";
- 1433 s[1430] = "BALTRES A. (1973).- A new Spongiomorpha, Stromatomorpha
 oncescui n.sp., from the allochthonous Triassic of the Rarua Mountains,
 Romania.- Rev. roumaine Geol. Geophys. Geogr., Geol. 17, 2: 159-163.-
 FC&P 4-1, p. 47, ID=5188^Topic(s): taxonomy;
 Spongiomorphae; Systematics: Porifera; Stratigraphy:
 Triassic; Geography: Romania, Rarua Mts^^1";
- 1434 s[1431] = "HENRICH R. (1982).- Middle Triassic carbonate margin
 development: Hochstaufen-Zwieselmassif, Northern Calcareous Alps,
 Germany.- Journal??? 6, 85-106 .- FC&P 13-2, p. 9,
 ID=0625^Topic(s): reefs; reefs; Systematics: ;
 Stratigraphy: Triassic M; Geography: Alps N^Describes
 development of reef platform and lagoon. Palaeoecological reef
 zonation. Sedimentology and diagenetic features.^1";
- 1435 s[1432] = "KUSS J. (1983).- Faziesentwicklung in proximalen
 Intraplattforrn-Becken: Sedimentation, Palaoökologie und Geochemie der
 Kossener Schichten, (Ober-Trias, Nordliche Kalkalpen). Depositional
 environments of proximal intra-platform basins: sedimentation,
 paleoecology and geochemistry of the Kossen beds (Upper Triassic,
 Northern Alps).- Facies 9: 61-172.- FC&P 13-2, p. 10,
 ID=0629^Topic(s): carbonates, reefs; geology; Systematics:
 ; Stratigraphy: Triassic U; Geography: Alps^Includes
 a description of coral biostromes, mud-mounds and of their
 frame-builders and associated organisms. A shallow-water coral
 limestone and a deeper water coral limestone have been distinguished
 based on paleoecological and sedimentological criteria.^1";
- 1436 s[1433] = "SCHAFFER P., SEOWBARI-DARYAN B. (1982).- The Upper Triassic
 Pantokrator Limestone of Hydra (Greece): An example of a prograding
 reef complex.- Facies 06: 147-164.- FC&P 13-2, p. 10,
 ID=0631^Topic(s): reefs, prograding reef; reefs; Systematics:
 ; Stratigraphy: Triassic U; Geography: Greece^^1";
- 1437 s[1434] = "SEOWBARI-DARYAN B., SCHAFFER P., ABATE B. (1982).-

- Obertriadische Riffe und Rifforganismen in Sizilien (Beitrage zur Palaontologie und Mikrofazies obertriadischer Riffe im alpin-mediterranen Raum, 27).- Facies 06: 165-184.- FC&P 13-2, p. 11, ID=0635Topic(s): reefs; reefs; Systematics: Stratigraphy: Triassic U; Geography: Italy, Sicily^^1";
- 1438 s[1435] = "WENDT J. (1982).- The Cassian patch reefs (Lower Carnian, Southern Alps).- Facies 06: 185-202.- FC&P 13-2, p. 11, ID=0636Topic(s): reefs, patch reefs; reefs; Systematics: Stratigraphy: Triassic Carn; Geography: Alps S^^1";
- 1439 s[1436] = "WURM D. (1982).- Mikrofazies, Palaontologie und Palaookologie der Dachsteinriffe (Nor) des Gosaukamms (Oberosterreich).- Facies 06: 203-296.- FC&P 13-2, p. 11, ID=1088Topic(s): reefs, microfacies, paleontology, ecology; reefs; Systematics: Stratigraphy: Triassic Nor; Geography: Austria, Gosaukamm^The Gosaukamm may be regarded as an example of a continuous synsedimentary degradation of shelf margin areas with isolated reefs. More than 70% of the Dachstein limestone samples studied are bioclastic and lithoclastic rudstones and bioclastic grain/packstones composed of reworked and encrusted reef biota. Low-growing frame-building organisms (predominantly calcisponges) were responsible for the formation of primarily non-rigid frameworks situated at the margin or on protected parts of the foreslope. Stabilization of the reef framework was possible due to the very strong biogenous encrustation (mainly by algal crusts) and by a rapid submarine cementation. Destruction of the marginal reefs by hurricanes and mass flows was influenced by eustatic changes of sea level. Therefore, no clear distinction can be made with regard to various parts of a "reef-complex" (back-reef, central reef area, fore-reef) even though the bulk of the sediment can be compared with "fore-reef breccia". [first part of extensive summary]^1";
- 1440 s[1437] = "FLUGEL E. (1981).- Paleoecology and facies of Upper Triassic Reefs.- SEPM Special Publications 30 [D.F. Toomey (ed.): European Fossil Reef Models]: 291-359.- FC&P 11-2, p. 38, ID=1868Topic(s): reef complexes, ecology, facies; reef complexes; Systematics: Stratigraphy: Triassic U; Geography: Alps N^In the Northern Calcareous Alps of Austria and Bavaria, Upper Triassic reefs are known from the Carnian (parts of the Wetterstein Reefs; Tisovec Limestones), and from the Norian and Rhaetian (Dachstein Reef Limestones; "upper Rhaetian" reef limestones; Kossen coral limestones). The Dachstein reefs developed predominantly on the southern exposed platform edges. The upper Rhaetian Reefs were formed upon shoals within the relatively shallow Kossen Basin (Roetelwand, Feichtenstein, Gruberalm), near the inner boundary of the Dachstein Platform (Steinplatte), or upon the Dachstein Platform (Adnet). [first part of extensive summary]^1";
- 1441 s[1438] = "BLENDINGER W. (1986).- Isolated stationary carbonate platforms: the Middle Triassic (Ladinian) of the Marmolada area. Dolomites, Italy.- Sedimentology 33: 159-183.- FC&P 16-1, p. 69, ID=1983Topic(s): carbonate plaforms; reefs, carbonates; Systematics: Stratigraphy: Triassic M; Geography: Italy, Dolomites^[includes discussion of the reef facies]^1";
- 1442 s[1439] = "NICOL S.A. (1987).- A Down-slope Upper Triassic Reef Mound: Aflenz Limestone, Hochschwab Mountains, Northern Calcareous Alps.- Facies 16: 23-36.- FC&P 16-2, p. 29, ID=2073Topic(s): reefs; reefs; Systematics: Stratigraphy: Triassic; Geography: Germany, Alps N^A small reef mound occurring within the well-bedded, chert-bearing Norian Aflenz Limestones of the Aflenzer Buergeralm (south eastern Hochschwab Mountains, Styria, Austria) is described with respect to microfacies and paleontological criteria. The mound was formed in a down-slope position near the transition between basinal sediments (Aflenz Limestone, exhibiting a shallowing-upwards sequence) and marginal platform carbonates (Dachstein Limestone). The

transitional zone is characterized by a change from open-marine pelagic carbonates with allochthonous intercalations at the base to protected platform environments as well as shallow-marine platform slope deposits near the top. The biota of the reef mound (corals, calcisponges, hydrozoans, calcareous algae, foraminifera, microproblematica) correspond with those of Dachsteinkalk reefs. Three communities can be distinguished according to dominant corals and calcisponges (Thecosmilia-Paradeningeria community, Astreaomorpha community, Paravesicocaulis community). The microfacies of the massive, partly dolomitized and stylolytized reef limestone is characterized by a bioclastic floatstone at the base of the mound, overlain by sponge bafflestone, coral-bafflestone, spongiostromate bindstone, coral-sponge framestone, and sponge-hydrozoan bafflestone, without regular distributional patterns. The bedded limestones below the reef carbonates consist of bioclastic lime mudstones with radiolarians; the overlying bedded limestones are composed of peloidal and bioclastic grainstones and packstones as well as rudstones indicating a termination of the reef growth by a rapid allochthonous sedimentation perhaps caused by slumping or storm effects.¹;

- 1443 s[1440] = "STANTON R.J.jr, FLUGEL E. (1987).- Paleocology of Upper Triassic Reefs in the Northern Calcareous Alps: Reef Communities.- Facies 16: 157-186.- FC&P 16-2, p. 30, ID=2074Topic(s):reefs, ecology; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Germany, Alps N^The community is the standard unit of analysis in ecology because through it both physical and biological aspects of the ecosystem can be determined. It offers the same potential in paleoecology. The communities of the upper Triassic reefs are analyzed from the literature and our own field work in order to determine their characteristics and to assess their usefulness. Six communities are recognized on the basis of R-mode cluster analysis of the dominant frame-builders in Roetelwand reef and from descriptions and our observations in other reefs. The Thecosmilia or High-growing coral, the Hydrozoan-tabulozoan and the Sponge communities are most widespread. The High-growing Astreaomorpha, Low-growing coral and Solenopora communities are less common. Each community is characterized by a few dominant taxa and a larger number of associated taxa. The fidelity of the dominant taxa to their community is generally high; the fidelity of many of the associated taxa are typically lower and these taxa occur in a number of communities. Consequently, there is considerable overlap in composition between stands of different communities. In addition, the communities typically occur in patches only a few meters in diameter, and particularly in the Hydrozoan-tabulozoan community, the composition may differ considerably between adjacent patches.¹;
- 1444 s[1441] = "RIEDEL P. (1988).- Facies and development of the "wilde Kirche" reef complex (Rhaetian, Upper Triassic, Karwendelgebirge, Austria).- Facies 18: 205-218.- FC&P 19-1.1, p. 20, ID=2572Topic(s): reef complexes, facies; reef complexes; Systematics: ; Stratigraphy: Triassic Rhaet; Geography: Austria, Karwendel Mts^^1";
- 1445 s[1442] = "STANTON R.J., FLUGEL E. (1989).- Problems with reef models: The Late Triassic Steinplatte "Reef" (Northern Alps, Salzburg " Tyrol, Austria).- Facies 20: 1-138.- FC&P 19-1.1, p. 20, ID=2574Topic(s): reefs, reef models; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Austria, N Alps^^1";
- 1446 s[1443] = "TURNSEK D., BUSER S. (1989).- The Carnian reef complex on the Pokljuka (NW Yugoslavia).- Razprave IV. razreda Sazu 30, 3: 75-127.- FC&P 19-1.1, p. 60, ID=2682Topic(s): reef complexes, new taxa; reef complexes; Systematics: ; Stratigraphy: Triassic Carn; Geography: Yugoslavia, Pokljuka^Continous reef sedimentation throughout Carnian was established. On the basis of position and fossil assemblages the reef

complex was subdivided into Cordevolian, Julian, and Tuvalian. Studied were 23 species of reef fossils which comprise corals, chaetetids, stromatoporoids, solenoporoids and microproblematica. Among them appear two new genera and three species of corals and one of chaetetids. In the paleoecological aspect the reef complex represents shallow marine deposition on the Julian carbonate platform. Laterally it passes into deeper marine deposits of intraplatform channels which are connected to the Slovenian basin. [original summary] The new taxa are: *Protoheterastraea minor* n.sp., *Pokljukosmia tuvalica* n.gen. et n.sp., *Rhopalodendron juliensis* n. gen et n.sp., *Atrochaetetes cylindrica* n.gen. et n.sp.^1";

- 1447 s[1444] = "HALLAM A., GOODFELLOW W.D. (1990).- Facies and geochemical evidence bearing on the end-Triassic disappearance of the alpine reef ecosystem.- *Historical Biology* 4, 2: 131-138.- FC&P 19-2.1, p. 38, ID=2759^Topic(s): reefs, facies, geochemistry, extinctions; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Austria, Kendelbach^A carbon and oxygen isotope profile is presented across Triassic-Jurassic boundary at the classic locality of Kendelbach, Austria. In conjunction with facies data it lands no support to the claim that the spectacular disappearance of the reef ecosystem at the end of the Triassic was due to a sharp fall of seawater temperature. A model relating mass extinction to sea-level change is preferred. ^1";
- 1448 s[1445] = "TURNSEK D., RAMOVŠ A. (1987).- Upper Triassic (Norian-Rhaetian) reef buildups in the northern Julian Alps (NW Yugoslavia).- *Razprave IV Razreda SAZU* 28, 2: 27-67.- FC&P 19-2.1, p. 42, ID=2781^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic Nor - Rhaet; Geography: Yugoslavia, Julian Alps^Cyclicopsis sp., Pamirostroma cf. *astrophoroides* and *Spongiorhiza acyclica* are described as hydrozoans. The chaetetid *Pseudoseptifera aktaski* is also described.^1";
- 1449 s[1446] = "BERRA F., JADOUL F. (1996).- Norian Serpulid and Microbial Bioconstructions: Implications for the Platform Evolution in the Lombardy Basin (Southern Alps, Italy).- *Facies* 35, 1: 143-162.- FC&P 25-2, p. 64, ID=3166^Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Triassic Nor; Geography: Italy, Lombardy^The development of peculiar margin facies and abundant talus breccias within the Dolomia Principale inner platform is commonly observed in the Lombardy Basin during the Norian. The organisms building these margins are mainly serpulids, benthic microbes, subordinate porostromata and other encrusting forms; typical margin organisms, as sponges or corals, are extremely rare or absent. The buildups form narrow rims along the borders of tectonic-controlled intraplatform basins. Regional back-stepping and progradation of the margin facies on the talus breccias produced by the erosion of the reef is commonly observed in the uppermost Dolomia Principale depositional system widespread occurrence of serpulids and microbial margins in middle-late Norian times is indicative of stressed environmental conditions - fluctuation of salinity and temperature on the inner platform and in the intraplatform basins - controlled by palaeogeographic setting. Physical characteristics allowed the bloom of forms able to develop in a wide range of environmental conditions, such as serpulids. In the Late Norian, major input of fine-grained elastics is recorded; close to the Norian-Rhaetian boundary, carbonate ramps were regionally restored. Locally, small serpulid and microbial bioconstructions still persist in the lowermost part of the shaly succession, even if they are less abundant with respect to the Dolomia Principale. Patch-reefs generally do not build a platform margin, but represent isolated mounds within shaly deposits. These build-ups occur on the edge of former structural highs; the communities survived the environmental change responsible for the siliciclastic input and locally managed to produce mounds during the deposition of the lower part of the upper depositional system (Riva di Solto Shale).^1";

- 1450 s[1447] = "RUSSO F., NERI C., MASTANDREA A., LAGHI G.F. (1991).- Stratigraphic setting and diagenetic history of the Alpe di Specie (Seelandalpe) fauna (Carnian, Northeastern Dolomites).- Facies 25: 187-210.- FC&P 21-2, p. 16, ID=3303^Topic(s): biostratigraphy, diagenesis; paleontology; Systematics: ; Stratigraphy: Triassic Carn; Geography: Italy, Dolomites^^1";
- 1451 s[1448] = "TURNSEK D., BUSER S. (1991).- Norian-Rhaetian Coral Reef Buildups in Bohinj and Rdeci rob in Southern Julian Alps (Slovenia).- Razprave IV. razr. SAZU 32: 215-257.- FC&P 21-2, p. 17, ID=3306^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Triassic Nor - Rhaet; Geography: Slovenia, Julian Alps^From Bohinj and Rdeci rob 26 species of reef building organisms have been determined belonging to Upper Norian - Rhaetian age. 15 species of corals are systematically described. Paleogeologically they represent the reef facies on the southern border of the Julian carbonate platform.^1";
- 1452 s[1449] = "FLUGEL E., VELLEDETS F., SENOWBARI-DARYAN B., RIEDEL P. (1992).- Rifforganismen aus "Wettersteinkalken" (Karn ?) des Bukk-Gebietes, Ungarn.- Geologisch-Palaeontologische Mitteilungen 18: 35-62.- FC&P 22-1, p. 51, ID=3424^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic Carn?; Geography: Hungary, Bukk Mts^Ladinian / Carnian reef organisms are described from two tectonically isolated localities in the southern Bukk Mountains / Hungary. Intensive organic encrustations are common features in these reefal limestones similar to other Carnian reefs. Comparison with other Carnian reef communities reveal similarities as well as distinct differences in faunal composition. The following new taxa are described: Sponges: Cryptocoelia kovacsi n.sp. Algae: Egericodium hungaricum n.g., n.sp.^1";
- 1453 s[1450] = "RUFFER T., BECHSTADT T. (1996).- Controlling Factors of the Steinalm- and Wetterstein Carbonate Platforms in the Middle Triassic of the Western Part of the Northern Calcareous Alps (Tyrol and Bavaria).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 40, ID=3604^Topic(s): carbonate platforms; carbonate platforms; Systematics: ; Stratigraphy: Triassic M; Geography: Alps, Calcareous, Tyrol, Bavaria^The sedimentation of the North-Alpine Middle and early Upper Triassic ("Wetterstein Reefs") passed through three stages, a homoclinal ramp in the late Anisian, a distally steepened ramp in the Fassanian, and a rimmed platform in the Longobardian and early Julian. This evolution from homoclinal ramp to rimmed platform was a continuous, dynamic process, creating a morphologically accentuated reef-basin topography. It is partly controlled by biota and by accommodation changes, which were due to sealevel fluctuations and tensional tectonics. In contrast to earlier assumptions, the start of the first North-Alpine reefs after the crisis at the Permian / Triassic boundary was caused by a basin-wide or global sealevel rise in the late Anisian to early Ladinian.^1";
- 1454 s[1451] = "BERNECKER M., WEIDLICH O., FLUGEL E. (1999).- Response of Triassic Reef Coral Communities to Sea-level Fluctuations, Storms and Sedimentation: Evidence from a Spectacular Outcrop (Adnet, Austria).- Facies 40, 1: 229-280.- FC&P 28-1, p. 58, ID=4001^Topic(s): reefs, eustacy; reefs; Systematics: ; Stratigraphy: Triassic Rhaet; Geography: Austria, Adnet^The Upper Rhaetian coral limestone of Adnet, southeast of Salzburg, Austria has been repeatedly referred to as one of the most spectacular examples of an ancient'autochthonous' coral reef structure. The 'Tropfbruch' quarry is probably the best outcrop for interpreting the distributional patterns of biotic successions and communities of a late Triassic patch reef. Our study is

based on the interpretation of a) outcrop photographs, b) reef maps resulting from quadrat transects, and c) the analysis of quantitative data describing the distribution and frequency of reef organisms and sediment. A new methodological approach (combination of reef mapping and photo-transects) is used to obtain quantitative field data which can be compared in greater detail with data from modern coral reefs investigated by corresponding quantitative surveys. [first part of very extensive summary]^1";

1455 s[1452] = "BONI M., IANNACE A., TORRE M., ZAMPARELLI V. (1994).- The Ladinian-Carnian Reef Facies of Monte Caramolo (Calabria, Southern Italy).- Facies 30: 101-118.- FC&P 23-1.1, p. 85, ID=4197^Topic(s): reefs facies; reefs, facies; Systematics: ; Stratigraphy: Triassic Lad - Carn; Geography: Italy, Calabria^In the Triassic of the San Donato Unit (Calabrian Apennines, Italy) a perireefal facies association of limestones and dolomites, hosting a Ladino - (?Carnian) fauna, has been recognized. This facies association is flanked by black, ostracode-bearing, calcareous marbles and evolves to peritidal dolomites, Carnian and possibly Norian in age, characterized by strong synsedimentary tectonics. The San Donato Unit has been strongly affected by alpine tectonics, resulting in pervasive deformation and metamorphic recrystallization (greenschist facies); nevertheless, careful observation on selected outcrops enabled the distinction of the following main facies: - Sponges-biogenetic crust-cement boundstone; - Reef debris rudstone; - Dasycladacean packstone-grainstone. [part of extensive summary]^1";

1456 s[1453] = "SATTERLY A.K. (1994).- Sedimentology of the Upper Triassic Reef Complex at the Hochkonig Massif (Northern Calcareous Alps, Austria).- Facies 30: 119-150.- FC&P 23-1.1, p. 91, ID=4209^Topic(s): reef complexes, sedimentology; reef complexes; Systematics: ; Stratigraphy: Triassic U; Geography: Austria, N Calcareous Alps^The Upper Triassic Dachsteinkalk of the Hochkonig Massif, situated 50 km south of Salzburg in the Northern Calcareous Alps, corresponds to a platform margin reef complex of exceptional thickness. The platform interior limestones form equally thick sequences of the well known cyclic Lofer facies. Sedimentation in the reef complex was not so strongly controlled by low-amplitude sea-level oscillations as was the Lofer facies. The westernmost of the 8 facies of the reef complex is an oncolite-dominated lagoon, in which wave-resistant stromatolite mounds with a relief of a few metres were periodically developed. The transition to the central reef area is accomplished across the back-reef facies. In the back-reef facies patch reefs and calcisponges appear. The proportion of coarse bioclastic sediment increases rapidly over a few hundred metres before the central reef area is encountered. The central reef area consists of relatively widely spaced small patched reefs that did not develop wave-resistant reef framework structures. The bulk of the sediment in the central reef area is coarse bioclastic material, provided by the dense growth of reef organisms and the wave-induced disintegration of patch reefs. Collapse of the reef margin is recorded by the supply of large blocks of patch material to the upper reef slope. Additionally, coarse, loose bioclastic debris was supplied to the upper reef slope and this was incorporated into debris flows on the reef slope and turbidites found at the base of the slope and in the off-reef facies. Partially lithified packstones and wackestones of the middle reef slope were modified by mass movement to form breccia and rudstone sheets. The latter reach out hundreds of metres into the off-reef facies environment. A reef profile is presented which was derived by the restoration of strike and dip formation. In conjunction with constraints imposed by sedimentary facies related to slope processes, the angle of slope in the reef margin area ranged from 11 to 5, forming a concave (dished downwards) slope. Water depth estimations require that the central reef area did not develop in water less than 10 metres

depth. At the reef margin water depths were about 30 metres, at the base of the reef slope 200 metres and deepening in the off-reef facies to 250 metres. While previous work on reef complexes from this type of setting suggests growth on heavily storm-dominated environment, the present author finds little evidence for storm-influenced sedimentation and reworking in the central reef area. Post-depositional processes were characterized by continued slope processes causing brecciation and hydraulic injection of red internal sediments downwards into the reef slope and off-reef limestones. Hydrothermal circulation caused a number of phases of post-depositional (diagenetic) brecciation. There appears not to have been an important period of emergence at the Triassic/Jurassic boundary.^1";

- 1457 s[1454] = "SCHOLZ G. (1973).- Récif calcaire de la formation de Wetterstein de l'Anisien en Hongrie du Nord.- Journal??? volume??? pp 99-115. [in Hungarian, with French summary].- FC#038;P 3-1, p. 28, ID=4892^Topic(s):reefs, morphology, structure; reefs; Systematics:; Stratigraphy:Triassic Anis; Geography:Hungary N^Sur le terrain des villages de Aggtelek et de Josvafo en Hongrie du Nord, se situe une formation récifale s'étendant sur plusieurs km2 sur la surface. Elle est part du terme Anisien de la série des calcaires de Wetterstein du Trias moyen. 3 aires principales à faciès différents peuvent être distinguées à l'intérieur de la masse récifale incluse dans des sédiments à Dasycladacées, déposés dans les eaux peu profondes ce sont : 1 - récif central caractérisé par une paléobiocénose de polypiers, hydrozoaires et éponges calcaires ; 2 - un talus périrécifal de type "fore-reef", situé du côté où la mer se fait et caractérisé par une paléobiocénose de brachiopodes, mollusques et échinodermes ; 3 - derrière le récif central, du côté sous le vent il y a une zone à débris de type "back-reef" avec une paléobiocénose d'échinodermes et mollusques. * Le complexe récifal d'épaisseur de 500 à 600m commença à grandir au début du Pelsonien et fut supprimé déjà au cours de l'Illyrien supérieur c'est-à-dire avant même le dépôt des sédiments de l'horizon à Diplopora annulatissima Pia. A l'Illyrien supérieur, tout le territoire étudié était couvert en continuité par des sédiments à Dasycladacées.^1";
- 1458 s[1455] = "OTT E. (1974).- Mitteltriadische Riffe der Noerdlichen Kalkalpen und altersgleiche Bildungen auf Karaburun und Chios (Aegeis).- Mitt. Gesellsch. Geol. Berghaustud. Oesterr. 21, 1: 251-276.- FC#038;P 3-2, p. 46, ID=4978^Topic(s):reefs; reefs; Systematics:; Stratigraphy:Triassic M; Geography:Alps N, Aegean Isls^1";
- 1459 s[1456] = "BOSELLINI A., ROSSI D. (1974).- Triassic carbonate buildups of the Dolomites, Northern Italy.- SEPM Special Publication 18 [L. Laporte (ed.): Reefs in Time and Space]: 209-233.- FC#038;P 4-1, p. 20, ID=5062^Topic(s):reefs; reefs; Systematics:; Stratigraphy:Triassic; Geography:Italy, Dolomites^1";
- 1460 s[1457] = "FLUGEL E., LEIN R., SENOWBARI-DARYAN ?. (1978).- Kalkschwaemme, Hydrozoen, Algen und Mikroproblematika aus den Cidarisschichten (Karn, Ober-Trias) der Muerztaler Alpen (Steiermark) und des Gosaukammes (Oberoesterreich).- Mitt. Ges. Geol. Bergbau-stud. 25: 153-195; wien.- FC#038;P 10-1, p. 26, ID=5908^Topic(s):; fossils; Systematics:; Stratigraphy:Triassic Carn; Geography:Alps^1";
- 1461 s[1458] = "DULLO W.-C. (1980).- Palaeontologie, Fazies und Geochemie der Dachstein-Kalke (Ober-Trias) im suedwestlichen Gesaeuse, Steiermark, Oesterreich.- Facies 2: 55-122.- FC#038;P 10-1, p. 28, ID=5924^Topic(s):reef complexes; reef complexes; Systematics:; Stratigraphy:Triassic U; Geography:Austria, Styria^[reef and fore-reef deposits]^1";
- 1462 s[1459] = "SCHAFER P. (1979).- Fazielle Entwicklung und palaeoekologische Zonierung zweier obertriadischer Riffstrukturen in

- den Noerdlichen Kalkalpen ("oberrhaet-Riff-Kalke" Salzburg).- Facies 01: 3-245.- FC&P 10-1, p. 29, ID=5931^Topic(s):reef complexes; reef complexes; Systematics: Stratigraphy:Triassic, Rhaet; Geography:Alps N^1";
- 1463 s[1460] = "SCHAFER P., SENOWBARI-DARYAN B. (1981).- Facies development and paleoecologic zonation of four upper Triassic patch-reefs, Northern Calcareous Alps near Salzburg, Austria.- SEPM Special Publications 30 [D.F. Toomey (ed.): European Fossil Reef Models]: pp- FC&P 10-1, p. 29, ID=5934^Topic(s):reef complexes; reef complexes; Systematics: Stratigraphy:Triassic U; Geography:Alps N^1";
- 1464 s[1461] = "SENOWBARI-DARYAN B. (1980).- Fazielle und palaeontologische Untersuchungen in oberrhaetischen Riffen (Feichtenstein- und Gruberriff bei Hintersee, Salzburg, Noerdliche Kalkalpen).- Facies 3: 1-237.- FC&P 10-1, p. 63, ID=5935^Topic(s):reef complexes; reef complexes; Systematics: Stratigraphy:Triassic, Rhaet; Geography:Alps N^Numerous small patch-reefs are found on the top of the Kossen beds in the Northern Calcareous Alps which are generally called Upper Rhaetian reefs (Fabricius 1966: 20, Tollmann 1976: 258). * Several of these patch-reefs are situated in the Salzburg region (Osterhorngruppe). Four of them, adjacent to each other, have been investigated in two thesis undertaken in the Paleontological Institut of the Erlangen-Nuernberg university. P. Schaefer (1979) has studied the Roetelwand reef and Adnet reef near Hallein. * The present dissertation deals with the Feichtenstein reef and the Gruber reef (Austrian topographical map 1:25000, sheet Hintersee 94/2). * The studies are focused on the paleontological investigation of the reef-building organisms. A general list of the fauna and flora is given.^1";
- 1465 s[1462] = "LOBITZER H. (1980).- The Steinplatte carbonate platform / basin-complex (Norian " Rhaetian", Northern Calcareous Alps).- Abhandlungen der Geologischen Bundesanstalt 34 [Field Guide of the 26th CGI]: 294-299.- FC&P 10-2, p. 10, ID=6046^Topic(s):carbonate platforms; geology, basin-platform; Systematics: Stratigraphy:Triassic U; Geography:Alps N^1";
- 1466 s[1463] = "BRANDNER R., RESCH W. (1980).- Mid-Triassic carbonate platform margin. Wetterstein reef limestone north of Innsbruck, Tyrol.- Abhandlungen der Geologischen Bundesanstalt 34 [Field Guide of the 26th CGI]: 300-305.- FC&P 10-2, p. 10, ID=6047^Topic(s):carbonate platforms; geology, platform margin; Systematics: Stratigraphy:Triassic M; Geography:Austria, Tyrol^1";
- 1467 s[1464] = "BRANDNER R., RESCH W. (1981).- Reef development in the Middle Triassic (Ladinian and Cordevolian) of the Northern Limestone Alps near Innsbruck, Austria.- SEPM Special Publications 30: pp- FC&P 10-2, p. 10, ID=6048^Topic(s):reefs; reefs; Systematics: Stratigraphy:Triassic M; Geography:Alps N^1";
- 1468 s[1465] = "PILLER W. (1981).- The Steinplatte reef complex, part of an Upper Triassic carbonate platform near Salzburg, Austria.- SEPM Special Publications 30: pp- FC&P 10-2, p. 10, ID=6049^Topic(s):reefs; reefs; Systematics: Stratigraphy:Triassic U; Geography:Alps N^1";
- 1469 s[1466] = "PILLER W., LOBITZER H. (1979).- Die obertriassische Karbonatplattform zwischen Steinplatte (Tirol) und Hochkoenig (Salzburg).- Verh. geol. B.-A. 1979, 2: 171-180.- FC&P 10-2, p. 10, ID=6050^Topic(s):carbonate platforms; carbonate complex; Systematics: Stratigraphy:Triassic U; Geography:Alps N^1";
- 1470 s[1467] = "SADATI S.-M. (1981).- Die Hohe wand: Ein obertriadisches Lagunen-Riff am Ostende der Noerdlichen Kalkalpen (Niederosterreich).- Facies 5: 191-264.- FC&P 11-1, p. 59, ID=6137^Topic(s):

- reefs; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Alps N^^1";
- 1471 s[1468] = "RAMOVŠ A., TURNSEK D. (1984).- Lower Carnian reef buildups in the Northern Julian Alps (Slovenia, NW Yugoslavia). [in English, with Slovenian summary].- Razprave SAZU, IV. razr., 25: 161-200; Ljubljana.- FC&P 14-2, p. 25, ID=6713^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic Carn; Geography: Slovenia, Julian Alps^In the Lower Carnian times on the territory of the Northern Julian Alps a shallow carbonate platform extended on which non-bedded "Diplopora" limestones were deposited with coral-sponge patch reefs in between. The reef fauna was investigated in detail, the fossil communities were established and the main facies types of rocks were described.^1";
- 1472 s[1469] = "HENRICH.R., ZANKL.H. (1986).- Diagenesis of Upper Triassic Wetterstein Reefs of the Bavarian Alps.- Reef Diagenesis [J.H. Schroeder & B.H. Purser (eds)]: 245-268; Springer, Berlin / Heidelberg.- FC&P 15-2, p. 6, ID=6733^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: ; Stratigraphy: Triassic U; Geography: Alps, Bavarian^^1";
- 1473 s[1470] = "MATZNER.C. (1986).- Die Zlambach-Schichten (Rhät) In den nördlichen Kalkalpen: Eine Plattform-Hang-Beckenentwicklung mit allochthoner Karbonatsedimentation.- Facies 14: 1-104.- FC&P 15-2, p. 7, ID=6741^Topic(s): carbonate platforms; carbonate system; Systematics: ; Stratigraphy: Triassic Rhaet; Geography: Alps N^[includes a discussion of the distribution of the scleractinian corals, species lists, plates with figures of scleractinians]^1";
- 1474 s[1471] = "MOSTLER H. (1989).- Mit "Zygomien" ausgestattete Dermalia von Kieselschwämmen (Demospongiae) aus pelagischen Sedimenten der Obertrias und des unteren Jura (Noerdliche Kalkalpen).- Jb. Geol. B.-A. 132, 4: 701-726.- FC&P 19-1.1, p. 61, ID=2688^Topic(s): spiculae; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Triassic U Jurassic L; Geography: Alps N^^1";
- 1475 s[1472] = "SCHOTT M. (1983).- Sedimentation und Diagenese einer absinkenden Karbonat-plattform: Rhat und Lias des Brunnstein-Auerbach-Gebietes, Bayerische Kalkalpen.- Facies 9: 1-60.- FC&P 13-2, p. 11, ID=0634^Topic(s): carbonate platforms; carbonate platform; Systematics: ; Stratigraphy: Triassic / Jurassic; Geography: Alps, Bavarian^Includes a microfacies description of Upper Rhaetian reef limestones (framework by the scleractinian Thecosmilia clathrata). A new reef model for open-marine shallow inner shelf ("platform forereef") is proposed.^1";
- 1476 s[1473] = "BOHM F. (1986).- Der Grimming: Geschichte einer Karbonatplattform von der Obertrias bis zum Dogger (Nordliche Kalkalpen, Steiermark).- Facies 15: 195-232.- FC&P 16-1, p. 69, ID=1984^Topic(s): carbonate platforms, geohistory; reefs, carbonates; Systematics: ; Stratigraphy: Triassic U Jurassic L; Geography: Austria, Styria^[includes description of an upper Triassic reef complex]^1";
- 1477 s[1474] = "EHSES H.H., LEINFELDER R.R. (1988).- Laterale und vertikale Faziesentwicklung der Rhaet / Unterlias-Sedimentation im Wallberg-Blankenstein-Gebiet (Tegernsee, Nordliche Kalkalpen).- Mainzer geowiss. Mitt. 17: 53-94. [in German, with English summary].- FC&P 18-2, p. 42, ID=2497^Topic(s): facies, microfacies; facies; Systematics: ; Stratigraphy: Triassic U Jurassic L; Geography: Germany, Bavaria^By means of microfacies analysis the Upper Rhaetian and Lower Liassic sediments of the wallberg-Blankenstein region (Tegernsee, Upper Bavaria) are described and classified. The Upper Rhaetian Limestone, developing from the marly / calcareous Kossen basinal sequence, exhibits 10 main microfacies types which partly can be further subdivided. The lateral

arrangement of microfacies types displays a mosaic-like distribution. Shoaling upward tendency is obvious already throughout the Kossen beds by the development of reef patches. This pattern also influenced distribution of reefal organisms and sediment types in the superimposed Rhaetian calcareous sedimentation. Ecological restrictions (e.g. water energy) limited, however, a more pronounced occurrence of reef biota and thus inhibited the development of reef patches. Besides these shallow subtidal patch reefs and related deposits, shoal sediments were deposited in higher energy settings. Dark intertidal algal bindstones and occurrence of black pebbles correspond to the peak of shoaling. The studied Upper Rhaetian limestones reflect the development of a ramp-like initial limestone platform within the Kossen basin. Reefoid development ceases with the discontinuous drowning of the depositional area at the end of the Rhaetian. This led to strongly differentiated shallow to deep subtidal deposits at the beginning of the Liassic, reflecting tectonic uplifts and predepositional Triassic topography. Further break-up and sinking of the Tethyan shelf resulted then in the superposition of bathyal, grey basinal deposits.¹¹;

- 1478 s[1475] = "MILER M., PAVSIC J. (2008).- Triassic and Jurassic beds in Krim Mountains area (Slovenia).- *Geologija* 51, 1: 87-99.- **FC#038;P 36**, p. 100, ID=6521^**Topic(s):** **geology; geology;**
Systematics: **;** **Stratigraphy:** **Triassic Jurassic;**
Geography: **Slovenia^11**";
- 1479 s[1476] = "TURNSEK D. (1989).- Diversifications of corals and coral reef associations in Mesozoic palaeogeographic units of northwestern Yugoslavia.- *Mem. Ass. Australas. Palaeontols* 8 [Jell P. A. & Pickett J. W. (eds): *Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)*]: 283-289.- **FC#038;P 19-1.1**, p. 14, ID=2546^**Topic(s):** **coral reefs; corals, coral reefs;**
Systematics: **Cnidaria; Anthozoa;** **Stratigraphy:** **Mesozoic;**
Geography: **Yugoslavia^11**";
- 1480 s[1477] = "TURNSEK D. (1997).- Mesozoic Corals of Slovenia.- *Zbirca ZRC (ZRC Series) 16*: 512 pp., 211 pls; Ljubljana (Znanstvenoraziskovalni Center SAZU). ISBN 961-6182-44-7.- **FC#038;P 27-1**, p. 98, ID=3848^**Topic(s):** **monograph; corals;** **Systematics:** **Cnidaria; Anthozoa;** **Stratigraphy:** **Mesozoic;** **Geography:** **Slovenia^Monographs like that with the description of several hundred species became rare the past times; summarizing monographs on the corals of one country were published the last time hundred years ago. Therefore this book is a great surprise and a great pleasure. In the Mesozoic Corals of Slovenia; the results of Slovenian Mesozoic coral research of the past 30 years are compiled. But it exceeds a simple compilation: all species are carefully checked, new items added to the synonymy lists and new illustrations provided. Each species is represented at one text page and one page of illustration side by side. The text page contains a synonymy list, a short description, the localities in Slovenia, the age and remarks on the geological setting and environment. A stratigraphical table and a map is provided, where the occurrence of the species concerned is plotted. The illustration page encompasses horizontal and vertical thin sections magnified four or eight times, and microstructure details in greater magnification. The illustrations are good as long the material is well preserved. The latter is maybe the main problem of the monograph: many species are indicated by poorly preserved material and in some cases it is difficult to follow the determination. * The book contains a short but satisfactory description of the geological situation and stratigraphy of the localities where the corals are found. A rich appendix encompasses a list of the described specimens - sorted according to species and generic names, alphabetically and according to their age, and a list of localities, alphabetically and according to the geological unit. A general index summarizes the coral assemblages with their species. * At all, the compilation is very careful: each**

Locality has a number and is plotted at a map. The species description refers to this number. In the list of localities in the description part and in the explanation to the illustration the collection number of the specimens is given. This makes reference to previously published papers and to own notes on the material easy.¹;

- 1481 s[1478] = "TURNSEK D. (1979).- List of Papers on Mesozoic Cnidaria in Jugoslavia.- FC&P 8, 1: 44-49.- FC&P 8-1, p. 44, ID=5685^Topic(s): bibliography; Cnidaria; Systematics: Cnidaria; Stratigraphy: Mesozoic; Geography: Yugoslavia^bibliography^1";
- 1482 s[1479] = "LATHUILIERE B., GAILLARD C., HABRANT N., BODEUR A., BOULIER A., ENAY R., HANZO M., MARCHAND D., THIERRY J., WERNER W. (2005).- Coral zonation of an Oxfordian reef tract in the northern French Jura.- Facies 50, 3-4: 545-559.- FC&P 34, p. 61, ID=1284^Topic(s): reefs, biological zonation; reefs, Scleractinia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: France, Jura^During the Middle Oxfordian, numerous coral reefs flourished on the northern margin of the Tethys Ocean. The outcrop of Bonnevaux-le-Prieur (northern French Jura mountains) provides a rare opportunity to observe a nearly complete section allowing the installation, evolution and demise of this global carbonate reef rich event to be studied. Quantitative data on coral assemblages together with sedimentological and palaeoecological observations lead to the reconstruction of a reef tract coral zonation. Starting from the outer slope, Dimorpharea, Microsolena, Dendraraea, Comoseris, and Styliina ecozones are recognized. This new facies model implies a central position for an oolitic shoal in the highest energy zone, within the Comoseris ecozone. Applying this facies model to the sequence stratigraphic interpretation of the vertical succession results in recognising a third-order relative sea-level fluctuation, which can be correlated at least within Lorraine (France) and Switzerland.¹;
- 1483 s[1480] = "LATHUILIERE B., BODEUR Y., GAILLARD C., HABRANT N., HANZO M., MARCHAND D., WERNER W. (2003).- Coral zonation of an Oxfordian reef tract in the northern French Jura.- Berichte des Institutes für Geologie und Paläontologie der Karl-Franzens-Universität, Graz/Austria 7: 50. [abstract] - FC&P 34, p. 85, ID=1326^Topic(s): reefs coral, ecology, sedimentology; reefs, Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: France, Jura^[the full paper has been subsequently published by the same team of authors in Facies 50, 3-4: 545-559]^1";
- 1484 s[1481] = "BENIER C. (2001).- Les collections du département de géologie et de paléontologie du Muséum d'histoire naturelle de Genève. 72. La collection Koby (Coelenterata).- Revue de Paléobiologie 20, 2: 667-669.- FC&P 31-1, p. 52, ID=1614^Topic(s): collections of fossils; Anthozoa collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^[Koby, Frederic Louis (1852-1930). Teacher at the Lycée cantonal at Porrentruy from 1875 till 1922, Professor Koby studied the palaeontology and the stratigraphy of the Jurassic period. He became a famous specialist on coelenterata, and his studies lead him to Russia, France, and Portugal. The development of the Jurassic Museum and the Botanical Garden at Porrentruy is due to his engagement.]^1";
- 1485 s[1482] = "LEBANIDZE Z. (1991).- Pozdnejurskie korally zapadnoy Gruzii (Abkhazija).- Trudy Geologicheskogo Instituta im. A.I. Dzhanelidze Akademii Nauk Gruzinskoj SSR, novaya seria 105; 65 pp.- FC&P 21-2, p. 40, ID=3333^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Georgia, Abkhasya^Reef sediments of west Abkhasya (formerly Abkhas Republic of the USSR, N of Georgia) yielded a rich collection of upper Jurassic (upper Oxfordian - Tithonian) corals. 33 species in 18 genera are described and illustrated. One genus, Thecosmiliopsis - closely

- related to Thecosmilia and four species are described as new.¹¹ ;
- 1486 s[1483] = "BARTHEL K.W. (1972).- The Upper Jurassic (Tithonian) coral-bearing facies complex in Southeastern Germany.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 81-86.- FC&P 2-2, p. 12, ID=4763^Topic(s): facies; Anthozoa reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Tith; Geography: Germany SE^11";
- 1487 s[1484] = "TURNSEK D. (1972).- Upper Jurassic Corals of Southern Slovenia.- Razprave Dissertaciones, Slovenska Akad. Znanosti in Umetnosti, Razred za Prirodoslovne i Medicinske vede 15, 6, Ljubljana: 120 pp., 37 pls.- FC&P 2-2, p. 24, ID=4829^Topic(s): new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Slovenia^The corals occur in the strata, dating from the Upper Oxfordian and Lower Kimmeridgian periods. After a short description of coral localities in Slovenia, the author describes 65 species; 5 are new. Comparisons are established with the Jurassic of Portugal, Spain, France, Switzerland, Germany, Poland, Northern Italy, Montenegro.¹¹ ;
- 1488 s[1485] = "YAMANI S.A. (1974).- Zur Oekologie der Korallenkalke von Laisacker bei Neuburg a. d. Donau (Untertithon).- Mitt. Bayer. Staatssamm1. Palaeont. hist. Geol. 14: 3-9; Muenchen.- FC&P 4-2, p. 54, ID=5251^Topic(s): coral limestones, ecology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Tith; Geography: Germany S^The living habits of the bivalves of the ancient coral reef of Laisacker is reconstructed according to the concepts of Kauffman (1969) and their environments according to the model of Schaefer (1963). As is shown by these investigations, all the biocoenoses described by Schaefer are to be found in the Laisacker coral reef complex. The bivalves are differentiated according to ecological-morphological types. It is noticed that types with semiburrowing habits are missing, those living within the sediments are rare. Lithophaga is the only representative of boring types. The major part of the fauna belongs to the group of epifaunal bivalves characteristic for a reef habitat.¹¹ ;
- 1489 s[1486] = "WULLSCHLEGER E. (1966).- Bemerkungen zum fossilen Korallenriff Gisliflue-Homberg.- Mitt. aargauische naturf. Ges. 27: 101-152.- FC&P 7-2, p. 26, ID=5668^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Baj; Geography: Switzerland, Jura^[description of Bajocian coral reefs and corals from Swiss Jura]^11";
- 1490 s[1487] = "WULLSCHLEGER E. (1971).- Bemerkungen zum fossilen Korallenvorkommen Tiersteinberg-Limberg-Kei.- Mitt. aargauische naturf. Ges. 28: 251-292.- FC&P 7-2, p. 26, ID=5669^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Bath; Geography: Switzerland, Jura^[description of Bathonian coral reefs and corals from Swiss Jura]^11";
- 1491 s[1488] = "BENDUKIDZE N.S. (1980).- Usloviya obrazovaniya pozdneyurskikh korallyovykh biotektov Bolshogo Kavkaza. [growth conditions of Upper Jurassic coral buildups (?) in Great Caucasus Mts; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 43, ID=5803^Topic(s): reefs; coral buildups; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Caucasus^11";
- 1492 s[1489] = "PAPOYAN A.S. (1980).- Nove dannye o yurskikh korallakh severnoy chasti Armyanskoy SSR. [new data on Jurassic corals of northern Armenian SSR; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5822^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Armenia^11";

- 1493 s[1490] = "LATHUILLIERE B. (1982).- Bioconstructions Bajociennes a Madreporaires et facies associes dans l'Ile Crémieu (Jura du Sud; France).- Geobios 15, 4: 491-504.- FC&P 12-1, p. 45, ID=6192^Topic(s): reefs; coral bioconstructions; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Baj; Geography: France, Jura^First of all, this study brings necessary details about regional stratigraphy. It goes on to reconstitute the paleobiocenoses and the environmental conditions of Bajocian coral limestone deposits: weak currents, fairly high depth, varied substrates, low relief. In the low areas scleractinians disappear and are replaced by sponges, Pseudomelania or pholadomyes communities. In order to explain the particularities of Bajocian constructions, some hypotheses have been put forward, mentioning the slope of the platforms, the speed of growth of organisms and the stability of the sea-level. [original summary]^1";
- 1494 s[1491] = "WINKLER A. (1982).- Skelett aus Kalk. Korallen des Jura (pt 1).- Mineral. Mag. 1982, 6: 256-262.- FC&P 12-2, p. 40, ID=6228^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1495 s[1492] = "WINKLER A. (1982).- Skelett aus Kalk. Korallen des Jura (pt 2).- Mineral. Mag. 1982, 7: 303-306.- FC&P 12-2, p. 40, ID=6229^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1496 s[1493] = "WINKLER A. (1982).- Skelett aus Kalk. Korallen des Jura (pt 3).- Mineral. Mag. 1982, 10: 469-471.- FC&P 12-2, p. 40, ID=6230^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1497 s[1494] = "WINKLER A. (1982).- Skelett aus Kalk. Korallen des Jura (pt 4).- Mineral. Mag. 1982, 12: 559-562.- FC&P 12-2, p. 40, ID=6231^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1498 s[1495] = "WINKLER A. (1983).- Skelett aus Kalk. Korallen des Jura (pt 5).- Mineral. Mag. 1983, 1: 43-44.- FC&P 12-2, p. 40, ID=6232^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1499 s[1496] = "WINKLER A. (1983).- Skelett aus Kalk. Korallen des Jura (pt 6).- Mineral. Mag. 1983, 4: 167-172.- FC&P 12-2, p. 40, ID=6233^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1500 s[1497] = "WINKLER A. (1983).- Skelett aus Kalk. Korallen des Jura (pt 7).- Mineral. Mag. 1983, 6: 277-279.- FC&P 12-2, p. 40, ID=6234^Topic(s): coral skeletons; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Jura Mts^^1";
- 1501 s[1498] = "KIESSLING W., RONIEWICZ E., VILLIER L., LEONIDE P., STRUCK U. (2009).- An Early Hettangian coral reef in southern France: implications for the end-Triassic reef crisis.- Palaios 24: 657-671.- FC&P 36, p. 91, ID=6504^Topic(s): reefs, extinctions; reefs, extinctions; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Hett; Geography: France S^The oldest known Jurassic coral reef is exposed in the Ardeche region of southern France. This reef site, consisting of at least three reefal bodies, is of early Hettangian age and thus immediately postdates the end-Triassic mass extinction, which is well known for its catastrophic effect on reef building. Bulk carbonate carbon isotopes of the limestones below the reef are likely to record environmental perturbations subsequent to the mass extinction. The main reef is

surprisingly well developed (20m in thickness, 200m in lateral extent) and composed of at least four genera and six species of corals ? not only holdover genera from the Triassic, but also one newly evolved genus (Phacelophyllia), contributed to reef construction. Just like their latest Triassic counterparts, the reef is dominated by phaceloid corals with a considerable contribution of microbialite. The reef predates similarly well developed structures by almost ten million years. The shelf setting of the reef renders it unlikely that refuges around oceanic islands are needed to explain survival of corals across the end-Triassic mass extinction. [original abstract]^1";

1502 s[1499] = "HEGELE A. (1993).- Korallenriffe in Schwaben.- Fossilien 10, 4: 220-224.- FC&P 22-2, p. 97, ID=6831^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Germany, Swabia^1";

1503 s[1500] = "DUPRAZ C., STRASSER A. (2002).- Nutritional modes in coral-microbialite reefs (Jurassic, Oxfordian, Switzerland): Evolution of trophic structure as a response to environmental change.- Palaios 17, 5: 449-471.- FC&P 31-2, p. 53, ID=1143^Topic(s): reefs ecology, nutritional modes; reefs ecology; Systematics: Cnidaria Monera; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: Switzerland^Detailed study of Oxfordian coral-microbialite reefs in the Swiss Jura Mountains has identified major paleoecological variations in space and time, which are attributed to environmental changes. Micro- and macroscale semiquantitative analyses of microbialite types, micro-encrusters, bioerosion, corals, and other macrofauna composing the reefal facies were performed. Three maintrophic structures (dominant nutritional modes) were recognized: phototrophic-dominated, balanced photo-heterotrophic, and heterotrophic-dominated. A phototrophic (light dependant) faunadominated reefs growing in pure carbonate and nutrient-poor environments, where sedimentation rate was the main factor controlling reef growth. In mixed siliciclastic-carbonate platform environments, a balanced photo-heterotrophic fauna with periodical shifts to heterotrophic dominated associations was induced by freshwater and sediment run-off into closed, shallow lagoons. In this case, the main factors controlling reef growth were the distribution and accumulation of terrigenous sediment on the platform and / or associated nutrient availability. The balanced photo-heterotrophic structure found in mixed carbonate-siliciclastic settings produced the most diversified reefs, suggesting that these Oxfordian reefs preferentially thrived in water moderately charged with nutrients (mesotrophic environment). In the case of strong siliciclastic accumulation and / or strong increase in nutrient availability, coral reef diversity dropped drastically and heterotrophs dominated the trophic structure. A model of the evolution of trophic structure in these reefs as a function of the governing environmental factors is proposed. Focusing on the dominant nutritional mode at each step in reef evolution allows a detailed characterization of reefal structure and a better understanding of the processes leading to coral reef settlement, development, and demise.^1";

1504 s[1501] = "MOSTLER H. (1990).- Mikroskleren von Demospongien (Porifera) aus dem basalen Jura der Nordlichen Kalkalpen.- Geol.-Palaeont. Mitt. Innsbruck 17: 119-142. [in German, with English summary].- FC&P 20-1.1, p. 72, ID=2858^Topic(s): microscleres; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Jurassic L; Geography: Alps N^For the first time microscleres of Demospongiae from the Liassic Kirchsteinkalk (Allgau Formation as basin facies to Liassic Kirchstein Limestones) are described and presented by 6 plates. In contrary to previous opinions microscleres can be proved frequently in scarcely diagenetically altered limestones and calcareous marls. With the help of microscleres and in consideration of accompanying megascleres for the first time it was possible to link with recent Demospongiae. Specific microscleres

Like cricorhabds, toxa, sigmata, diancistors and various chelate scleres, clavidisks, oxasters, sphaerasters, sterrasters and amphiasters are of special importance. With few exceptions these types of microscleres are only known from the Late Tertiary and in some cases even only recently. In particular this concerns chelate scleres. By evaluation of these microscleres from the Lower Liassic of the Northern Calcareous Alps the following Demospongiae are provable: The Ceratinomorpha are represented by the order Poecilosclerida and their families Myxillidae, Cladorhizidae, Crellidae, Amphilectidae, Desmacellidae and Desmacitidae. Partly correlation on generic level is possible. Within the Tetractinomorpha the order Astrophorida (= Choristida) is represented by the families Gediidae, Ancorinidae and Pachastrellidae; with the help of microscleres it was possible to prove the families Theonellidae and Corallistidae. The order Hadromerida is represented by the family Clionidae. All the mentioned families are widespread by numerous genera. By the proof of the above mentioned microscleres in the Lower Liassic it was possible to enlighten the evolutionary history of Poecilosclerida and especially Astrophorida. Particular attention is drawn to the sharp faunal break between Triassic and Jurassic, revealed by evaluation of the deep water Porifera (demosponges and hexactinellids).^1";

- 1505 s[1502] = "MOSTLER H. (1989).- Mikroscleren hexactinellider Schwaemme aus dem Lias der Noerdlichen Kalkalpen.- Jb. Geol. B.-A. 132, 4: 687-700.- FC&P 19-1.1, p. 61, ID=2687^Topic(s):microscleres; Porifera Hexactinellida; Systematics:Porifera; Hexactinellida; Stratigraphy:Jurassic L; Geography:Alps N^^1";
- 1506 s[1503] = "MOSTLER H. (1990).- Hexactinellide Poriferen aus pelagischen Kieselkalken (Unterlias, Nordliche Kalkalpen).- Geol. Palaeont. Mitt. Innsbruck 17: 143-178. [in German, with English summary].- FC&P 20-1.1, p. 72, ID=2859^Topic(s):Porifera Hexactinellida; Systematics:Porifera; Hexactinellida; Stratigraphy:Jurassic L; Geography:Alps N^^1";
- 1507 s[1504] = "MORYCOWA E. (1974).- Hexacorallia d'un bloc exotique de calcaire tithonique a wozniki pres de wadowice (Carpathes Polonaises Occidentales).- Acta Geologica Polonica 24, 3: 457-484.- FC&P 6-1, p. 29, ID=0099^Topic(s):exotics in flysch; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic Oxf - Tith; Geography:Poland, Carpathians^17 species of corals (3 new) ranging from Upper Oxfordian to Upper Tithonian are described from an erratic block (of "Stramberk" limestone lithology) in Hauterivian (Lower Cretaceous).^1";
- 1508 s[1505] = "RONIEWICZ E. (1976).- Les scleractiniaux du Jurassique Superieur de la Dobrogea Centrale, Roumanie.- Palaeontologia Polonica 34: 17-121. [monograph] - FC&P 6-1, p. 29, ID=0101^Topic(s):Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic; Geography:Romania, Dobrogea^91 Scleractinian species are described from the Upper Oxfordian-Lower Kimmeridgean rocks of Dobrogea, Roumania. Twenty-five new species are defined. Comparison is made with other Jurassic faunas and there is a short discussion on trends in colonial morphologies with time and environment^1";
- 1509 s[1506] = "BEAUVAIS L. (1981).- Nouvelles especes de Madreporaires dans le Kimmeridgien superieur du Jura (France).- Geobios . 173-189.- FC&P 11-1, p. 27, ID=1746^Topic(s):Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic Kimm; Geography:France, Jura^^1";
- 1510 s[1507] = "BEAUVAIS L., RIEUF M. (1981).- Decouverte de Madreporaires oxfordiens dans les calcaires de Caporalino (Corse).- Bulletin de la Societe geologique de France . 353-359.- FC&P 11-1, p. 27, ID=1747^Topic(s):Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic Oxf; Geography:

- 1511 s[1508] = "KAPITZKE M., LAUXMANN U. (1988).- Tiaradendron giganteum n.sp., eine neue Korallenart aus dem hoeheren Oberjura der Schwabischen Alb.- Stuttgarter Beitr. Naturkunde B 45: 5 pp., 1 Tab. [in German, with English summary].- FC&P 17-2, p. 33, ID=2195Topic(s): taxonomy; Scleractinia, Tiaradendron; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^A new species of the genus Tiaradendron is described as Tiaradendron giganteum n.sp. It differs particularly by the largeness of the calice, the hexamere septal substitution and the manner of budding from the only so far known species Tiaradendron germinans (Quenstedt 1852).^1";
- 1512 s[1509] = "RONIEWICZ E. (1988).- Cylismilia nom. n. (Scleractinia, Jurassic).- Acta Palaeontologica Polonica 33, 1: 85.- FC&P 18-1, p. 27, ID=2224Topic(s): homonymy; Scleractinia, Cylismilia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Kimm; Geography: Romania, Dobrogea^Nomenclatural note; for an early Kimmeridgian coral from Dobrogea, Cyliindrosmlia Roniewicz 1976 (type species: C. cylindrical) preoccupied by Cyliindrosmlia Quenstedt 1880 (type species: C. reticulata) from the late Kimmeridgian of Nattheim, a new name Cylismilia has been proposed.^1";
- 1513 s[1510] = "REIFF W. (1988).- Die Korallenvorkommen von Gerstetten. Fazielle und stratigraphische Zuordnung im Oberen weissen Jura der ostlichen Schwabischen Alb.- Jh. geol. Landesamt Baden-wuerttemberg 30: 357-371 [in German].- FC&P 18-1, p. 44, ID=2282Topic(s): ecology, stratigraphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^[listed are scleractinian corals (about 20 species are figured), comparable to famous fauna of Naltheim / wuerttemberg]^1";
- 1514 s[1511] = "MORYCOWA E., MISIK M. (2005).- Upper Jurassic shallow-water scleractinian corals from the Pieniny Klippen Belt (western Carpathians, Slovakia).- Geologica Carpathica 56, 5: 415-432.www.geologicacarpatica.sk/src/abstract.php?id=2005005600050415.- FC&P 35, p. 80, ID=2398Topic(s): shallow water corals; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Slovakia, Pieniny Klippen Belt^Oxfordian shallow-water scleractinian coral association from the biohermal limestones of the Mt Vrsatec (Czorsztyn Succession, Slovak sector of the Pieniny Klippen Belt, western Carpathians) comprises 18 species (among them 2 new) plus 3 taxa determined on the generic level only. They represent 13 genera and 10 (or 11) families. The most common are phaceloid coral growth forms from the genus Thecosmlia Milne Edwards et Haime (family Montlivaltiidae). The studied fauna appears similar, though less diversified taxonomically, as compared to those known from the Upper Jurassic shallow-water facies of many other parts of Europe. In the Pieniny Klippen Belt this type of coral fauna occurs only in Western Slovakia.^1";
- 1515 s[1512] = "LAUXMANN U. (1991).- Revision der oberjurassischen Korallen von wuerttemberg (SW-Deutschland), excl. Fungiina.- Palaeontographica A219: 107-175.- FC&P 20-2, p. 34, ID=2897Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^The present paper [thesis elaborated at the Institut fur Geologie und Palaeontologie, Universitaet Stuttgart] deals with the following suborders of the Upper Jurassic corals of wuerttemberg (SW-Germany): Archaeocaeniinae Alloiteau 1952, Stylinina Alloiteau 1952, Rhipidogyrina Roniewicz1976, Caryophylliina Vaughan & wells 1943, Amphiastraeina Alloiteau 1952, Faviina Vaughan & wells 1943 (excl. genus Montlivaltia). The suborder Fungiina Duncan 1884 is not included. 28 genera and 63 species are examined with consideration of environmentally and ontogenetically caused variations. One species is

declared invalid, 16 species or subspecies are posed to other, formerly described species, 8 species are described for the first time out of the Upper Jurassic of the Swabian Alb and one species is wholly newly defined. Furthermore, the systematic position of some taxa is changed.¹";

- 1516 s[1513] = "LAUXMANN U. (1991).- Bemerkungen zu den meandroiden Korallen des hoeheren Oberjura der Schwaebischen Alb (SW-Deutschland).- Stuttgarter Beitr. Naturkunde B181: . pp? [in German, with English summary].- FC&P 20-2, p. 34, ID=2898^Topic(s): meandroid corals; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^In the present paper the meandroid corals of the suborder Fungiina Duncan 1884 which are known up to now from Wuerttemberg are shortly presented. 6 of these species cannot be maintained in the list of corals from Wuerttemberg. 1 species is described for the first time from the higher Upper Jurassic of the Swabian Alb and 1 species is described wholly new. The most important features of the 5 meandroid genera occurring in Wuerttemberg of the suborder Fungiina are listed.¹";
- 1517 s[1514] = "LAUXMANN U., KAPITZKE M. (1991).- Microphyllia profunda n.sp. und Microphyllia minima (Koby 1885), zwei neue meandroide Korallenarten aus dem hoeheren weissen Jura der Schwaebischen Alb.- Stuttgarter Beitr. Naturkunde B175: . pp? [in German, with English summary].- FC&P 20-2, p. 34, ID=2899^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^Two meandroid species of the suborder Fungiina Duncan 1884 of the higher Upper Jurassic of the Swabian Alb are described. One of them is new, the other was not known from Wurttemberg thus far.¹";
- 1518 s[1515] = "ANDRI E., CARLONE C., ROSSI F. (1991).- Archeoanthophyllum paradiseopsis n.g., n.sp. (Scleractinia, Hexanthiniaria); un nuovo corallo della Marsica orientale (Abruzzo, Italia).- Atti della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano 131, 1990, 14: 233-242.- FC&P 22-1, p. 41, ID=3404^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M - U; Geography: Italy, Abruzzo^A new coral family including a new genus as well as species of the order Hexanthiniaria has been established. The new form which has a simple and archaic morphology has been found together with corals of the genera Stylosmilia and Schizosmilia in a patch-reef zone of the middle Jurassic (middle Dogger to lowermost Malm) in the Abruzzo region (Italy).¹";
- 1519 s[1516] = "DULAI A. (1995).- Preliminary notes on Early and Middle Jurassic corals of the Bakony Mountains (Hungary).- Hantkeniana 1: 49-58.- FC&P 26-2, p. 72, ID=3752^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic L M; Geography: Hungary, Bakony Mts^Hettangian, Pliensbachian and Bajocian corals were examined from 6 localities of the Bakony Mountains. All of the suborders existed in Early and Middle Jurassic are present in the 80 specimens. The determined 6 genera belong to 4 suborders. 88% of the fauna is derived from the Domerian formations, but the number of taxa are nearly equal in Carixian, Domerian and Bajocian. Four genera appeared earlier in the Bakony Mountains, than in other areas. Seventy-seven specimens belong to solitary corals, and only 3 specimens are colonial. Two-third of the fauna is hermatypic at the Pliensbachian localities, but at the same time 80% of the specimens are ahermatypic in Bajocian. Fissures of seamounts and the edge of a seamount are represented at these localities. This means, that the top of the seamounts were not sinking below the depth of 100m during the Pliensbachian, but it may have been below 100m in Bajocian. The elongated morphotypes of corals stabilized themselves by root-like fixation, or the specimens had to be sunk in the loose sediments. Because the loose sediments were rare at the top

- of seamounts, the corals are sometimes overturned (scolecid specimens).^1";
- 1520 s[1517] = "TURNSEK D., BUSER S. (1999).- Stylophylloids veneta (Airaghi), a Liassic coral from the northern Dinaric Carbonate Platform (Slovenia).- Profil 16: 173-180.- FC&P 28-2, p. 31, ID=4025^Topic(s): ; Scleractinia, Stylophylloids; Systematics: Cnidaria; scleractinia; Stratigraphy: Jurassic Plie; Geography: Slovenia^The coral stylophylloids veneta (Airaghi 1907) from middle Liassic (Domerian) limestone of southern Slovenia is described and revised. This species is hitherto the only Liassic coral known from Slovenia and the entire Dinaric Carbonate Platform.^1";
- 1521 s[1518] = "ROSTOVTSEV K.O. (1992).- Yura Kavkaza [Jurassic of the Caucasus].- Trudy Ross. Ak. Nauk. Kom. geol. isp. 22: 184 pp.; St. Petersburg. [in Russian].- FC&P 23-2.1, p. 52, ID=4393^Topic(s): geology; geology, sedimentation; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Caucasus^The monograph gives a detailed overview of the Jurassic sediments in the Caucasus region. In the frame of the description, the occurrence of scleractinian corals is reported. The species names are given in the text. ^1";
- 1522 s[1519] = "LAUB C. (1994).- Die Radiolarit-Rhynchonolithen-Kalke des Rosso Ammonitico in den mittleren Suedalpen (Mittel/Oberjura, Norditalien).- Palaeontographica A234, 4/6: 89-166.- FC&P 24-1, p. 68, ID=4493^Topic(s): ; geology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M / U; Geography: Italy, ammonitico rosso^[some corals named Stephanophyllia suevica Quenstedt and Trochocyathus sp. are reported in Radiolarit-Rhyncholith-limestones of the Rosso Ammonitico (Middle/Upper Jurassic) in the central southern Alps (northern Italy)]^1";
- 1523 s[1520] = "BEAUVAIS L. (1972).- Trois espèces nouvelles de Madréporaires de l'Oxfordien supérieur de Grèce continentale (Province de Béotie).- Annales de la Societe geologique du Nord 92, séance du 7/6/1972, pp 95-97.- FC&P 2-2, p. 21, ID=4817^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Oxf; Geography: Greece^The Madreporaria found in the limestones called "Domvrena marbles" allowed to date the base of a structural unit minutely: eocretaceous-aged Beotian flysch. The three new species seen in this material are described here.^1";
- 1524 s[1521] = "KHADZHI-MITROVA S., KARAJOVANOVIC M. (1973).- Contribution à la connaissance de l'extension du Jurassique supérieur aux environs de Kumanova. [en macédonien] .- Trud. geol. zavod. socijal. Republ. Makedonija 1973, 15: 53-75.- FC&P 4-1, p. 44, ID=5168^Topic(s): ; geology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Macedonia Republic of^Etude stratigraphique et paléontologique comportant la description et la figuration de deux espèces d'Hexacoralliaires appartenant à deux genres et de nombreux genres et espèces de mollusques.^1";
- 1525 s[1522] = "BONNEAU M., BEAUVAIS L., MIDDLEMISS F.A. (1974).- L'unité de Miamou (Crète - Grèce) et sa macrofaune d'âge Jurassique supérieur (Brachiopodes, Madréporaires).- Annales de la Societe geologique du Nord 94: 71-85.- FC&P 4-2, p. 50, ID=5231^Topic(s): geology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Kimm; Geography: Greece, Crete^Une nouvelle unité tectonique à caractères helléniques internes est décrite. Elle est formée de roches terrigènes associées à des calcaires récifaux et à des diabases. Les nombreux fossiles récoltés sont ici décrits. Ils comportent 18 espèces de Madréporaires et 5 espèces de Brachiopodes. L'âge de la faune est Kimméridgien.^1";
- 1526 s[1523] = "MACKEVICH M.M., KRASNOV Ye.V., STAROSTINA E.A. (1980).- Tipy

- organogennykh postroek i vidovoy sostav skleraktiniy pozdnejurskikh morey severo-vostochnogo Kavkaza. [types of organic buildups and taxonomic composition of Upper Jurassic scleractinians of Great Caucasus Mts; in Russian].- Korally i rify fanerozoja SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 43, ID=5817^Topic(s): reefs; reefs, Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Caucasus^^1";
- 1527 s[1524] = "BEAUVAIS L. (1980).- Bodeurina: un nouveau genre de Madréporaire de la famille des Rhipidogyriidae, dans le Jurassique supérieur du Languedoc.- C. R. somm. Soc. Geol. Fr. 1980, 6: 228-231.- FC&P 10-1, p. 22, ID=5891^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: France, Languedoc^^1";
- 1528 s[1525] = "SCHAFER P., SENOWBARI-DARYAN B. (1980).- Aulastraea conica, eine neue Koralle (Scleractinia: Amphiastreidae) aus Tithon-Riffkalken der Madonie-Berge (Mittel-Sizilien).- Senckenbergiana lethaea 61, 1/2: 1-11.- FC&P 10-1, p. 55, ID=5933^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Tith; Geography: Italy, Sicily^The coral Aulastraea conica n.sp. is described from Upper Jurassic (Tithonian) reef limestones of the Monte Mufara in the Madonie Mountains S. of Cefalu, Sicily. It belongs to the scleractinian family Amphiastreidae Ogilvie. [original summary]^1";
- 1529 s[1526] = "BEAUVAIS L. (1975).- Revision des types de Madreporaires décrits par Koby, provenant des couches à Mytilus (Alpes Vaudoises).- FC&P 4, 2: 31-33.- FC&P 4-2, p. 31, ID=6288^Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Alps, Swiss^Grâce à la complaisance de M. Wiedmann, Conservateur du Musée Géologique de Lausanne, que nous remercions ici très vivement, nous avons pu réviser les types de Koby provenant des couches à Mytilus des Alpes romanes (Suisse) que nous croyions perdus (L. Beauvais, Eclog 1966). Ces 25 échantillons furent décrits par Koby dans la Monographie des Polypiers jurassiques de la Suisse (1883-1889). Les résultats de notre étude sont exposés dans le tableau ci-joint (pages suivantes). * Parmi les 25 espèces de Madréporaires provenant des couches à Mytilus (= Dogger) des Alpes suisses, nous en avons reclassé 10 dans des genres différents de ceux que leur avait attribué Koby. Six sont mises dans la synonymie d'espèces déjà connues et les 10 autres sont maintenues dans leur classification générique et spécifique originale. * De plus, du point de vue répartition stratigraphique et géographique, 15 espèces sont endémiques, 7 ont été rencontrées dans le Dogger d'autres régions et 3 n'étaient connues jusqu'à présent que dans le Malm. [original text]^1";
- 1530 s[1527] = "ELIASOVA H. (2008).- Corals from the Stramberk Limestone (Silesian Unit, Outer Western Carpathians, Czech Republic).- Geologia 34, 3/1: 151-160; Cracow.- FC&P 36, p. 89, ID=6499^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Carpathians^The submitted contribution informs about the present-day situation of the coral fauna occurring in the Stramberk Limestone at the Kotouc Quarry near Stramberk. 120 determined species belong to 50 genera that pertain to 7 suborders of the order Scleractinia. [original abstract]^1";
- 1531 s[1528] = "ELIASOVA H. (1973).- Sous-famille Rhipidogyrinae Koby, 1905 (Hexacorallia) des calcaires de Stramberk, Tithonien, Tchécoslovaquie.- Casopis pro mineralogii a geologii 18, 3: pp ??.- FC&P 2-2, p. 23, ID=4822^Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Tith; Geography: Stramberk Lst^Jusqu'à présent j'ai trouvé dans les calcaires de Stramberk (localités: Stramberk, Skalicka, Jasenice en Moravie du nord et l'unité silésienne dans les

Carpates occidentales du Flysch) 7 genres et 20 espèces de coraux de la sous-famille Rhipidogyrinae Koby, 1905. j'ai décrit un nouveau genre Ogilviella n.g. et 5 espèces nouvelles. A la sous-famille mentionnée j'ai aussi rapporté le genre Pruvostastraea Alloiteau, 1957 qui jusqu'ici était classé dans la famille Amphiastraeidae Ogilvie, 1897 j'ai rendu plus précises les descriptions des genres Acanthogyra Ogilvie, 1897 et Placogyra Koby, 1904, peu connus, et j'ai aussi décrit des septes apophysaux caractéristiques de la sous-famille Rhipidogyrinae; selon mon opinion les septes lonsdaléoïdes mentionnés chez les genres Aplosmilium Orb., 1849 et Rhipidogyra M. Edw. et H., 1848, ne peuvent être désignés que comme septes lonsdaléoïdes non-typiques. Les conditions de présence et l'état de conservation de la faune corallienne dans les blocs de calcaires de la région de Stramberk sont brièvement caractérisés. ^1";

- 1532 s[1529] = "STOLARSKI J., RUSSO A. (2002).- Microstructural diversity of the stylophyllid (Scleractinia) skeleton.- Acta Palaeontologica Polonica 47, 4: 651-666.- FC#038;P 32-1, p. 29, ID=1733^Topic(s): microstructures, diversity; Scleractinia, Stylophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic sine; Geography: Italy, Sicily^Coralla of the three species of solitary corals described herein from the Sinemurian (Lower Jurassic) of Sicily, i.e., Haimeicyclus haimeii (Chapuis and Dewalque 1853), Stylophyllopsis sp. cf. S. rugosa (Duncan and Wright 1867), and Stylophyllopsis sp.A., conform to the overall stylophyllid morphology. Their septa consist of spines that are increasingly covered with sclerenchyme and low in the calice form compact blades. The pattern of diagenetic alteration of septa is diverse but consistent within particular taxa. It suggests that the spectrum of the original microstructures is wider than traditionally suggested for stylophyllids. In H. haimeii, the septa are covered with dense granulations and completely recrystallized. Granulations also cover septal faces of Stylophyllopsis cf. rugosa and have rod-like foundations. In Stylophyllopsis sp. A., vestiges of the narrow mid-septal zone (similar to that in minitrabecular corals) occur in the proximal part of larger septa, whereas septal spines which are similar to those in Stylophyllopsis cf. rugosa occur in their distal parts. Similar diversity of microstructures is reported also in Triassic stylophyllids that have aragonitic coralla. The presence of distinct septal spines along with wide-ranging microstructural diversity of traditional Triassic-Jurassic stylophyllids, casts light on their possible evolutionary relationships, and can be a useful criterion for further revision of the group. For example, Jurassic thecocyathids, considered ancestral to caryophyllinians, share similar spiny/lobate septa with stylophyllids. Also Recent deep-water anthemiphylliids with spiny/lobate septa are strikingly similar to stylophyllids. Although this may be another example of parallel evolution, the separation of anthemiphylliids from other scleractinian clades on a mitochondrial 16S RNA tree topology suggests their ancient roots and enable us to suggest a stylophyllid ancestry. The supposed cyclic pattern of protoseptal insertion in Early Jurassic H. haimeii supports the hypothesis of scleractinian-like (and not rugosan) ancestry of the stylophyllid evolutionary lineage.^1";
- 1533 s[1530] = "MILAN A. (1980).- Prilog poznavanju malmskih naslaga produkcija Zlobina u jugozapadnoj Hrvatskoj. [contribution to the knowledge of the Malmian deposits in the Zlobin area in SW Croatia; in Croatian].- Geoloski vjesnik 31: 369-372.- FC#038;P 10-1, p. 59, ID=6019^Topic(s): geology; geology, stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic U; Geography: Croatia^[Upper Jurassic stromatoporoidea of the genera Sphaeractinia, Actinostromina, Astrostylopsis, Tubuliella and Adriatella have been determined]^1";
- 1534 s[1531] = "WIRSING G., KOCH R. (1986).- Algen-Schwamm-Bioherme des Flachwasserbereichs (Schwäbische Alb, Weissjura Delta 3).- Facies 14:

- 285-308.- FC&P 15-2, p. 7, ID=6742^Topic(s): reefs; algal-poriferan reefs; Systematics: algae Porifera; Stratigraphy: Jurassic Kimm; Geography: Germany, Swabian Alb^[shallow marine algal-sponge bioherms: Upper Jurassic, Middle Kimmeridgian; Swabian Alb]^1";
- 1535 s[1532] = "GOHNER D. (1980).-'Covel dell'Angiolono" - ein mittelliassisches Lithiotis-Schlammioherm auf der Hochebene von Lavarone (Provinz Trento, Norditalien).- N. Jb. Geol. Palaeont. Mh. 1980, 10: 600-619.- FC&P 10-1, p. 28, ID=5926^Topic(s): reefs; Lithiotis mud mound; Systematics: Mollusca; Stratigraphy: Jurassic L; Geography: Italy N^^1";
- 1536 s[1533] = "KEUPP H., KOCH R., LEINFELDER R. (1990).- Steuerungsprozesse der Entwicklung von Oberjura-Spongiolithen Sueddeutschlands: Kenntnisstand, Probleme und Perspektiven.- Facies 23: 141-174.- FC&P 20-1.1, p. 67, ID=2849^Topic(s): spongiolites; spongiolites; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Germany S^The spongiolitic facies reaches its widest distribution along the epicontinental to pericontinental margin of the Northern Tethys during the Upper Jurassic. These buildups formed by siliceous sponges represent a singular event within the evolution of reef communities during Earth's history. In this paper the present knowledge of causal and environmental aspects of the spongiolithic limestones in Southern Germany and adjacent areas is discussed. With regard to the research project "Evolution of Reefs" (a major part of the Schwerpunktprogramm "Biogenic Sediments" established by the Deutsche Forschungsgemeinschaft in 1990) the following genetically and process orientated aspects are of interest: 1) The stratigraphic classification using biostratigraphic, lithostratigraphic and mineralostratigraphic methods. 2) The paleogeography, oceanography and geotectonics along the broad passive northern shelf of the Tethys are discussed with regard to width and stability of the shelf, distance to the land mass and terrigenous influence and sea level fluctuations. 3) Certain sedimentological features seem to be indicative of climatic fluctuations, but this is not always proved by the distribution patterns of organisms. 4) The classical interpretation that spongiolites formed below the wave base gets opposition by the significance of biogenic carbonate crusts as well as sedimentological and paleogeographic arguments. 5) Important sedimentological factors of the Upper Jurassic spongiolites are paleobathymetry, sedimentary cycles, possible control of spongiolite growth by sea level fluctuations, as well as biogenic interactions which probably initiated the fossilization of siliceous sponges as well as the formation of spongiolitic buildups. 6) Paleoecological conditions can be reconstructed by the community patterns of benthonic organisms and substrate control patterns, both changing through time. Phylogenetic innovations of related sponge groups (hexactinellids, lithistide demospongeans) most probably are not responsible for the initial growth of buildups. 7) Comparison of the spongiolites with the laterally and vertically associated coral facies is of major importance for the interpretation of controlling parameters (bathymetry, sedimentation rates, nutrient and nutrient availability) of the sponge facies. 8) The genetic significance of diagenetic processes in spongiolites is discussed with regard to early lithification, dissolution, epigenetic dolomitization and dedolomitization. ^1";
- 1537 s[1534] = "MEYER R.F., SCHMIDT-KALER H. (1990).- Palaeogeographie und Schwammriffentwicklung des sueddeutschen Malm - ein Ueberblick.- Facies 23: 175-184.- FC&P 20-1.1, p. 69, ID=2852^Topic(s): sponge reefs; sponge reefs; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Germany S^The subdivision and evolution of the south German Upper Jurassic shelf sediments is shown on paleogeographic maps for the Oxfordian, Kimmeridgian and Tithonian (Figs 2-4). Stable elements in this

- or Polish Upper Jurassic sponge fauna, the sponge community in Dobrogea has some particular features that make that eastern part of the European sponge megafacies different from all the rest. The work tries to point out some of them, but not to complete the research, as the sponge fauna here needs revision. [original abstract]^1";
- 1541 s[1538] = "UNGUREANU D. (2005).- Faciesul cu spongieri din vestul Dobrogei centrale in Jurasicul superior - intrepretari paleoecologice [The facies with sponges in western central Dobrogea during Upper Jurassic - paleoecological interpretations; in Romanian].- www.tesionline.com; 47 pp.www.tesionline.com.- FC&P 36, p. 45, ID=6422^Topic(s): sponge facies; sponge facies; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Romania, Dobrogea^The present study deals with paleoecological aspects of the Upper Jurassic sponge facies in the western area of the central Dobrogea. There is also, an attempt to include the occurrences of the facies in Dobrogea within the frame of the sponge reefs developed across Europe and beyond, marking a global significance event at the end of Jurassic. An argumentation is also included for the place of the sponge reefs in Dobrogea within the geo-historical evolution of that kind of biological buildings. Finally, there are few comparisons between the sponge facies in western Dobrogea and its fauna against the status of other occurrences along the siliceous sponge reef belt, in Germany, Poland, Spain.^1";
- 1542 s[1539] = "UNGUREANU D., BARBU E. (2004).- Endemic Features of the Upper Jurassic Sponges in the Western Central Dobrogea (Atarnati-Cechirgea Perimeter).- Acta Palaeontologica Romaniae 4: 493-502.- FC&P 36, p. 46, ID=6424^Topic(s): taxonomy biogeography; Porifera; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Romania, Dobrogea^In the Upper Oxfordian, central Dobrogea hosted the far eastern end of the Upper Jurassic Sponge Megafacies. Its closest relations are the occurrences in Poland and those in the Swabian Alb (Germany). The Oxfordian sponge fauna in Dobrogea is also most related with that in Poland and in Germany. However, in Dobrogea, the support of the faunal association was a slight slope, unlikely the rest of the European occurrences. * As the closest Upper Jurassic sponge communities were quite far, their weak influence allowed the development of some different sponge populations in the specific conditions of life here. The differences are mostly related to shape and size, and this study tries to present some of them. * Several genera are considered: Laocoetis, Cribrospongia, Trochobolus, Cnemidiastrum and Melonella. The Cribrospongia phylloidea (Antonescu 1928) species is particularly analyzed and it is suggested that it is only a variety of Cribrospongia reticulata (Goldfuss 1826), and not a separate one. It is, also, particularly analyzed the Trochobolus dentatus (Kolb 1910) species identified in that area. * Unfortunately, diagenetic conditions did not allow the conservation of the skeleton structure. That is why all taxonomical identifications of fossil sponges in Dobrogea, both previous and present ones are based entirely on the macroscopic morphologic descriptions.^1";
- 1543 s[1540] = "SCHORR M., KOCH R. (1985).- Fazieszonierung eines oberjurassischen Algen-Schwamm-Bioherms (Herrlingen, Schwabische Alb).- Facies 13: 227-270.- FC&P 15-1.2, p. 10, ID=0851^Topic(s): reefs facies; reefs, facies; Systematics: Porifera algae; Stratigraphy: Jurassic U; Geography: Germany^Facies zonation of an Upper Jurassic Algal-sponge bioherm (Swabian Alb, Germany).^1";
- 1544 s[1541] = "KOCH R., SCHWEIZER V. (1986).- Microfazies, Diagenese und Bildungsraum oberjurassischer Schwamm-Algen- "Riffe" der Schwabischen Alb.- Heidelberger geowiss. Abh. 6: 247-263.- FC&P 16-2, p. 26, ID=2062^Topic(s): reefs; reefs; Systematics: Porifera algae; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^1";

- 1545 s[1542] = "SCHWEIZER V. (1987).- Die Schwamm-Algen-Fazies im Weissen Jura der westlichen Schwabischen Alb.- Facies 17: 197-202.- FC&P 16-2, p. 27, ID=2067^Topic(s): poriferan-algal facies; poriferan-algal facies; Systematics: Porifera algae; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^1";
- 1546 s[1543] = "KOCH R., SCHORR M. (1986).- Diagenesis of Upper Jurassic Sponge-Algal Reefs In SW Germany.- Reef Diagenesis [J.H. Schroeder & B.H. Purser (eds)]: 224-244; Springer, Berlin / Heidelberg.- FC&P 15-2, p. 7, ID=6738^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: Porifera algae; Stratigraphy: Jurassic U; Geography: Germany SW^1";
- 1547 s[1544] = "SCHROEDER J.H., REINHOLD C., WEIDLICH O. (1996).- Diagenesis in Upper Jurassic Microbial Sponge Mounds (Southern Germany): Sequence Analysis, Controlling Factors and Quantitative Assessment.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 38, ID=3599^Topic(s): reefs microbial - sponge; reefs, microbial - sponge; Systematics: Porifera Monera; Stratigraphy: Jurassic Oxf Kimm; Geography: Germany, Swabian Alb^In cores taken around the Eybtal near Geislingen / Steige (Swabian Alb), diagenetic products in Oxfordian to Kimmeridgian microbial sponge mounds and surrounding carbonate sediments are characterized by means of petrographic and geochemical methods. Using seven microfacies types as reference, respective specific diagenetic sequences and their variations are traced. The general diagenetic history includes early marine phreatic, burial partly hydrothermal and late meteoric stages in all microfacies types. Various controlling factors are effective at different stages and in different dimensions. Early marine diagenesis is largely controlled by rock fabric and composition as well as primary porosity; in contrast, burial and meteoric stages are influenced by fluid chemistry, secondary porosity and regional structural processes. Dolomitized and dedolomitized microbial sponge bafflestones including non-dolomitized, pervasively dolomitized or dedolomitized portions were quantified by digital image analysis. Pathways of the fluids were stylolites and fractures. Spatial heterogeneity of dolomite products increases with dolomite percentage. Dolomite cements of non fabric selective pores did not contribute volumetrically to dolomitization. Pore cementation was controlled by a complex network of factors including effective porosity and total dolomite percentage.^1";
- 1548 s[1545] = "KRAUTTER M. (1996).- Kieselschwämme aus dem unterjurassischen Misonekalk der Trento-Plattform (Suedalpen): Taxonomie und phylogenetische Relevanz.- Paläontologische Zeitschrift 70: 301-313.- FC&P 26-1, p. 73, ID=3648^Topic(s): taxonomy, phylogeny; Porifera, Silicispongiae; Systematics: Porifera; Stratigraphy: Jurassic L; Geography: Alps S^The Lower Jurassic Misone Limestone of the Trento Platform (Southern Alps, Italy) contains a siliceous sponge fauna which is here described. Besides the well-known Moroccan sponge carbonates, these Lower Jurassic spongioliths from the Trento Platform are presently the second mass occurrence of siliceous sponges, which is known from the southern margin of the Tethys. They differ from each other in regard of the composition of the sponge fauna and the absence of microbial crusts in the spongioliths of the Trento Platform. There, hexactinosans and lithistid demosponges occur in equal proportions. Sphinctozoans are another very characteristic element. Because of the richness in both sphinctozoans and siliceous sponges, the Trento occurrences may be considered as a transitional fauna between the late Paleozoic-Triassic sponge fauna dominated by Sphinctozoans and the post-Liassic sponge fauna dominated by more modern groups of siliceous sponges. Two new siliceous sponge genera with their species are established: Misonia

baldensis n.gen. n.sp. (Hexactinosa) and Benacia princeps n.gen. n.sp. (lithistid Demospongiae). The rarity of siliceous sponge-dominated spongioliths in the Early Jurassic is due to the restricted occurrence of low energy, deeper shelf areas.¹¹;

- 1549 s[1546] = "PISERA A. (1997).- Upper Jurassic Siliceous Sponges from the Swabian Alb: Taxonomy and Paleoecology.- Palaeontologia Polonica 57: 3-216.- FC&P 27-1, p. 104, ID=3854^Topic(s): monograph; Porifera, Silicispongiae; Systematics: Porifera; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^The fauna of siliceous sponges (hexactinellids and demosponges) from the Upper Jurassic of the Swabian Alb is described and revised. It consists of 124 species representing 67 genera. Only 15 species show frequency higher than 1% of the whole assemblage. Nearly all sponges represent groups with solid skeletons: Hexactinosa and Lychniscosa, and lithistid Demospongiae. Loose spicules occurring are also described and illustrated. Two new species are proposed: lithistid Amphibleptula jurassica sp.n. and hexactinosan Sphenaulax irregularis sp.n. Several other new species are described in an open taxonomy. The presence or absence of dermal and/or gastral layers of pentactines or stauractines in Hexactinosa and Lychniscosa is of no taxonomic value, because it is mostly a taphonomical phenomenon, and both types of spicules can be present in the same species. Lithification of sponges leading to origin of the so called "sponge mummies" preserves (except in one lyssacinosan sponge) only parts of the sponges delimited by solid skeletal structures. The Oxfordian assemblage is dominated by hexactinosan and lychniscosan sponges, while beginning with the Kimmeridgian lithistid demosponges are very common. The proportion of lithistid sponges in the assemblage increases steadily and the uppermost Kimmeridgian assemblage consists mostly of lithistids. This trend is interpreted here in terms of superimposed bathymetric changes and type of food dominant in the environment: particulate (domination of lithistid demosponges) and colloidal (hexactinellids domination). Ecological analysis of the sponge fauna and sedimentological analysis of sponge-bearing sequences point to a relatively deep-water setting of the Upper Jurassic siliceous sponge biofacies: the most shallow mixed sponge-coral Upper Kimmeridgian assemblages dominated by lithistid demosponges could be from 60-100 meters, while Oxfordian hexactinellid dominated assemblages in the Upper Jurassic is mostly ecological phenomenon since the numerous genera contributing to this assemblage are rooted in the Lower Jurassic at least. Generally high sea level during the Upper Jurassic produced large, relatively deep water areas, remote from the shore and thus with slow sedimentation. Such new habitats suitable for sponges have been colonized by immigrants from refugia existing on continental and island slopes. Large sponge populations were supported by high nutrient availability characteristic for the Upper Jurassic.¹¹;
- 1550 s[1547] = "BENDUKIDZE N.S. (1977).- Ecology of the Malm-Reef Formation of the Great Caucasus.- Bureau Recherches Geologiques et Minieres Memoir 89: 313-321 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 28, ID=0081^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Caucasus^^1";
- 1551 s[1548] = "FLUGEL E. (1983).- Mikrofazies der Pantokrator-Kalke (Lias) von Korfu, Griechenland.- Facies 8: 263-300.- FC&P 13-2, p. 53, ID=0594^Topic(s): facies, paleontology; reefs ?; Systematics: ; Stratigraphy: Jurassic L; Geography: Greece, Korfu^Microfacies and fossils of the Pantokrator Limestones of the type locality (Pantocrator Mountain, northeastern Korfu/Kerkyra) give evidence of a depositional environment characterized by a carbonate platform with both intertidal and subtidal areas. Vadose diagenesis of some repositied clasts points to a subaerial exposure of parts of the platform. Five microfacies types can be recognized; four of them are defined by algal aggregate grains, peloids, oncoids,

- dasycladaceans, porostromate algae and thaumatoporellids. These elements participate in the formation of packstone, grainstone and bindstone fabrics. Microfacies 5 corresponds to an oncolitic grainstone with corals. Two microfacies types, formed in the intertidal environment, yield rounded and angular carbonate clasts, representing different parts of the carbonate platform. Sub- and intertidal carbonates are also represented by clasts found within the deeper marine Siniais Limestones, which very probably formed synchronously with the Pantokrator Limestone; this is indicated by the interfingering of intertidal carbonates (microfacies 2) and micritic limestones with filaments (microfacies 7) southwest of Agios Spyridon.¹¹;
- 1552 s[1549] = "STEIGER T., WURM D. (1980).- Faziesmuster oberjurassischer Plattform-Karbonate (Plassen-Kalk, Nordliche Kalkalpen, Steierisches Salzkammergut, Osterreich).- Facies 02: 241-284.- FC&P 14-1, p. 70, ID=1087Topic(s): carbonate platforms; carbonate platform; Systematics: ; Stratigraphy: Jurassic U; Geography: Alps N^[Facies patterns of Upper Jurassic Platform Carbonates (Plassen Limestone, Northern Alps, Austria).]¹¹;
- 1553 s[1550] = "TURNSEK D., BUSER S., DEBELJAK I. (2003).- Liassic coral patch reef above the "Lithiotid Limestone" on Trnovski Gozd Plateau, west Slovenia.- Razprave Slov. Akad. Zn. Um IV. Razreda Sazu 44, 1: 285-331.- FC&P 33-2, p. 39, ID=1179Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic Plie; Geography: Slovenia^In the village Gozd on Trnovski gozd plateau, west Slovenia, locality of Liassic reef building corals has been discovered. Twelve species are described systematically, four of them are new: Protoheterastraea trnovensis n.sp., Apocladophyllia gozdensis n.sp., Phacelophyllia bacari n.sp. and Heterastraea angelae n.sp. Corals form at least a 70m long and 4m thick patch reef. It was located at the northern margin of the Dinaric Carbonate Platform. Coral limestone lies directly above "Lithiotid limestone" containing Domerian bivalves. According to this, also the described corals are attributed to the Domerian, i.e. Upper Pliensbachian.¹¹;
- 1554 s[1551] = "REOLID M., GAILLARD C., LATHUILIERE B. (2006).- Microfacies and microfossil assemblages from the Oolithe corallienne de Pagnoz Formation (French Jura, Oxfordian): stratigraphic fluctuations in a shallowing upward sequence.- XXII jornadas de la Sociedad espanola de Paleontología: 75-77. [abstract?] - FC&P 34, p. 91, ID=1337Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Jura^^1";
- 1555 s[1552] = "REOLID M., GAILLARD C., LATHUILIERE B. (2007).- Microfacies, microtaphonomic traits and foraminiferal assemblages from Upper Jurassic oolitic-coral limestones: stratigraphic fluctuations in a shallowing upward sequence (French Jura, Middle Oxfordian).- Facies 53, 4: 553-574.- FC&P 35, p. 113, ID=2449Topic(s): microfacies; geology fossils Anthozoa; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: France, Jura^The characterization and distribution of the microfacies and the microfossil assemblages of a Middle Oxfordian section from Jura Mountains composed by thick oolitic-coral limestones is analyzed. Six microfacies types (mainly grainstones) are differentiated mainly composed by ooids, intraclasts and bioclasts. Foraminiferal assemblages are dominated by agglutinated forms. Benthic microbial communities and sessile foraminifera are the main components of the encrustations. The whole set of microfossil assemblages is typical of shallow subtidal environments rich in "algae" (Cayeuxia, "solenopora", Thaumaporella, Bacinella, Girvanella and Terquemella) and foraminifera such as Nautiloculina oolithica, Redmondoides lugeoni, Ammobaculites coprolitifformis, Troglotella incrustans and Rectocyclammina. The increasing upward record of debris of algae and Nautiloculina, and the decrease of serpulids, bryozoans, nodosariids and ophthalmidiids indicate a shallowing-upward trend. The stratigraphic distribution of microfacies and microfossil assemblages

Lead to differentiate two main successive phases. The first is a deeper subtidal environment in an open shelf, while the second is a shallow subtidal environment with evolution from winnowed to more restricted conditions. Microfabrics of radial to concentric ooids upwards in the section correspond to higher energy environments related to an oolitic shoal. This study shows how a very detailed analysis of microfacies, which integrates oolitic features, microfossil assemblages and microtaphonomy is potentially a useful tool for interpreting hydrodynamism and sequence evolution in marine carbonate shallow environments.¹¹;

1556 s[1553] = "POMONI-PAPAIOANNOU F., FLUGEL E., KOCH R. (1989).- Depositional environments and diagenesis of Upper Jurassic subsurface sponge- and Tubiphytes reef limestones: Altensteig 1 well, western Molasse Basin, southern Germany.- Facies 21: 263-284.- FC&P 19-1.1, p. 59, ID=2680Topic(s): reefs, sedimentology, ecology, diagenesis; reefs; Systematics: ; Stratigraphy: Jurassic Kimm Tith; Geography: Germany S^An up to 300 m thick Kimmeridgian and Tithonian "reef sequence"; occurring in the Altensteig 1 well southwest of Augsburg, Bavaria, has been studied with regard to facies types, depositional environment and diagenesis. The reef sequence consists of oolitic sands and sand bars, stabilized by binding organisms and overgrown by siliceous sponges and the enigmatic organism Tubiphytes. The biota consists of siliceous sponges, sclerosponges, bryozoans, brachiopods, molluscs, serpulid and terebellid worms, and echinoderms. Foraminifera exhibit no significant distribution patterns. Algae occur in samples of core 4 (Malm zeta 3). Four facies types (sponge / algal boundstones, tuberoid-peloid wackestone / packstone, ooid-intraclast grainstone and Tubiphytes packstone / boundstone) can be differentiated. The Tubiphytes boundstones represent a particular reef type not yet described in detail from the Upper Jurassic. As can be deduced from subsurface samples and from surface samples (Graibach quarry near Donauwoerth), Tubiphytes formed an organic framework within shallow subtidal environment. The diagenesis of most of the section is characterized by the existence of early marine-phreatic cements, except for the Malm delta / Malm epsilon interval. For this interval, an widespread subaerial exposure of Upper Jurassic carbonates is indicated by the absence of marine-phreatic cements, the occurrence of meteoric-vadose meniscus cements, meteoric-phreatic granular to blocky cements, and of asymmetric radiaxial-fibrous cements.¹¹;

1557 s[1554] = "LIEDMANN W., KOCH R. (1990).- Diagenesis and Fluid Inclusions of Upper Jurassic Sponge-Algal Reefs in SW Germany.- Facies 23: 241-268.- FC&P 20-1.1, p. 68, ID=2851Topic(s): reefs, diagenesis, fluid inclusions; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Germany SW^Petrographic and fluid inclusion studies were carried out on limestones, dolomites and dedolomites from Upper Jurassic sponge-algal reefs in SW Germany (Geislingen and Herrlingen areas) to reveal their general diagenetic development and especially their deeper burial history. The first results of this study allow a 12-phase diagenetic history to be reconstructed, which includes two karstification and three dolomitization phases. In addition granular meniscus cements indicate local early diagenetic subaerial exposure and meteoric vadose conditions. A very early dolomitization, which was underestimated up to now due to later diagenetic overprinting, largely closed the primary pores. The characteristic growth of scalenohedral calcite cements (dog tooth) probably indicates alterations in the pores water chemistry which were related to the early dolomitization. Early blocky cements (phase 8) and late diagenetic dolomite (phase 9) were analyzed micro-thermometrically. The measurements of fluid inclusions in blocky cements indicate homogenization temperatures of 55°C to 65°C with salinities of 3.5 to 8.5 weight % NaCl (equiv.). The data indicate their formation under meteoric shallow-burial conditions. The late

main dolomitization phase. Formation temperatures of 40-90°C are shown by the homogenization temperatures of 2-phase inclusions. Salinities (3.5-14 weight-% NaCl-equiv.) indicate primary marine to highly concentrated waters. A hydrothermal dolomitization (temperature of formation >85°C) only occurred in the deeply buried (>3,000 m) areas in the eastern Molasse basin. During karstification meteoric waters from the surface could percolate along tectonic fractures resulting in late cementation by calcite blocky cements (formation temperature of <40°C) and dedolomitization.^1";

1560 s[1557] = "HERRMANN R. (1996).- Entwicklung einer oberjurassischen Karbonatplattform: Biofazies, Riffe und Sedimentologie im Oxfordium der Zentralen Dobrogea (Ost-Rumaenien).- Berliner geowissenschaftliche Abhandlungen E19: 1-101.- FC&P 26-1, p. 85, ID=3657^Topic(s): carbonate platforms; carbonate platform; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Romania, Dobrogea^The Central Dobrogea in Eastern Romania exhibits the easternmost occurrence of Upper Jurassic microbialite / siliceous sponge facies (spongiolite facies) in Europe. The spongiolites are part of the Lower to Upper Oxfordian Casimcea Fm. which was deposited on a gently westward dipping carbonate platform (homoclinal ramp). This platform was surrounded by deep marine basins in the south, west and north, while to the east the existence of a land area with low relief is assumed. The gently sloping carbonate ramp shows an E-W facies zonation. A lagoonal belt is followed towards the open sea by a coral patch reef belt, a bioclastic-oolitic sand belt, and a spongiolitic belt. [first part of extensive summary]^1";

1561 s[1558] = "DUPRAZ C., STRASSER A. (1999).- Microbialites and Micro-encrusters in Shallow Coral Bioherms (Middle to Late Oxfordian, Swiss Jura Mountains).- Facies 40, 1: 101-129.- FC&P 28-1, p. 61, ID=4003^Topic(s): carbonates microbial; microbialites; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Switzerland, Jura^Benthic microbial crusts (microbialites or microbolites) are an important component of Middle to Upper Oxfordian shallow-water coral bioherms in the Swiss Jura. They display stromatolitic (laminated), thrombolitic (clotted), and leiolitic (structureless) fabrics, which are distributed heterogeneously throughout the studied sections. The bioherms can be subdivided into coral-microbialite facies, microbialite-dominated facies, and sediment matrix. Macroscopic and microscopic study reveals that microbialitic encrustations commonly occur in two layers. The first one is directly in contact with the substrate and composed of leiolite (locally stromatolite) and a well-diversified micro-encruster fauna; the second one fills the remaining porosity partly or completely with thrombolite and low-diversity micro-encrusters. The growth of the first layer accompanies the growth of the coral reef and thus formed under the same environmental conditions. The second layer is the result of a moving encrustation front filling the remaining porosity (micro- and macrocavities) inside the reef, below the living surface. Both layers play an important role in early cementation. Phototrophic cyanobacteria probably intervene in the formation of the first encrustation zone, whereas hetefotrophic bacteria associated to acidic, Ca2+-binding macromolecules in biofilms are thought to contribute to the thrombolite inside the reef body. when coral growth cannot take pace with microbialite development, the thrombolite front reaches the surface of the construction and finally covers the reef. The result is a thick interval of thrombolite, which can be interpreted as being related to an ecological crisis in coral-reef evolution. [part of extensive summary]^1";

1562 s[1559] = "MEYER R.K.F., SCHMIDT-KALER H. (1994).- Fazieswandel und Probleme der Stratigraphie im Obermalm (Tithon) zwischen Solnhofen und Neuburg / D. (Bayern).- Erlanger geologische Abhandlungen 123: 1-49. [in German, with English abstract].- FC&P 24-2, p. 101, ID=4612^Topic(s): facies; geology; Systematics: ;

- Stratigraphy: Jurassic Tith; Geography: Germany, Bavaria^Based on new drill core holes an attempt has been made to elucidate the intricate facies interrelationships of the Upper Malm between Solnhofen and Neuburg / Donau. In the Solnhofen-Langenthaltheim Basin the facies changes in the west-east direction from marl-rich shales to pure lithographic limestone of the Upper Solnhofen beds (Zeta 2b). Despite similar configuration of the basin bottom the lithographic limestone in the east measures twice the thickness of the marl-rich shales in the west. These important differences in thickness can therefore only be explained by a heavier compaction of the marl-rich sections in the course of diagenesis. The differences in relief thus generated within the basin were subsequently leveled out by differently thick sediments of the "Hangende Krumme Lage" (lump structures) and particularly the Mornsheim beds (Zeta 3) (see fig. 5 and 7). Even more pronounced is, of course, the change in facies between different basins. Fig. 9 shows the differing sequence in the Malm Zeta 2 and 3 above the bedded limestone of Zeta 1. While in the protected Solnhofen basin pure lithographic limestone was deposited the same series in the Rennertshofen basin was strongly affected by the reef: the rough bituminous shales rich in radiolarians and sponge-rhaxes are repeatedly interspersed with fine and coarse reef detritus beds. Here in contrast to the situation at Solnhofen the nannoplankton is present throughout. Discernible are only coccoliths and spiny, thin-skinned dinoflagellates. It can, however, be surmised that red tides of thick-skinned and pore-rich dinoflagellates (Tasmanacea) can be held responsible for the generation of bitumen and fine lamination (Meyer & Schmidt-Kaler 1993), similar to the situation in the Posidonienschiefer (Toarcian). From the Malm Zeta 3 upward coral biostromes growing on decaying sponge reefs furnish reef debris to all sides. Similary bioturbated beds point to a better oxygenation of the sea bottom. Overlying these rocks are the marly limestones and shales of Malm Zeta 4 and 5 whose delineation becomes yet more difficult owing to the small scale facies changes (fig. 10). A clear cut double cycle of bedded limestones and shales (Fesefeldt 1962) does not exist. In the holes drilled near the reef (Spindelta and Finkenstein) the fine debris content extends upward into Malm Zeta 4 and 5 and demonstrates that the reef evolution and development here in the south lasted longer. Further to the south underneath the Tertiary Molasse sediments, up to more than 500m thick sponge and coral reef detritus limestones have been proved (Meyer & Schmidt-Kaler 1989 and 1990). In the Appendix (chapter 5) as well as on plates 2 to 10 the drill hole columns and special investigations (Macro-, Micro-, Nannofacies, clay minerals, geochemistry, palynology) are presented.^1";
- 1563 s[1560] = "WAGENPLAST P. (1972).- Oekologische Untersuchung der Fauna ans Bank- und Schwamm-fazies des Weissen Jura der Schwaebischen Alb.- Arbeiten Inst. Geol. Paläont. Univ. Stuttgart 67: 100 pp., 44 pls, 15 figs (Diss. Univ. Stuttgart). [dissertation] - FC&P 4-1, p. 45, ID=5174^Topic(s): ecology; paleontology, ecology; Systematics: ; Stratigraphy: Jurassic U; Geography: Germany, Swabian Alb^^1";
- 1564 s[1561] = "BODEUR Y. (1980).- Kimmeridgien superieur et Portlandien du Languedoc.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 77-83.- FC&P 9-2, p. 13, ID=5864^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: France, Languedoc^^1";
- 1565 s[1562] = "DOZET S., TURNSEK D. (1993).- Litostratigrafaska enote in biostratigrafaska razclenitev jurskih plasti na Logaski planoti. [litostratigraphic units and biostratigraphic subdivision of Jurassic beds in Logatec plain area; in Slavonic].- Rudarsko-Metalurski Zbornik 40, 1/2: 59-78; Ljubljana.- FC&P 28-1, p. 41, ID=6925^Topic(s): geology, reefs; geology, reefs; Systematics: ; Stratigraphy: Jurassic; Geography:

Slovenia^In the year 1988 detailed regional geological research began in the Logatec plain area in order to make a Thematic geological map of Slovenia in the scale of 1:50 000. On the basis of significant and biofacies [?] as well as their superposition, the shallow water Jurassic sedimentary sequence in the Logatec plain area was divided into the following seven lithostratigraphic units: (1) grained bituminous dolomite - Lower Lias, (2) lithiotid limestones and dolomites - Middle Lias, (3) micritic and biomicritic [limestones] - Upper Lias and Dogger, (4) oolitic limestones - Upper Dogger and Lower Malm, (5) reef limestones - Oxfordian and Lower Kimmeridgian, (6) bauxite - Lower/Upper Malmian boundary, and (7) Clypeina - tintinnid limestones and dolomites - Upper Kimmeridgian and Tithonian. [...] In the reef limestones of the Logatec Plain area seven new species of corals and stromatoporoids were established: *Allocoenia trochiformis*, *Dehornella crustans*, *Enallhelia* sp., *Milleporidium somaense*, *Plesiosmia compressa*, *Pseudocoenia limbata* in *Thamnasteria concina*. [excerpts from original abstract]^1";

- 1566 s[1563] = "RONIEWICZ E. (2008).- Kimmeridgian-Valanginian reef corals from the Moesian Platform from Bulgaria.- *Annales Societatis Geologorum Poloniae* 78, 2: 91-134.www.asgp.pl/2008/78_2/contents.html.- FC&P 36, p. 102, ID=6531^Topic(s): hermatypic, taxonomy, stratigraphy; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Kimm - Cretaceous Val; Geography: Bulgaria, Moesian Platform^The coral fauna of the Late Kimmeridgian?Valanginian interval from the Slivnitsa Formation, Lyubash monocline, SW Moesian Platform, is presented. Coralliferous interbeds from a continuous, over 350m thick sequence of well-bedded platform limestones, cropping out near the village of Lyalintsi, yielded 72 species (29 determined in open nomenclature) classified into 50 genera and 23 families belonging to the orders Scleractinia and Hexantiniaria. The following genera and/or species are described as new: *Epistreptum communeformae* gen. et sp. n., *Lyubasha gracilis* gen. et sp. n., *Oedalmiopsis cretacea* gen. et sp. n., *Siderastreites lyalintsensis* gen. et sp. n., and *Latomeandra obliqua* sp. n., *Microphyllia elevata* sp. n., *M. amalla* sp. n.; a new family Solenocoeniidae is erected. The fauna shows a mixed Late Jurassic/Early Cretaceous character, with Jurassic taxa prevailing over Cretaceous taxa. Epithecate phaceloid (pseudocolonial), lamellar, and ramose (colonial) growth forms dominate over massive (hemispherical) and solitary corals. Rich microencrusting organisms are associated. The predominantly pelmicritic sediment of thrombolite macrofabric, and the character of the fauna show that the palaeoenvironment was situated below wave base. The stratigraphical distribution of the Cretaceous coral taxa is conformable with the micropaleontological (foraminifera, calcareous dinocysts, diploporids) stratigraphical zonation established in the Slivnitsa Formation. [original abstract]^1";
- 1567 s[1564] = "MISIK M., MORYCOWA E. (2004).- Upper Jurassic and Lower Cretaceous scleractinian corals from the exotic pebbles - Pieniny Klippen Belt, Slovakian West Carpathians.- *Slovak Geological Magazine* 10, 4: 313-321.- FC&P 35, p. 79, ID=2394^Topic(s): exotic pebbles; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U, Cretaceous L; Geography: Slovakia, Pieniny Klippen Belt^^1";
- 1568 s[1565] = "KOŁODZIEJ B. (2003).- Scleractinian corals of suborders Pachythecaliina and Rhipidogyrina: discussion on similarities and description of species from Stramberk-type limestones, Polish Outer Carpathians.- *Annales Societatis Geologorum Poloniae* 73, 3: 193-217.- FC&P 33-1, p. 71, ID=7218^Topic(s): systematics; Scleractinia Pachythecaliina; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U, Cretaceous L; Geography: Poland, Carpathians^Similarities between scleractinian corals from extinct suborders Pachythecaliina Eliasova 1976 and Rhipidogyrina Roniewicz 1976 are discussed. Corals of the

former suborder are considered by some authors as possible descendants of Palaeozoic Rugosa because of their unusual skeletal characters. Some rhipidogyrinans, especially the family Aulastraeoporidae, despite different septal microstructure, share more common features with pachythecaliinans than with other scleractinians. The following skeletal features are discussed to show similarities between these two suborders: (1) wall microstructure and its relations to septa, (2) corallite bilateral symmetry, (3) marginarium, (4) lonsdaleoid and apophysal septa, and (5) internal septal margin. These similarities can be explained by convergence, although phylogenetic relationships of both suborders can not be excluded. This hypothesis needs to be verified by more studies, especially on early blastogeny of rhipidogyrinans and wall microstructure of pachythecaliinans. The systematic part gives descriptions of discussed corals occurring in the Stramberk-type limestones, Polish Outer Carpathians (Tithonian-?Berriasian, ?Valanginian). Similarly as in the Stramberk Limestone (Moravia), pachythecaliinans are highly diversified (17 species, 12 genera, including *Pachythecophyllia eliasovae* n.gen., n.sp.). Rhipidogyrinans are represented by 4 species of 4 genera, including ?*Ogilvinella morycowae* n.sp. [original abstract]^1";

1569 s[1566] = "MATYSZKIEWICZ J., SLOMKA T. (2004).- Reef-microencrusters association *Lithocodium aggregatum*-*Bacinella irregularis* from the Cieszyn Limestone (Tithonian-Berriasian) of the outer western Carpathians (Poland).- *Geologica Carpathica* 55, 6: 449-456.- FC&P 33-2, p. 45, ID=1208^Topic(s):reefs, encrusters; reefs; Systematics: Stratigraphy:Jurassic / Cretaceous; Geography:Poland, Carpathians^Debris-flow sediments belonging to the Upper Cieszyn Limestone (Berriasian) are exposed nearywiec (Polish part of the Outer Western Carpathians). The debris-flow sediments include clasts of bioclastic limestones (boundstones) derived from both microbial-sponge mud mounds and coral-algal reefs. The microcruster assemblage *Lithocodium aggregatum* - *Bacinella irregularis* has been found in clasts from coral-algal reefs. This assemblage unequivocally proves the presence of shallowing-upward reefal sequences on the Silesian Ridge. The development of the coral-algal reefs was probably a consequence of intense aggradational growth of microbialite-sponge mud mounds, accompanied by intense uplift movements of the neo-Cimmerian phase.^1";

1570 s[1567] = "GALEOS A., POMINI-PAPAIANO F., TSAILA-MONOPOLIS S., TURNSEK D., IOAKIM C. (1997).- Upper Jurassic - Lower Cretaceous " Molasse-type " sedimentation in the western part of the Almopia subzone, Loutra Aridhea unit (Northern Greece).- *Bulletin of the Geological Society of Greece* 30, 1: 171-184.- FC&P 27-1, p. 93, ID=3838^Topic(s):reefs; geology; Systematics: Stratigraphy:Jurassic U, Cretaceous L; Geography:Greece ^The metamorphic basement of the Aridhea Loutra Unit (Almopia Subzone) is followed by two thick " molassic type " siliciclastic transgressive series of Upper Jurassic-Lower Cretaceous age. In the Northwestern coarse-grained series, the following members are distinguished: Ophiolitic conglomerates " transgressive basal unit ". Reef limestones with Corals of Upper Jurassic age, marking the first clastic-carbonate, transitional episode. Quartzitic breccia, accumulated during episodes of high discharge in marine environment. Quartzitic sandstones and mudstones. Neritic limestones with Foraminifera and pollen of Late Aptian - Middle Albian age represent the second clastic-carbonate, transition episode.^1";

1571 s[1568] = "IVANOVA D., KOLODZIEJ B., KOLEVA-REKALOVA E., RONIOWICZ E. (2008).- Oxfordian to Valanginian palaeoenvironmental evolution on the western Moesian carbonate platform: a case study from SW Bulgaria.- *Annales Societatis Geologorum Poloniae* 78, 2: 65-90. www.asgp.pl/2008/78_2/contents.html.- FC&P 36, p. 115, ID=6553^Topic(s):carbonate platforms; carbonate platform;

Systematics:; **Stratigraphy:** Jurassic Oxf - Cretaceous Val; **Geography:** Bulgaria, Moesian Platform^Three sections (Rebro, Lyalintsi and Velinovo) of the Upper Jurassic-Lower Cretaceous carbonate sequences from the Lyubash unit (Srednogorie, Balkanides, SW Bulgaria) have been studied for elucidation of biostratigraphy and palaeoenvironmental evolution. Palaeontological studies of foraminifera, supplemented by studies of calcareous dinoflagellate cysts and corals, enabled the determination of the Oxfordian-Valanginian age of the analysed sequences. They were deposited on the Dragoman Block (western part of the Moesian Platform), and during Mid-Late Cretaceous included to the Srednogorie. A possible Middle to Late Callovian age of the lowermost part (overlying the Bajocian-Lower Bathonian Polaten Formation) of the studied sections assumed till now has not been confirmed by the present studies. Eleven facies have been distinguished and attributed to depositional environments. Marine sedimentation on a homoclinal ramp started in the Oxfordian and till the Early Kimmeridgian - in all three sections - was dominated by fine-grained peloidal-bioclastic wackestones to grainstones. Since the Late Kimmeridgian, when a rimmed platform established, facies pattern underwent differentiation into (i) the inner platform (lagoon and tidal flat facies) - only in Velinovo, (ii) reef and peri-reef facies/bioclastic shoals - mainly in Lyalintsi, and (iii) platform slope - mainly in Rebro. Sedimentation generally displays a shallowing-upward trend. Two stages in evolution of the rimmed platform are postulated. The mobile stage lasting till the Tithonian/Berriasian boundary was followed by a more stable stage in the Berriasian to Valanginian time. Reefs are developed mainly as coral-microbial biostromes, lower coral bioherms or coral thickets, in the environment of moderate energy and sedimentation. They contain highly diversified corals (72 species) [see Roniewicz (2009)]. Microbialites contributed to the reef framework, but they never dominated. Locally, microencrusters and cement crusts formed important part of reefal framework. During the mobile stage of the platform evolution a relative sea-level rise interrupted reef development, as evidenced by intercalations of limestones with Saccocoma. During the second stage high carbonate production and/or regressive eustatic events, not balanced by subsidence, decreased accommodation space, limiting reef growth and enhancing carbonate export to distal parts of the platform. [original abstract]^1";

1572 s[1569] = "TURNSEK D., BUSER S. (1976).- Cnidarian fauna from the Senonian breccia of Banjska Planota (NW Yugoslavia).- Slovenska Akad. Znanosti i umetnosti 3: 39-52.- FC&P 6-1, p. 30, ID=0110^Topic(s):taxonomy; Anthozoa stroms; Systematics:Cnidaria; Anthozoa;Stratigraphy:Cretaceous Seno; Geography:Yugoslavia, Banjska Planota^In addition to many corals this publication describes the stromatoporoids - Astrostylopsls slovenica Germovsek, Sporadoporidaium rakoveci Germovsek, and Sporadoporidaium kanalensis n.sp. and the chaetetids - Chaetetopais krumholzi Yavorsky, Chaetetopsis fnveri (Deninger), Blastochaetetetes irregularis (Michelin) and Acanthochaetetetes seunesi Fischer.^1";

1573 s[1570] = "LOSER H., RAEDER M. (1995).- Coral assemblages from the Aptian/Albian in the Helicon Mountains (Boeotia, Greece): palaeontological, palaeoecological and palaeogeographical aspects.- Coral Research Bulletin 04: 39-68.- FC&P 25-1, p. 41, ID=3033^Topic(s):taxonomy; corals; Systematics:Cnidaria; Anthozoa;Stratigraphy:Cretaceous Apt / Alb; Geography:Greece, Beotia^Four coral assemblages are reported from Aptian and Albian transgressive deposits in the Helicon Mountains (Boeotia, Greece). Their origin and composition are discussed. 88 species in 33 genera of the order Scleractinia are briefly described, of which 56 species are already known from other Cretaceous faunas. 32 species were determined only generically. The stratigraphical and geographical relations of the assemblages to other faunas from the

- Cretaceous of Eurasia are discussed in detail. The paper represents the second systematical record of Cretaceous corals in Greece after Hackemesser 1936.¹";
- 1574 s[1571] = "TURNSEK D. (1994).- Upper Cretaceous reef building colonial corals of Gosau facies from Stranice near Slovenske Konjice (Slovenia).- Razprave SAZU IV. Razreda Sazu 35, 1: 3-41.- FC&P 25-2, p. 55, ID=3154Topic(s): hermatypic, taxonomy; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Sant - Camp; Geography: Slovenia, Gosau faciesFrom Stranice near Slovenske Konjice 17 species of reef building colonial corals were systematically described. This is so far the only primary locality of such fossils in Slovenia. It has the character of the Gosau biolithite facies presumably belonging to the northern Tethys shoals. The Santonian-Campanian age is determined.1"
- 1575 s[1572] = "TURNSEK D. (1992).- Tethyan Cretaceous corals in Yugoslavia.- Schriften der Erdwissenschaftlichen Kommission an der Oesterreichischen Akademie der Wissenschaften 9: 155-170.- FC&P 22-2, p. 90, ID=3532Topic(s): distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: YugoslaviaThe Cretaceous corals found in the former Yugoslavia are discussed in view of their stratigraphical and geographical distribution. An extensive list of all found species and the consideration of their stratigraphical distribution give a good overview about this region.1"
- 1576 s[1573] = "HEUSEL J. (1974).- Russbach am Pass Gschuett im Land Salzburg, eine Fossil-fundstaette.- Aufschluss 25, 10: 568-571.- FC&P 4-2, p. 52, ID=5240Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: Austria, Calcareous Alps[faune coralliaire, Alpes calcaires d'Autriche (Tannengebirge, Dachstein), Crétacé]1"
- 1577 s[1574] = "SIKHARULIDZE G.Ya. (1980).- Novyi korallovyi kompleks rannemelovykh biostromov iz zapadnoy Gruzi. [new coral complex of Lower Cretaceous biostromes of western Georgia; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 43, ID=5826Topic(s): reefs biostromes; coral biostromes; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous L; Geography: Georgia1"
- 1578 s[1575] = "TURNSEK D., POLSAK A. (1978).- Senonian colonial corals from the biolithite complex of Oresje on Mt. Medvednica (NW Yugoslavia).- Razprave Dissert. SAZU 21, 4: 133-180.- FC&P 10-1, p. 57, ID=6302Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Seno; Geography: Slovenia1"
- 1579 s[1576] = "TURNSEK D. (1978).- Solitary senonian corals from Stranice and Mt. Medvednica (NW Yugoslavia).- Rasprave Dissert. SAZU 21, 3: 66-128.- FC&P 10-1, p. 57, ID=6303Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Seno; Geography: Slovenia1"
- 1580 s[1577] = "SCOTT R.W., FERNANDEZ-MENDIOLA P.A., GILI E., SIMO A. (1990).- Persistence of coral-rudist reefs into the Late Cretaceous.- Palaios 05: 98-110.- FC&P 23-2.1, p. 67, ID=4433Topic(s): reefs coral-rudist; reefs, coral-rudist; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous U; Geography: PyreneesDuring the Early Cretaceous, coral-algal communities occupied deeper water habitats in the reef ecosystem, and rudist communities generally populated the shallow-water, carbonate-sand substrates. During the middle Cretaceous, however, coral-algal communities became less common, and Late Cretaceous reef communities consisted of both rudist-dominated and rudist-coral communities. In the Pyrenean basins and other basins in the Mediterranean, coral associations co-existed with rudists forming complex buildups at the shelf-edge. In some parts of these

buildups corals were nearly as abundant as rudists; in some complex buildups large coral colonies encrusted the rudists. Behind the shelf margin cylindrical, elevator rudists dominated the lenticular thickets that were interspersed with carbonate sands. Global changes in oceanic conditions, such as marine productivity and oxygen content, may have stressed the deeper coral-algal reef communities leaving rudists as the major shallow reef biota in Caribbean reefs. However, the co-occurrence of corals with rudists in these Pyrenean complex buildups suggests that corals were able to compete with rudists for resources. The corals in the complex buildups generally belong to genera different from those in the coral-algal communities. Perhaps this ecological stress in the mid-Cretaceous resulted in the evolution of new coral taxa.¹;

- 1581 s[1578] = "LUKENEDER A. (2008).- The ecological significance of solitary coral and bivalve epibionts on Lower Cretaceous (Valanginian-Aptian) ammonoids from the Italian Dolomites.- Acta Palaeontologica Polonica 58, 4: 425-436.www.geo.uw.edu.pl/agp/table/abstracts/58-4.htm.- FC&P 36, p. 129, ID=6585^Topic(s): epibionts; epibionts; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous L; Geography: Italy, Dolomites^Lower Cretaceous deposits of the Puez section in the Dolomites (northern Italy) yielded a rich ammonoid fauna (28 genera, n=424) showing unique epifaunal encrustations by the ahermatypic solitary scleractinian ?Cycloseris Lamarck, 1801. The coral encrusted only the outer shell surfaces of the ammonoids; the inner surface remained unaffected. such a Cretaceous community and the relationship between the two fossil groups are described for the first time. The shells of dead ammonoids sank to the sea bottom and became colonized by the coral larvae, as documented by the location of the epibionts on only one side of the shells. The coral was fixed to the ammonoid shell for its entire life. Only the "sediment free" upper side of the ammonoid shells could be inhabited by epibionts such as corals and serpulids. The encrustation of ammonoid shells by the bivalve Placunopsis represents a different situation in that both sides of the ammonoid shells were affected, pointing to encrustation of floating ammonoids. This long-term infestation in the water column contrasts with coral settlement on the sea-floor. Ammonoid specimens encrusted by Placunopsis never exhibit encrustation by corals. The ammonoid-coral relationship from the Dolomites is documented from the Valanginian to Aptian interval. examples of coral epibionts on ammonoids and other fossil groups throughout the geological column are briefly reviewed. [original abstract]^1";
- 1582 s[1579] = "CAMOIN G., BERNET-ROLLANDE M.C., PHILIP J. (1988).- Rudist-coral frameworks associated with submarine volcanism in the Mastrichtian of Pachino area (Southeastern Sicily).- Sedimentology 35, 1: 123-138.- FC&P 17-1, p. 10, ID=2098^Topic(s): reefs; Anthozoa Rudista; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous Maas; Geography: Italy, Sicily^^1";
- 1583 s[1580] = "TURNSEK D., PLENICAR M., SRIBAR L. (1992).- Lower Cretaceous Fauna from Slovenski vrh near Kocevje (South Slovenia).- Razprave SAZU IV, Razreda Sazu 33, 8: 205-257.- FC&P 22-2, p. 90, ID=3307^Topic(s): paleontology; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous L; Geography: Slovenia, Slovenski vrh^The biostratigraphy of Aptian and Albian limestone from Slovenski vrh is treated. Lower Orbitolina Limestone contains foraminifers typical for Lower Aptian. Upper Orbitolina limestone contains foraminifers of Upper Aptian - Lower Albian age. Next to it the reef fauna of corals and rudists has been found ascribed to Aptian and Albian stages. 13 species of foraminifers have been determined, 6 coral species have been systematically described (among them 2 new species), as well as rudists which belong to 4 genera. From the paleoecological aspect the limestone with

- orbitolinas was deposited in a lagoon of the shallow Dinaric platform, and in the favorable circumstances the reef organisms (rudists and corals) built the smaller patch reef.^1";
- 1584 s[1581] = "SANDERS D., BARON-SZABO R.C. (1997).- Coral-Rudist Bioconstructions in the Upper Cretaceous Haidach Section (Gosau Group; Northern Calcareous Alps, Austria).- Facies 36, 1: 69-90.- FC&P 26-1, p. 91, ID=3660^Topic(s): reefs, coral-rudist; reefs; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous U; Geography: Austria, N Calcareous Alps^In the area of Haidach (Northern Calcareous Alps, Austria), coral-rudist mounds, rudist biostromes, and bioclastic limestones and marls constitute an Upper Cretaceous shelf succession approximately 100 meters thick. The succession is part of the mixed siliciclastic-carbonate Gosau Group that was deposited at the northern margin of the Austroalpine microplate. In its lower part, the carbonate succession at Haidach comprises two stratal packages that each consists, from bottom to top, of a coral-rudist mound capped by a rudist biostrome which, in turn, is overlain by bioclastic limestones and, locally, marls. The coral-rudist mounds consist mainly of floatstones. The coral assemblage is dominated by *Fungiina*, *Astraeoina*, *Heterocoeniina* and *Agathelia asperella* (*Stylinina*). From the rudists, elevators (*Vaccinites* spp., radiolitids) and recumbents (*Plagioptychus*) are present. Calcareous sponges, sclerosponges, and octocorals are subordinate. The elevator rudists commonly are small; they settled on branched corals, coral heads, on rudists, and on bioclastic debris. The rudists, in turn, provided settlement sites for corals. predominantly plocoid and thamnasterioid coral growth forms indicate soft substrata and high sedimentation rates. The mounds were episodically smothered by carbonate mud. Many corals and rudists are coated by thick and diverse encrustations that indicate high nutrient level and/or turbid waters. The coral-rudist mounds are capped by *Vaccinites* biostromes up to 5m thick. The establishment of these biostromes may result from unfavourable environmental conditions for corals, coupled with the potential of the elevator rudists for effective substrate colonization. The *Vaccinites* biostromes are locally topped by a thin radiolitid biostrome. The biostromes, in turn, are overlain by bioclastic limestones; these are arranged in stratal packages that were deposited from carbonate sand bodies. Approximately mid-section, and interval of marls with abundant *Phleopteria* is present. These marls were deposited in a quiet lagoonal area where meadows of sea grass or algae, coupled with an elevated nutrient level, triggered the mass occurrence of *Phleopteria*. [fragment of extensive summary]^1";
- 1585 s[1582] = "TURNSEK D., BUSER S. (1974).- Spodnjekredne Korale, hidrozoji i chetetidi z Banjske Planote in Trnovskega Gvozda [coraux, hydrozoaires et chaetetidés du Crétacé inférieur de Banjska Planota et de Trnovski Gozd].- Sloven. Akad. Znan. Umetn., Razpr. prirodosl. med. Vede, Cl. 4, Prirodosl. Vede, Razpr. 17, 2: 1-44.- FC&P 4-2, p. 54, ID=5248^Topic(s): new taxa; Anthozoa, Hydrozoa, Chaetetida; Systematics: Cnidaria Porifera; Anthozoa Hydrozoa Chaetetida; Stratigraphy: Cretaceous L; Geography: Yugoslavia, Banjska Planota^26 espèces de Cnidaria réparties en 20 genres. 2 espèces sont nouvelles: *Dermosmia cretatica*, *Placophyllia curvata*. 2 espèces d'Hydrozoaires. 2 espèces de Chaetetida.^1";
- 1586 s[1583] = "CHESHMEDJIEVA V.L. (1984).- Chaetetids from the Upper Cretaceous in South-west Bulgaria.- Review of the Bulgarian Geological Society . : 45-50 .- FC&P 15-1.2, p. 8, ID=0887^Topic(s): Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Cretaceous; Geography: Bulgaria^^1";
- 1587 s[1584] = "ENGESER T.S., FLOQUET M., REITNER J. (1987).- Acanthochaetetidae (Hadromerida, Demospongiae) from the Coniacian of Vera de Bidasoa (Basque Pyrenees, Northern Spain).- *Geobios* 19: 849-854.- FC&P 16-2, p. 34, ID=2059^Topic(s):

- systematics; Porifera, Acanthochaetetes; Systematics:
 Porifera; Chaetetida; Stratigraphy: Cretaceous Cogn;
 Geography: Spain, Pyrenees^Acanthochaetetes lived in crevices
 in the fore-reef breccias; the Acanthochaetetidae are placed in the
 demosponges and the order Tabulospongia is abandoned]^1";
- 1588 s[1585] = "FISCHER J.C., LAFUSTE J. (1972).- Nouvelles observations sur
 la paléohistologie du genre Acanthochaetetes (Hydrozoa, Chaetetida).-
 Bulletin de la Société géologique de France, 7e sér., 14, 1-5:
 320-324.- FC&P 3-2, p. 45, ID=4974^Topic(s):
 microstructures; Chaetetida; Systematics: Porifera;
 Chaetetida; Stratigraphy: Cretaceous Cen; Geography:
 Pyrenees^L'examen de lames ultra-minces à faces polies
 (procédé L.F.P.) apporte des précisions sur la microstructure
 d'Acanthochaetetes sennesi (Cénomaniens, Pyrénées Atlantiques):
 toutes les structures, parois, paliers et épines sont constitués de
 lamelles. Par leur forme, leur dimension et leur disposition, ces
 lamelles diffèrent de celles qui ont été reconnues jusqu'ici chez
 les autres Cnidaires.^1";
- 1589 s[1586] = "KAZMIERCZAK J. (1979).- Sclerosponge nature of Chaetetids
 evidenced by spiculated Chaetetopsis favrei (Deninger 1906) from the
 Barremian of Crimea.- N. Jb. Geol. Palaeont. Mh. 1979, 2: 97-108.-
 FC&P 10-1, p. 56, ID=5998^Topic(s): spiculae;
 Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy:
 Cretaceous Barr; Geography: Crimea^A specimen of a typical
 chaetetid Chaetetopsis favrei (Deninger 1906) with abundant monaxon
 spicules preserved within the calcareous skeleton has been recovered
 from the Barremian (L. Cretaceous) of Crimea. This confirms the idea of
 Hartman & Goreau (1972) of the sclerosponge affinity of
 chaetetids. The genus Chaetetopsis Neumayr 1890, and suprageneric
 categories in chaetetids have been revised including a redescription of
 Chaetetopsis favrei. [original summary]^1";
- 1590 s[1587] = "TURNSEK D., HERB R. (1980).- Eine neue Chaetetide aus den
 Drusberg-Schichten (Barremien) des Kistenpass-Gebiets
 (Sedimentbedeckung des östlichen Aarmassivs, Schweizer Alpen).- Eclogae
 Geologicae Helvetiae 73, 3: 1109-1121.- FC&P 10-2, p. 76,
 ID=6102^Topic(s): new taxa; Chaetetida; Systematics:
 Porifera; Chaetetida; Stratigraphy: Cretaceous Barr;
 Geography: Switzerland, Alps^Ptychochaetetes (Granatiparietes)
 helveticus is described]^1";
- 1591 s[1588] = "CHESHMEDJIEVA V.L. (1995).- Crétacé supérieur: Chaetetides
 (Porifera) et Anthozoaires (Coelenterata).- Fossilite na Bulgariya. Vb;
 143pp; Presses universitaires"St. Kliment Ohridski", Sofia.
 [monograph] - FC&P 29-1, p. 39, ID=7016^Topic(s):
 Chaetetida, Anthozoa; Systematics: Porifera Cnidaria; Chaetetida
 Anthozoa; Stratigraphy: Cretaceous U; Geography:
 Bulgaria^[Contents: Gisements des Chaetetides et des Coraux du
 Crétacé supérieur en Bulgarie; Etat des connaissances sur les
 Chaetetides et les Coraux du Crétacé supérieur en Bulgarie; Composition
 taxonomique des Chaetetides et des Coraux du Crétacé supérieur en
 Bulgarie; Relations phylogénétiques entre les Scléactiniaires du
 Crétacé supérieur; Notes sur la répartition des Chaetetides et des
 Coraux connus de Crétacé supérieur en Bulgarie; Matériel et
 collections; Aperçu bref de l'état contemporain de la systématique
 des Chaetetides, des Scléactiniaires et des Octocoralliaires;
 Descriptions paléontologiques]^1";
- 1592 s[1589] = "REITNER J., ENGESER T. (1989).- Coralline Demospongiae
 (Porifera) aus dem Campan von Pobla de Segur (Pyrenäen, Nordspanien).-
 Mitt. Geol.-Palaeont. Inst. Univ. Hamburg 68: 167-177. [in German, with
 English summary].- FC&P 20-1.1, p. 74, ID=2863^Topic(s):
 ex olistolites; Porifera corallina; Systematics: Porifera;
 Corallina; Stratigraphy: Cretaceous Camp; Geography:
 Spain, Pyrenees^Two boulders of shallow-water carbonates found in
 Campanian olistostromes near Torollola, a small village 2.5 km south of

- Pobla de Segur (Southern Pyrenees, northern Spain) contained the coralline demosponges *Vaceletia crustans* n.sp. and *Spirastrella* (*Acanthochaetetes*) cf. *wellsi* Hartmann & Goreau 1975. *Vaceletia crustans* n.sp. is characterized by a stromatoporoid basal skeleton originally consisting of aragonite. The spicular skeleton consists of oxate megascleres. The sclere type and the sclere arrangement is typical for haplosclerid demosponges. *Spirastrella* (*Acanthochaetetes*) cf. *wellsi* Hartmann & Goreau 1975 has a chaetetid skeleton consisting of high-Mg calcite. In contrast to some Mid-Cretaceous forms, the specimens from the Campanian of Torollola do not incorporate the spicules in their basal skeletons. There are no significant differences to the Recent *Spirastrella* (*Acanthochaetetes*) *wellsi* Hartmann & Goreau 1975 from the Pacific. ^1";
- 1593 s[1590] = "CHERCHI A., SCHRODER R. (1987).- Monaxon spiculae im lumen von *Blastochaetetes* (*Demospongia*) aus dem Santon der Spanischen Pyrenaen.- *Senckenbergiana lethaea* 68: 305-319.- FC#038;P 17-1, p. 40, ID=2159^Topic(s): Porifera *Demospongia*; Systematics: Porifera; *Demospongiae*; Stratigraphy: Cretaceous Sant; Geography: Spain, Pyrenees^monaxon spicules fill the tubes of this fossil from the Cretaceous of Spain]^1";
- 1594 s[1591] = "REITNER J., FOELLNI K.B. (1992).- A new deepwater chaetetopsis species (*Chaetetopsis favositiformis* n.sp., *Demospongia*) from the Plattenwald Bed (Mid-Cretaceous Garschella Formation, Vorarlberg, Austria).- *Eclogae Geologicae Helvetiae* 84, 3: 837-849.- FC#038;P 21-2, p. 52, ID=3350^Topic(s): open marine; *Porifera*, *Demospongiae*, *Chaetetopsis*; Systematics: Porifera; *Demospongiae*; Stratigraphy: Cretaceous M; Geography: Austria, Vorarlberg^A phosphatized coralline sponge discovered in the Plattenwald bed of the Mid-Cretaceous Garschella Formation in Vorarlberg (Austria) is distinguished from other coralline sponges by the presence of large calicles (mean diameter value - 1,5mm) which increase in number during the growth by the intercalation of basically v-shaped tubes. The calicles are divided by regular spaced tabulae and the specimen resembles, therefore, the Paleozoic cnidarian taxon *Favosites*. It is described here as *Chaetetopsis favositiformis* n.sp. In contrast to most known representatives of the coralline sponges, *Chaetetopsis favositiformis* n.sp. occurs in association with a non-reef-type open-marine fauna. ^1";
- 1595 s[1592] = "DIENI I., TURNSEK D. (1979).- *Parkeria sphaerica* Carter 1877 (Hydrozoan) in the Vraconian (Lower Cretaceous) of Orosei (Sardinia).- *Bolletino della Societa Paleontologica Italiana* 18: 200-206.- FC#038;P 10-1, p. 59, ID=6016^Topic(s): Hydrozoa, *Parkeria*; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous Alb; Geography: Italy, Sardinia^1";
- 1596 s[1593] = "TURNSEK D., MASSE J.P. (1973).- The Lower Cretaceous Hydrozoa and Chaetetida from Provence (South-Eastern France).- *Razprave - Dissertationes* 16, 6: 28pp., 4 figs, 1 tabl., 27 pls; Ljubljana.- FC#038;P 3-1, p. 33, ID=4906^Topic(s): taxonomy; Hydrozoa, Chaetetida; Systematics: Cnidaria *Porifera*; Hydrozoa Chaetetida; Stratigraphy: Cretaceous L; Geography: France, Provence^Description de 23 espèces appartenant aux groupes suivants: Hydrozoa (genres *Actinostromaria*, *Disparistromaria*, *Actostroma*, *Astroporina*, *Dehornella*, *Tosastroma*, *Steinerella*, *Milleporidium*, *Steineria*, *Promillepora*, *Burgundia*); *Spongiomorpha* (*Spongiomorpha*); *Chaetetida* (*Chaetetopsis*, *Varioparietes*). Age: Valanginien, Barrémien, Bedoulien.^1";
- 1597 s[1594] = "LOSER H. (1996).- A new octocoral from the Upper Cretaceous of east Bavaria.- *N. Jb. Geol. Palaeont. Mh.* 8: 485-489.- FC#038;P 25-2, p. 53, ID=3148^Topic(s): taxonomy; Octocorallia, *Paramoltkia*; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous Tour; Geography: Germany, Bavaria^*Paramoltkia neumeieri* n.g., n.sp. from the Upper Turonian nearshore deposits of the Regensburg-Kelheim-area is a rare incrusting

- octocoral. The new genus seems to be related to the dendroid octocoral *Moltkia*.¹";
- 1598 s[1595] = "MOOSLEITNER G. (1990).- Lederkorallen aus den alpinen Gosauschichten.- Fossilien 1990, 5: 206-207 [in German].- FC&P 22-1, p. 42, ID=2845Topic(s): sclerites; Octocorallia Alcyoniidae; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous Cogn Sant; Geography: AustriaIn an overview spines of octocorals (family Alcyoniidae) from the Gosau formation (Coniacian-Santonian; Austria) are described and depicted. The comparison to recent material shows affinity to the genus *Sinularia*.¹";
- 1599 s[1596] = "MASSE J.P. (1977).- Les constructions a Madreporas des calcaires Urgoniens (Barremien, Rfidaulinn [?]) de France (SE de la France).- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 322-328.- FC&P 6-2, p. 17, ID=0141Topic(s): urgonian facies; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr; Geography: France SEStromatoproids referred to as hydrozoans, play a significant role in these early Cretaceous reefs. but are subordinate to other faunal element such as coral and rudists .¹";
- 1600 s[1597] = "CHESHMEDJIEVA V.L. (1985).- Scleractinians from the Upper Cretaceous in South-west Bulgaria.- 001 Annales Universite de Sofia, Faculte de Geologie et de Geographie .: 23-33.- FC&P 15-1.2, p. 8, ID=0888Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Bulgaria SW^1";
- 1601 s[1598] = "CHESHMEDJIEVA V.L. (1985).- Some Peculiarities of the skeletal Morphology of the Genera *Actinastraea* d'Orbigny and *Columactinastraea* Alloiteau (Upper Cretaceous of South-west Bulgaria).- 001 Annales Universite de Sofia, Faculte de Geologie et de Geographie .: 35-38.- FC&P 15-1.2, p. 8, ID=0889Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Bulgaria^1";
- 1602 s[1599] = "CHESHMEDJIEVA V.L. (1983).- Especies nouvelles de Madreporaires du Maestrichtien en Bulgarie du Sud-Ouest.- 001 Annales Universite de Sofia, Faculte de Geologie et de Geographie .: .- FC&P 15-1.2, p. 8, ID=0890Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Bulgaria SWDans cette publication on donne la description des especes *Meandroria breznikensis* sp. n., *Meandroria garloensis* sp. n. et *Plesiosiderastraea tzankovi* sp. n.¹";
- 1603 s[1600] = "CHESHMEDJIEVA V.L. (1987?).- Madreporaires du Turonien et du Maestrichtien du srednogorie de l'Ouest (Bulgarie de Sud-Ouest).- 001 Annales Universite de Sofia, Faculte de Geologie et de Geographie .: .- FC&P 15-1.2, p. 9, ID=0891Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Tour - Maas; Geography: Bulgaria WDans cet article l'auteur propose la description de 21 especes de l'ordre Scleractinia, appartenants aux sous-ordres *Archaeocaeniida* ALLOITEAU, *Astraeoidea* ALLOITEAU, *Meandriida* AILOITEAU, *Caryophylliida* VAUGHAN & WELLS, *Fungiida* DUNCAN et *Heterocoeniina* BEAUVAIS.¹";
- 1604 s[1601] = "IDAKIEVA V. (2001).- Some Scleractinian corals from Lovech Urgonian Group (Balgarene Formation) from the area of V. Tirnovo-Gabrovo (Central Fore-Balkan, Bulgaria).- Godishnik na Sofijskiya Universitet Kliment Okhridski, geologo-geografski fakultet (1: geologie) 94, 1: 5-25.- FC&P 34, p. 60, ID=1282Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: BulgariaIn the district of the towns V. Tirnovo and Gabrovo (Central Fore-Balkan) 9 scleractinian species from the Lovech Urgonian

Group are described. In the area this lithostratigraphic unit is characterized by the development of mainly carbonate/siliciclastic shallow water sequences, deposited during the Lower Barremian to Lower Aptian stages. The coral fauna is derived from the siliciclastic sediments in the lower part of the Balgarene Formation from Lovech Urgonian Group, which is of Early Barremian age. The scleractinian corals are dominated by colonial forms. They are reported from three localities: Pushevo, Sedjankovci and Vetrovo and comprise 9 genera, belonging to four suborders. Some species are not described in Bulgaria until now. ^1";

- 1605 s[1602] = "LOSER H., FERRY S. (2006).- Coraux du Barrémien du Sud de la France (Ardèche et Drôme).- *Geobios* 39, 4: 469-489.- FC&P 34, p. 64, ID=1290^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: France S^Corals from the Barremian of southern France (dépt. Ardèche and Drôme) are described. The rather small fauna of colonial corals encompasses 23 species belonging to 18 genera of both Hexa- and Octocorals. The assemblages from the lower as well as upper Barremian show stratigraphic relationships to those of the Hauterivian and Aptian of the Tethys and the Caribbean province.^1";
- 1606 s[1603] = "BARON-SZABO R.C. (2003).- Taxonomie und Ontogenie von scleractinen Korallen der ostalpinen Oberkreide (Hochmoos- und Grabenbachschichten, Gosau-Gruppe, Santon).- *Jahrbuch der Geologischen Bundesanstalt* 143, 2: 107-201.- FC&P 32-2, p. 65, ID=1403^Topic(s): ontogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Alps E^For the first time the stages of ontogeny of the following coral species from the marls of the Grabenbach and Hochmoos beds (Santonian) of the Hochmoos-Rußbach, Finstergraben, and Grabenbach areas were investigated. *Columactinastrea pygmaea* (Felix), *Columactinastrea formosa* (Goldfuss), *Cladocora gracilipes* (D'Orbigny), *Agathelia asperella* Reuss, *Hydnophora styriaca* (Michelin), *Peplosmia latona* (Felix), *Hydnophora styriaca* (Michelin), *Placosmia martini* (Michelin), *Placosmia fenestrata* (Felix), *Aulosmia aspera* (Sowerby), *Phyllosmia didymophila* (Felix), *Diploctenium ferrumequinum* Reuss, *Flabelliosmia bisinuatum* (Reuss), *Acrosmia elongata* (Reuss), *Actinacis parvistella* Oppenheim, *Fungiastraea exigua* (Reuss, 1854) *Cunolites polymorpha* (Goldfuss) und *Aspidastraea orientalis* Kühn. [first fragment of extensive abstract - rather summary than abstract]^1";
- 1607 s[1604] = "IDAKIEVA V., TCHECHMEDJIEVA V. (2003).- wellsimeandra gen.n. du Barrémien de la Région de Veliko Tirnovo (Prébalkan Central).- *Comptes Rendus de l'Académie Bulgare des Sciences* 56, 1: 61-66.- FC&P 32-2, p. 67, ID=1405^Topic(s): taxonomy; Scleractinia, wellsimeandra; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr; Geography: Bulgaria^A colonial meandroid scleractinian coral wellsimeandra morycowae gen.n. et sp.n. from the district of Veliko Tirnovo (Central Forebalkan, Bulgaria) is described. The new genus belongs to suborder Rhipidogyrina Roniewicz, 1976, family Trochoidomeandridae Turnsek, 1981. It distinguishes from the other two genera in the family - *Trochoidomeandra* Morycowa, 1971 and *Rhipidomeandra* Morycowa & Masse, 1998 by the simultaneous presence of long and short radially arranged series, tectiform collines and microstructure (mid-septal clear zigzag line located between two dark parallel lines). The corallums are obtained in the terrigenous sediments from the lower part of the Lovech Urgonian Group - the Balgarene Formation, which is of Early Barremian age. [original abstract]^1";
- 1608 s[1605] = "BARON-SZABO R.C. (1999).- Taxonomy of Upper Cretaceous scleractinian corals of the Gosau Group (Weissenbachalm, Steiermark, Austria).- *Bulletin natural History Museum London (Geology)* 56, 2: 91-131.- FC&P 29-1, p. ???, ID=1472^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia;

- 1609 Stratigraphy: Cretaceous U; Geography: Austria, Styria^^1";
s[1606] = "FORTELEONI G., ELIASOVA H. (2000).- I rapporti tra il bivalve Lithophaga alpina (Zittel, 1866) ed il corallo Actinastrea elongata Alloiteau, 1954, nel Cretaceo superiore dell'Italia nord-orientale.- Bollettino della Società Paleontologica Italiana 39, 1: 47-54.- FC&P 29-1, p. ???, ID=1477^Topic(s): ; Scleractinia, Actinastrea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Italy N^^1";
- 1610 s[1607] = "LOSER H. (2000).- Upper Cretaceous corals from the Ptoon Mountains (Central Greece).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 21: 49-61.- FC&P ???, p. 56, ID=1484^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Greece^Sediments of the Late Turonian - Early Coniacian transgression are exposed in the Ptoon Mountains (Boeotia, Central Greece) and contain a species rich rudist association. Two horizons with corals were found: a monospecific dendroid coral thicket and small patch reefs with various massive corals. The corals are taxonomically described and their ecology is briefly discussed. ^1";
- 1611 s[1608] = "SORAUF J.E. (1999).- Skeletal microstructure, geochemistry, and organic remnants in Cretaceous Scleractinian corals: Santonian Gosau beds of Gosau, Austria.- Journal of Paleontology 73, 6: 1029-1041.- FC&P 29-1, p. 54, ID=1506^Topic(s): microstructures, geochemistry; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Austria, Gosau^Extremely well-preserved specimens of the species Rennensismilia complanata and Aulosmilia cuneiformis occur in Santonian (Upper Cretaceous) strata of the Lower Gosau beds, near Gosau, Austria. Two of these, here reported, have aragonite skeletal mineralogy and skeletal structures that are typical for their families, and, in addition, show distribution of trace elements (Sr and Mg above all) that confirm the biogenic origin of these structures observed. R. complanata also has proteinaceous matrix surrounding bundles of skeletal crystallites. Matrix is most abundant along the axial plane of septa, which also is the first-formed part of each septum. Although A. cuneiformis lacks observable organic matrix materials, its skeletal structure and its distribution and amount of trace elements are analogous to that seen in R. complanata and also in modern corals.^1";
- 1612 s[1609] = "BARON-SZABO R.C. (2001).- Corals of the Theresienstein reef (Upper Turonian-Coniacian, Salzburg, Austria).- Bulletin Biological Society of Washington 10: 257-268.- FC&P 30-2, p. 25, ID=1580^Topic(s): reef corals; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Austria^The coral fauna of the Theresienstein reef is taxonomically described. The fauna consists exclusively of colonial forms, comprising the taxa Heterocoenia erecta Felix, Actinacis parvistella Oppenheim, A. haueri Reuss, A. remesi Felix, Thamnarea lithodes Felix, Elephantaria lindstroemi Oppenheim, Goniopora elegans (Leymerie), Mesomorpha mammillata (Reuss), Pleurocora alternans Milne Edwards & Haime, Ogilvieastraea cf. bigemmis (Felix), Fungiastraea crespoid (Felix), Thamnoseres arborescens Felix, Dimorphastraea leptophylla (Felix), Synastrea agaricites (Goldfuss), and Parapolytremacis septifera (Gregory). One species is new: Vallimeandra bayeri n.sp.^1";
- 1613 s[1610] = "MORYCOWA E., DECROUEZ D. (2006).- Early Aptian scleractinian corals from the Upper Schratzenkalk of Hergiswil (Lucerne region, Helvetic Zone of central Switzerland).- Revue de Paleobiologie 25: 791-838.- FC&P 35, p. 79, ID=2395^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Switzerland, Helvetic zone^The paper deals with scleractinian corals from the Upper Schratzenkalk (Early Aptian) in the area of Hergiswil near Lucerne in the Helvetic Zone of the Swiss Alps. The coral assemblage is dominated

by small lamellar and massive colonies, in places grouped in small lenses, mainly from suborder Microsolenina and Astraeoina. From 38 taxa, 28 species have been described (including 2 new species) and ten at the generic level, only. The identified coral taxa are characteristic of Urgonian facies of the European and near East Tethyan realm.^1";

- 1614 s[1611] = "MORYCOWA E., MASSE J.-P. (2007).- Actinaraeopsis ventosiana, a new scleractinian species from the Lower Cretaceous of Provence (SE France).- Annales Societatis Geologorum Poloniae 77: 141-145.- FC&P 35, p. 80, ID=2397^Topic(s): taxonomy; Scleractinia, Actinaraeopsis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: France, Provence^Actinaraeopsis ventosiana is a new scleractinian coral species from the Lower Cretaceous shallow-water limestones of the Mont Ventoux (Provence, SE France). To date only two Late Jurassic species of this genus have been known, i.e. Actinaraeopsis araneola Roniewicz and A. exilis Roniewicz. The new species shows some similarity to the Jurassic species A. araneola, but differs in microstructure details and morphometric parameters.^1";
- 1615 s[1612] = "SANDERS D., BARON-SZABO R.C. (2008).- Palaeoecology of solitary corals in soft-substrate habitats: the example of Cunnolites (upper Santonian, Eastern Alps).- Lethaia 41, 1: 1-14.- FC&P 35, p. 84, ID=2405^Topic(s): soft-substrate habitats; Scleractinia, ecology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Sant; Geography: Alps E^The upper Santonian Hofergraben Member (Eastern Alps) provides an example of a soft-substrate habitat suited mainly for solitary corals (Cunnolites), for colonial forms of solitary coral-like shape (Placosmia, Diploctenium), and for colonial corals of high sediment resistance (e.g. Actinacis, Pachygyra). The Hofergraben Member consists mainly of silty-sandy marls of wave-dominated, low-energy shore zone to shallow neritic environments. Substrates of soft to firm mud supported level-bottoms of non-rudist bivalves, gastropods, solitary corals, colonial corals, rudists, echinoids, and benthic foraminifera. Boring and/or encrustation of fossils overall are scarce. In the marls, Cunnolites is common to abundant. Both a cupolate shape and a lightweight construction of the skeleton aided the coral to keep afloat soft substrata. Cunnolites taphocoenoses are strongly dominated by small specimens (about 1-3 cm in diameter). Cunnolites was immobile and mostly died early in life upon, either, smothering during high-energy events, rapid sedimentation associated with river plumes, or by toppling and burial induced by burrowing. Comparatively few large survivor specimens may show overgrowth margins interpreted as records of partial mortality from episodic sedimentation or tilting on unstable substrate. Scattered pits and scalloped surfaces on large Cunnolites may have been produced, in some cases at least, by predators (durophagous fish?). Post-mortem, large Cunnolites provided benthic islands to corals, epifaunal bivalves and bryozoans. In a single documented case of probable in vivo contact of Cunnolites with the colonial coral Actinastrea, the latter prevailed.^1";
- 1616 s[1613] = "HOEFLING R. (1989).- Substrate-induced morphotypes and intraspecific variability in Upper Cretaceous scleractinians of the eastern Alps (West Germany and Austria).- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 51-60.- FC&P 19-1.1, p. 12, ID=2522^Topic(s): ecology, variability; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Alps E^^1";
- 1617 s[1614] = "STOLARSKI J. (1990).- On Cretaceous Stephanocyathus (Scleractinia) from the Tatra Mts.- Acta Palaeontologica Polonica 35, 1-2: 31-39.- FC&P 20-2, p. 66, ID=2962^Topic(s): new taxa; Scleractinia, Stephanocyathus; Systematics: Cnidaria;

- Scleractinia; Stratigraphy: Cretaceous Alb; Geography: Poland, Tatra Mts^A new species, Stephanocyathus antiquus sp.n. is described from the Albian (Lower Cretaceous) glauconitic limestones from the High-Tatric series of the Tatra Mountains, Poland. It is the oldest species of the genus Stephanocyathus known so far. Distichophyllid microstructure, as well as the morphological features (shape, development of radial elements), make the species similar to Recent forms.^1";
- 1618 s[1615] = "MORYCOWA E., DECROUEZ D., SCHENK K. (1995).- Presence de Latusastraea exiguis (Scleractiniaire) dans le Schrattealk du Rawil (Helvetique, Suisse) et quelques remarques sur les especes cretacees du genre Latusastraea d'Orbigny 1849.- Annales Societatis Geologorum Poloniae 64: 15-22.- FC&P 25-1, p. 9, ID=2993^Topic(s): ; Scleractinia, Latusastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Switzerland, Helvetic zone^^1";
- 1619 s[1616] = "PLENICAR M. (1993).- The southern margin of the Styrian Cretaceous biolithitic complexes. [in Slovenian] .- Rudarsko-Metalurski Zbornik 40, 1/2: 233-240.- FC&P 25-2, p. 54, ID=3152^Topic(s): reef complexes; reef complexes; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Sant - Camp; Geography: Austria, Styria^The Styrian Cretaceous biolithitic complexes are comparable to the Gosau-formation of Austria, Slovenia, Croatia and Hungary. From the Santonian / Campanian within this complex solitary corals are reported.^1";
- 1620 s[1617] = "MOOSLEITNER G. (1991).- Panourgias - ein nicht ganz alltaegliches Museum.- Fossilien 8, 1: 45-51.- FC&P 21-2, p. 40, ID=3334^Topic(s): Panourgias museum; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: Greece, Panourgias^Colleagues who work about Cretaceous corals surely know the extensive and well illustrated monograph by Hackemesser (1936): he described a Cenomanian coral fauna from Dremisa, central Greece. The present paper gives an account on a museum in Panourgias (the Greek name of Dremisa), where corals and other fossils are presented. In addition, a detailed description of the outcrop where the Cenomanian corals could be found, is given.^1";
- 1621 s[1618] = "MORYCOWA E., DECROUEZ D. (1993).- Description de quelques coraux des calcaires urgoniens du domaine delphino-helvetique.- Revue de Paleobiologie 12, 1: 203-215.- FC&P 23-1.1, p. 76, ID=3484^Topic(s): urgonian facies; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr; Geography: France, Haute-Savoie^In the paper Scleractinian corals from Lower Barremian limestones of the Bornes massif in the Haute-Savoie (French Alps) are described. 6 species are recorded, two of them are described as new: Ovalastraea pseudolorioli and Comoseris bargyensis.^1";
- 1622 s[1619] = "CHESHMEDJIEVA V.L. (1992).- Paleoekologichni dannii za skleraktiniite ot severnoevropejskiya tip gorna kreda v plevensko. [Paleoecological data for the scleractinians of the northeuropean type of Upper Cretaceous in the Pleven district.] .- Godishnik na Sofijskija Universitet"Kliment Okhridski", biologo-geologo-geografski Fakultet, kniga 2: Geologija 82, 1: 197-213.- FC&P 26-2, p. 71, ID=3751^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Bulgaria, Pleven^Nine outcrops of Scleractinians are found in the North European type of Upper Cretaceous in the Pleven district. Eleven species have been defined; three of them are Lower Cenomanian, two are Lower Campanian, 2 - Upper Campanian, 4 -Lower Maastrichtian and 2 - Upper Maastrichtian. Upper Maastrichtian species are also found in the Lower Maastrichtian. There is no evidence for two of the Cenomanian species as to which ecological groups belong. All the

- other species are ahermatypic. The Lower Campanian species pertain to the Parasmilia ahermatypic cosmopolitan genus and the Upper Campanian and the Maastrichtian - to the Caryophyllia ahermatypic cosmopolitan genus. The development of scarce fauna can be explained mainly with the lack of hard substratum for fixation. The outcrops of Upper Cretaceous Scleractinians pertain to the Northern paleofaunistic region.¹¹;
- 1623 s[1620] = "BARON-SZABO R.C. (1997).- Die Korallenfazies der ostalpinen Kreide (Helvetikum: Allgauer Schrätkalk; Noerdliche Kalkalpen: Brandenberger Gosau). Taxonomie, Palöekologie.- Zitteliana 21: 3-98.- FC&P 27-1, p. 89, ID=3833^Topic(s): coral facies; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Alps^ ^1";
- 1624 s[1621] = "MORYCOWA E., MARCOPOULOU-DIACANTONI A. (1997).- Cretaceous Scleractinian corals from the Parnassos area (Central Greece) (Preliminary note).- Bulletin of the Geological Society of Greece 30, 2: 249-273.- FC&P 27-1, p. 94, ID=3842^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb - Cen?; Geography: Greece, Parnassos^From the Parnassos Mountains a coral assemblage of probably Albian to Cenomanian age is described. The corals belong to the suborders Amphiastreaeina and Rhipidogyrina. Five new species and three new genera are reported. Based on type material it is showed that several species described by Hackemesser (1936) under Phyllocoenia belong to Preverastreae.¹¹;
- 1625 s[1622] = "MORYCOWA E. (1997).- On a new Rhipidogyrin genus, Diplocoeniella (Scleractinia, Lower Cretaceous).- Annales Societatis Geologorum Poloniae 67: 297-305.- FC&P 27-1, p. 94, ID=3843^Topic(s): taxonomy; Scleractinia, Diplocoeniella; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr Apt; Geography: Poland, Carpathians^Diplocoeniella gen.n. is newly described from the Barremian and Lower Aptian of the Polish Outer Carpathians. This genus includes cerioid colonies, plocoid in appearance, characterised by intracalicular budding, septoparathecal wall of corallites, costosepta consisting of branching trabeculae, typical of rhipidogyrin corals, styliform columella, extended, tabuloid dissepiments. One new species of this genus, Diplocoeniella gerochi sp.n. is described herein.¹¹;
- 1626 s[1623] = "OEKENTORP K. (2004).- Professor Dr. Otto Franz Geyer.- FC&P 33, 1: 9.- FC&P 33-1, p. 9, ID=7164^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[born] 18. 05. 1924 at Bergreichenstein / Böhmerwald, [died] 18. 11. 2002 at Staufen / Breisgau. * In 1946/47 Prof. Geyer started his study of Biology at the Technische Hochschule Stuttgart, but changed to Geology and Palaeontology in 1948. with his thesis "Die oberjurassische Korallenfauna von württemberg" he finished his studies in 1952. Between 1952 and 1961 he worked as assistant professor at the Geologisch-Paläontologisches Institut of the Technische Hochschule Stuttgart. In 1959 he finished his Habilitation with a work; "Monographie der Perisphinctidae des unteren Unterkimmeridgium (weißer Jura γ, Badenerschichten) im süddeutschen Jura". with that the venia legendi was bestowed on him. Thesis and Habilitationsschrift already marked his main field of work: Mesozoic corals and ammonoids, but he was interested in stratigraphy and paleogeography as well. widely known is his textbook "Grundzüge der Stratigraphie und der Fazieskunde", which was published in two volumes in 1973. List of his works contains 115 publications. * His obituary has been published by winfried Reiff, Stuttgart: Reiff w. 2003: Otto Franz Geyer, 1924-2002; Jh. Ges. Naturkde württemberg 159, pp 291-303, 1 fig., 1 portrait; Stuttgart.¹¹;
- 1627 s[1624] = "BUGROVA I.Yu. (1997).- Corals.- In: Arkabeva, V.V.(ed.): Atlas of the Cretaceous fauna in the south-west Crimea. p. 18-39.- FC&P 27-2, p. 57, ID=3917^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy:

- Cretaceous Val - Haut; Geography: Ukraine, Crimea^22 coral species are described from the Valanginian to Hauterivian of the Crimea Mountain range. They are represented by the genera Cyathophora, Styliina, Stylosmia, Heliocoenia, Pleurophyllia, Montlivaltia, Thecosmia, Monocyclastraea, Axosmia, Fungiastraea, Dimorphastraea, Siderastraea, Dermosmia, Calamophylliopsis, Microphyllia, Latiastraea, Thamnaraea and Discocyathus. One species (Placophyllia grata) is described as new.^1";
- 1628 s[1625] = "ZLATARSKI V. (1970).- Cyclastraea meltensis, nouvelle espece de Madreporaria de l'&O39;Aptien de Bulgarie.- C. R. Acad. Bulgare des Sciences 23, 2: 201-204.- FC&#O38;P 1-2, p. 24, ID=4694^Topic(s): new taxa; Scleractinia, Cyclastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Bulgaria^^1";
- 1629 s[1626] = "SIKHARULIDZE G.I. (1972).- A new genus Paretallonia (Hexacorallia) from the Lower Cretaceous deposits of western Georgia.- Bulletin Acad. Sci. Georgian SSR 68, 3: 641-644.- FC&#O38;P 2-2, p. 23, ID=4825^Topic(s): new taxa; Scleractinia, Paretallonia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Georgia^A new Lower Cretaceous genus Paretallonia Sikharulidze of the family Acroporidae Verrill has been established. It differs from other genera of this family by rudimental perithecium (with the exception of Etallonia Roniewicz) and from Etallonia only by a styliform columella. A new type-species Paretallonia bendukidzeae, is described.^1";
- 1630 s[1627] = "KUZMICHEVA E.I. (1972).- Scleractinies du Berriasien des Monts de Crimée. [en russe] .- Paleontologicheskii Zhurnal 1972, 2: 41-52.- FC&#O38;P 4-1, p. 44, ID=5170^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Berr; Geography: Ukraine, Crimea^Création de Monocyclastraea gen. nov. (Montlivaltiidae), Baksanophyllia cylindrica gen. èt sp.nov. (Acrosmiliidae), Dimorpharaea burnlichientis sp.nov.^1";
- 1631 s[1628] = "MORYCOWA E. (1976).- Ksiazkiewiczia - nouveau genre de Hexacorallia du Crétacé inférieur des Carpathes Polonaises Externes.- Annales Societatis Geologorum Poloniae 46, 1-2: 77-88.- FC&#O38;P 5-1, p. 21, ID=5338^Topic(s): taxonomy; Scleractinia, Ksiazkiewiczia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Poland, Carpathians^On a décrit le nouveau genre Ksiazkiewiczia basé sur l'&O39;espèce type Ksiazkiewiczia lanckoronensis n.gen., n.sp. et Ksiazkiewiczia sp. Les spécimens proviennent des Couches de Grodziszcze (Aptien inférieur) de la nappe Subsilézienne des Carpathes Polonaises Externes.^1";
- 1632 s[1629] = "BEAUVAIS L., BIGNOT G., BLANC P. (1976).- L'&O39;évolution diagénétique de quelques madréporaires des couches de Gosau (Santonien, Alpes orientales, Autriche): Conséquences d'&O39;ordre paléogéographique.- Geobios 9, 6: 801-805.- FC&#O38;P 6-1, p. 6, ID=5476^Topic(s): diagenesis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Sant; Geography: Austria, Alps E^Mise en évidence dans le squelette de Madréporaires crétacés, du processus inachevé et fossilisé de l'&O39;inversion de l'&O39;aragonite en calcite. Ce phénomène est probablement en relation avec un apport limité d'&O39;eaux douces dans le sédiment au cours de sa diagenèse.^1";
- 1633 s[1630] = "KUZMICHEVA E.I. (1974).- Mel: Hexacoralla (Scleractinia). [in Russian].- Atlas iskopaemoy fauny Armyanskoy SSSR [atlas of fossil fauna of the Armenian SSSR; in Russian]; AN Arm. SSR: 208-211, pl. 95; Erevan. [atlas of fossils] - FC&#O38;P 3-1, p. 14, ID=6254^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Armenia^^1";
- 1634 s[1631] = "LOSER H. (2010).- The Barremian coral fauna of the Serre de

Bleyton mountain range (Drôme, France).- Annalen des naturhistorischen Museums in wien 112: 575-612.- FC&P 36, p. 96, ID=6514Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr; Geography: France, DromeThe corals of the Serre de Bleyton mountain range are determined and described. The fauna consists of very small coral remains and fragments rarely exceeding one centimetre in size. It is clearly dominated by a few solitary and small phaceloid forms, while other growth forms are very rare. The fauna comprises 26 species in 16 genera of the suborders Amphiastrea, Archeocaeniina, Caryophyllina, Faviina, Fungiina, Microsolenina, and Stylinina. With the exception of one Amphiastrea species, all corals have small to very small calices. The faunal composition is typical of Hauterivian to Early Albian coral faunas. Palaeobiogeographically they are related to Barremian-Aptian faunas of the Central Tethys and the western hemisphere. [original abstract]^1";

- 1635 s[1632] = "MASSE J.-P., MORYCOWA E., FENERCI-MASSE M. (2008).- Valanginian-Hauterivian scleractinian coral communities from the Marseille region (SE France).- Cretaceous Research 30, 1: 178-192.- FC&P 36, p. 99, ID=6519Topic(s): ecology, stratigraphy; Scleractinia, communities; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Val - Haut; Geography: France SCoral beds associated with Valanginian and Hauterivian platform carbonates from the Marseille region show two faunal assemblages corresponding with a Stylosmilia-Baryphyllia community (late Valanginian) and a Mesomorpha-Dimorpharaea community (early Hauterivian). The stratigraphic position of this fauna is based on the associated microfossils and correlation with ammonite-bearing beds. The internal architecture of the coral beds is loosely packed, the geometry of the corresponding bodies is tabulate and flat, and their depositional setting being the deeper, muddy part of the infralittoral zone. The biostratigraphic significance of the encountered species which include: stylosmilia cf. corallina, Eocomoseris raueni, Mesomorpha ornata, Dimorpharaea catalaunica and Baryphyllia haimei, is low and our data tend to broaden the stratigraphic range of some of them. Assuming that the corresponding species were zooxantellate suggests the existence of an oligotrophic rather than a mesotrophic oceanic regime, postulated by some workers for the time span in question. [original abstract]^1";
- 1636 s[1633] = "MASSE J.-P., MORYCOWA E., FENERCI-MASSE M. (2008).- Corrigendum to: "Valanginian-Hauterivian scleractinian coral communities from the Marseille region (SE France)" (vol 30, pg 178, 2009).- Cretaceous Research 30, 2: 503.- FC&P 36, p. 99, ID=6520Topic(s): biocoenoses; Scleractinia, communities; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Val - Haut; Geography: France Scorrigendum to Masse et al. 2008^1";
- 1637 s[1634] = "LOSER H. (1998).- About an "inappropriate relationship" between Clausastrea and Dimorpharaea (Scleractinia, Lower Cretaceous).- FC&P 27, 2: 40-43.- FC&P 27-2, p. 40, ID=6920Topic(s): taxonomical riddle; Scleractinia; Systematics: Cnidaria; scleractinia; Stratigraphy: Cretaceous Apt; Geography: GreeceThe specimen shows characters of both Dimorpharaea and Clausastrea. […] It is difficult to draw conclusions for taxonomy. The specimen indicates that the value of [septal] perforations is less important than is commonly believed. If more material becomes available, the creation of a new genus and its assignation to the Clausastraeidae could be necessary. [excerpts from a short note]^1";
- 1638 s[1635] = "MORYCOWA E., MASSE J.-P. (1998).- Les Scléactiniaux du Barrémien-Aptien inférieur de Provence (SE de la France).- Geobios 31, 6: 725-766.- FC&P 29-1, p. 40, ID=7022Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia;

Stratigraphy: Cretaceous Barr Apt; Geography: France, Provence[^]In the Urgonian limestones from Provence of Barremian - Early Aptian age, 29 scleractinian species are described, belonging to 14 families and five suborders: Amphiastreina, Rhipidogyrina, Archaeocoeniina, Stylinina et Astreoina. The suborder Stylinina Alloiteau, 1952, is emended. Twenty genera are recognized among with two new: Saltocyathus and Rhipidomeandra (Rhipidogyrina). Among the 29 species identified, six are new: Donacosmia massaliensis, Paraclausastrea valclusensis, P. pulchra, Diploastraea crassicostata. Two species belong to the new genera (Saltocyathus urgonensis, Rhipidomeandra bugrovae). On a European scale this fauna tends to characterize the Barremian - Early Aptian interval and shows a strong affinity with the Carpathian fauna even if some of the species are also found in other regions. [original abstract]^1";

1639 s[1636] = "VALLDEPERAS X.F., GILI E. (1999).- Nuevos datos sobre la fauna coralina (Scleractinia) de la plataforma carbonatada de Sant Corneli, Unidad Central Surpirenaica (Cretácico superior, Santoniense).- Revista Española de Paleontología, no extraordinario 9 [homenaje al Prof. J. Truyols]: 143-159.- FC&P 29-1, p. 41, ID=7030Topic(s): new records; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Sant; Geography: Spain, Pyrenees[^]Los depósitos santonienses (Cretácico Superior) de la plataforma carbonatada de Sant Corneli, en la unidad central surpirenaica contienen, además de rudistas, corales diversos y abundantes. Presentamos los resultados del estudio taxonómico de la fauna de corales escleractinios de la unidad de rudistas y corales de la sección de Sant Martí de Vilanoveta, en el flanco norte del anticlinal de Sant Corneli cerca de Tremp. Se han descrito 21 especies de 16 géneros y 11 familias diferentes; 5 de las especies se dejaron en nomenclatura abierta. La gran mayoría de las especies reconocidas se encuentran y fueron originariamente descritas en el Cretácico Superior del Grupo Gosau y depósitos afines en los Alpes calcáreos. En este trabajo, las especies han sido identificadas siguiendo un análisis taxonómico clásico, como primer paso a una revisión profunda de la taxonomía de los corales escleractinios del Cretácico Superior. [original abstract]^1";

1640 s[1637] = "CLACK N. (2001).- Palaeoecological reconstruction of Lower Cretaceous (Barremian-Aptian) coral communities of southern France.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 96-113.- FC&P 30-1, p. 20, ID=7064Topic(s): ecology, biocoenoses; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr Apt; Geography: France [^]A palaeoecological study of a significant number of Lower Cretaceous (Barremian and Aptian) coral bearing sequences in southern France has permitted the classification of coral bearing units according to their litho and biofacies. Schematic depositional models have been produced, and major developmental controls of the coral communities elucidated. Three main types of coral bearing unit and one associated facies are recognized, based principally upon sedimentological criteria. Sub divisions of these groups are determined by the nature of the coral fabric and fauna. The classification scheme comprises: (1a) biostromal units developed within pure carbonate facies and typified by tabulo lenticular coral colony morphotypes; (1b) a biostrome developed within pure carbonate facies, characterized by lamellar to tabulo lenticular colonies; (2a) biostromal units developed within mixed carbonate siliciclastic facies, dominated by lamellar and tabulo lenticular colonies; (2b) biostromal units developed within mixed carbonate / siliciclastic facies, dominated by phaceloid colony morphotypes; (3) lenticular units developed in relatively pure carbonate facies with evidence for early cementation and dominated by lamellar colonies; and (4) coral gravels comprising numerous rounded coral fragments associated with type 1a units. Unit types 1,2 and 3 developed under

different ranges of environmental conditions, with type 4 units the associated facies fitting into the type 1 depositional model. Important abiotic factors controlling development of the coral communities were: light intensity, degree of siliciclastic input and sedimentation rate. In contrast to many shallow marine depositional systems associated with zooxanthellate corals, hydrodynamic energy was not an important control on community development. [original abstract]^1";

- 1641 s[1638] = "BARON-SZABO R.C. (2003).- Ontogenetische Entwicklung von *Dasmiopsis lamellicostatus* (Reuss 1854) (Scleractinia; Meandrinidae), einer seltenen Koralle von der Oberkretazischen Gosau-Gruppe (Hofergraben; Österreich).- Beiträge zur Geologie des Salzkammerguts 2 [J.T. Weidinger, H. Lobitzer & I. Spitzbart (eds): Gmundner Geo-Studien]: 141-146.- FC;P 33-1, p. 68, ID=7215^Topic(s): ontogeny; Scleractinia *Dasmiopsis*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: Austria^For the first time the ontogenetical development of specimens of the rare taxon *Dasmiopsis lamellicostatus* (Reuss, 1854) from the Austrian Gosau Group; at Hofergraben (Santonian) is documented. In the juvenile stage the corallite is circular in outline with septa regularly alternating, becoming elliptical in later ontogenetical stages with 12 septa which are both dominant and nearly equal within a septal arrangement of 5 cycles. [original abstract]^1";
- 1642 s[1639] = "BARON-SZABO R.C., STEUBER T. (1996).- Korallen und Rudisten aus dem Apt im tertiären Flysch des Parnass-Gebirges bei Delphi-Arachowa.- Berliner geowissenschaftliche Abhandlungen E18: 3-75.- FC;P 25-2, p. 51, ID=3144^Topic(s): ecology, taxonomy; Scleractinia, bivalvia; Systematics: Cnidaria Mollusca; Scleractinia Bivalvia; Stratigraphy: Cretaceous Apt; Geography: Greece^A coral-rudist-association is described from the Lower Cretaceous (Lower Aptian) of Greece. The assemblage was found in limestone-olistoliths and ophiolitic conglomerates redeposited in early Tertiary flysch-type deposits of the Parnassus platform near Delphi-Arachowa. The coral fauna is extremely rich in species; 63 coral species in 43 genera are described of which three are new: *Pseudomyriophyllia turnsekae*, *Amphiaulastraea keuppi*, *Carolastraea graeca*.^1";
- 1643 s[1640] = "MERMIGHIS A., DIACANTONI-MARCOPOULOU A. (2004).- La faune a rudistes, porifères et scléactiniaires du Crétacé supérieur du mont Ptoon (Béotie septentrionale, Grèce continentale).- Revue de Paléobiologie 23, 1: 313-353.- FC;P 34, p. 67, ID=1296^Topic(s): Scleractinia, Rudists, Porifera; Systematics: Cnidaria Mollusca Porifera; Scleractinia Bivalvia; Stratigraphy: Cretaceous U; Geography: Greece^We have described 16 species of rudists, 14 species of porifères and 3 species of coral from the Santonian of mount Ptoon in northern Beotia (central Greece). Although this fauna is known in the eastern paleobioprovince, a little endemism has been observed. Two new species of rudists are created : *Agriopleura mitzopoulei* n.sp. and *Agriopleura liatsikaei* n.sp. One species of rudistes *Praelapeirusia* n.sp. and three of porifères *Phyllodermia* n.sp., *Aphrocallistes* n. sp and *Coscinopora* n.sp. have been remained in open nomenclature.^1";
- 1644 s[1641] = "MORYCOWA E., KOLODZIEJ B. (2001).- Skeletal microstructure of the *Aulastraeoporidae* (Scleractinia, Cretaceous).- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 187-192.- FC;P 31-1, p. 68, ID=1641^Topic(s): microstructures; Scleractinia, *Aulastraeoporidae*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Greece^The neorhipidacanth skeleton microstructure of Cretaceous specimens identified as genera *Aulastraeopora* Prever, 1909 and *Preverastraea* Beauvais, 1976 of the family *Aulastraeoporidae* Alloiteau, 1957, indicate that their proper systematic position is within the

- suborder Rhipidogyrina Roniewicz, 1976. The microstructure of Albian-Cenomanian aulastraeoporid corals from the Parnassos-Ghiona Region, Central Greece, is presented here.¹";
- 1645 s[1642] = "CHESHMEDJIEVA V.L. (1982).- Attempt for clarifying of some Peculiarities in the Perforation and the Ontogeny of the cycloolithoid Scleractinians of the Maestrichtian in South-west Bulgaria.- 001 Annales Universite de Sofia, Faculte de Geologie et de Geographie, 1-Geologie: .: 246-250.- FC&P 15-1.2, p. 8, ID=0886Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Bulgaria¹";
- 1646 s[1643] = "MASSE J.P., MORYCOWA E. (1994).- Les Scleractiniaires hydnochoroides du Cretace inferieur (Barremien-Aptien inferieur) de Provence (S.E. de la France). Systematique, stratigraphie et paleobiogeographie.- Geobios 27, 4: 433-448. [in French].- FC&P 24-1, p. 68, ID=4494Topic(s): biogeography; Scleractinia, Hydnochorida; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr Apt; Geography: France, ProvenceFrom the Barremian-Early Aptian platform carbonates (Urgonian facies s.l.) from Provence, seven species of hydnochoroid Scleractinia are described. They belong to genera Eohydnochora and Felixigyra (Faviidae) and Hydnochoromeandraraea (Microsolenidae). Two species are new. These taxa are original features of the Provence fauna. Hydnochoromeandraraea shows a restricted palaeobiogeographic distribution, the Felixigyra-Eohydnochora group has a wider one (Eurasia-East Africa and America).¹";
- 1647 s[1644] = "MORYCOWA E., MASSE J.-P. (2009).- Lower Cretaceous Microsolenina (Scleractinia) from Provence (southern France).- Annales Societatis Geologorum Poloniae 79, 2: 97-140.http://www.asgp.pl/.- FC&P 36, p. 100, ID=6524Topic(s): taxonomy; Scleractinia Microsolenina; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: France, ProvenceIn the Lower Cretaceous (Urgonian) limestones of the Provence region (South France) shallow-water scleractinian corals are very common. This paper concentrates on corals from the suborder Microsolenina. They represent 34 taxa (including 5 new species) belonging to 14 genera from two families: Microsolenidae and Latomeandridae. This coral assemblage is representative for the late Early Cretaceous Tethyan realm but also shows some endemism. Its characteristic feature is the abundance of hydnochoroid specimens from the genus Hydnochoromeandraraea Morycowa. The Barremian-Early Aptian age of the studied corals is based on foraminifera (mainly orbitolinids), dasycladale algae and rudists, and agrees with that of the whole studied coral fauna. [original abstract]¹";
- 1648 s[1645] = "MORYCOWA E., MARCOPOULOU-DIACANTONI A. (2002).- Albian corals from the Subpelagonian zone of Central Greece (Agrostyilia, Parnassos Region).- Annales Societatis Geologorum Poloniae 72: 1-65.- FC&P 32-1, p. 29, ID=1731Topic(s): taxonomy, biogeography; Scleractinia, Octocorallia; Systematics: Cnidaria; Scleractinia Octocorallia; Stratigraphy: Cretaceous Alb; Geography: Greece, ParnassosShallow-water scleractinian corals from Cretaceous allochthonous sediments of the Subpelagonian Zone in Agrostyilia (Parnassos region, Central Greece) represent 47 taxa belonging to 35 genera, 15 families and 8 suborders; of these 3 new genera and 9 new species are described. Among these taxa, 5 were identified only at the generic level. One octocorallian species has also been identified. This coral assemblage is representative for late Early Cretaceous Tethyan realm but also shows some endemism. A characteristic feature of this scleractinian coral assemblage is the abundance of specimens from the suborder Rhipidogyrina. The Albian age of the corals discussed is indicated by the whole studied coral fauna, associated foraminifers, calpionellids and calcareous dinoflagellates.¹";

- 1649 s[1646] = "MORYCOWA E. (1971).- Hexacorallia et Octocorallia du Crétacé inférieur de Rarau (Carpathes orientales roumaines).- Acta Palaeontologica Polonica 16, 1-2; 149 pp.- FC&P 1-2, p. 22, ID=4685^Topic(s): taxonomy; Scleractinia, Octocorallia; Systematics: Cnidaria; Scleractinia Octocorallia; Stratigraphy: Cretaceous L; Geography: Romania, Carpathians E^Sont étudiés les Polypiers provenant des dépôts fossilifères marneux et gréso-marneux de l'Aptien inférieur de la région de Rarau dans les Carpathes Orientales roumaines. Les Polypiers sont trouvés in situ, souvent aussi en position de vie. Ce sont, en général, des formes coloniales, petites, le plus souvent massives, plus rarement lamellaires ou branchues à rameaux courts et épais. On a constaté 54 espèces (21 déjà connues, 4 déterminées approximativement (aff.), 18 espèces et 6 sous-espèces nouvelles, et 9 formes spécifiquement indéterminables, attribuables à 8 genres différents), réparties en 38 genres (4 genres et 1 sous-genre nouveaux dont un incertae sedis) et 18 familles, dont 17 représentent 5 sous-ordres des Hexacorallia et 1 famille appartient aux Octocorallia. L'assemblage de Coraux étudiés indique l'Aptien inférieur. Le bon état de conservation des Polypiers a permis d'étudier leur microstructure histologique. Les Coraux et les organismes qui les accompagnent suggèrent un milieu marin peu profond, un peu éloigné du rivage, agité, tropical ou subtropical, et une sédimentation assez intense. Les Coraux y formaient probablement des touffes.^1";
- 1650 s[1647] = "SCHOLZ H. (1984).- Sklerospongien aus dem Allgäuer Schrattenkalk (Helvetikum, Bayerische Alpen).- N. Jahrb. Geol. Paläont. Mh. 1981, 10: 605-613.- FC&P 14-1, p. 21, ID=6610^Topic(s): ; Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Cretaceous L; Geography: Alps, Bavarian^[sclerosponges from the Schrattenkalk, Lower Cretaceous, of the Bavarian Alps]^1";
- 1651 s[1648] = "PHILIP J. (1974).- Les formations calcaires à Rudistes du Crétacé supérieur provençal et rhodanien: stratigraphie et paléogéographie.- Bulletin du B.R.G.M. (2e sér.), section I, 3/1974: 107-151.- FC&P 4-1, p. 44, ID=5171^Topic(s): reefs rudist; rudist limestones; Systematics: Mollusca; Stratigraphy: Cretaceous U; Geography: France, Provence Rhone^Les formations calcaires à Rudistes du Crétacé supérieur provençal (Basse Provence) et rhodanien (Basse Vallée du Rhône) ont fait l'objet d'une étude détaillée: paléontologique, stratigraphique, sédimentologique et paléogéographique. On précise tout d'abord leur extension stratigraphique (Albien supérieur à Sénonien inférieur) et leurs caractères paléontologiques (concernant Rudistes et Foraminifères notamment). Les différentes formations sont ensuite décrites sur le plan de la Paléoécologie et de la Sédimentologie et on envisage les phénomènes paléogéographiques qui ont présidé à leur établissement, leur développement et leur disparition au cours du temps (pulsations de la sédimentation terrigène et tectonique). Ces observations conduisent l'auteur à exposer ses conceptions sur l'évolution paléogéographique de la Basse Provence au Crétacé supérieur et sur la notion de formation à Rudistes.^1";
- 1652 s[1649] = "CAMOIN G., PHILIP J., BERNET-ROLLANDE M.C. (1983).- Stratigraphie et Paleobiogéographie des récifs à Rudistes du Sénonien supérieur du Sud-Est de la Sicile. Relations avec le volcanisme sous-marin.- Comptes Rendus [???] 296, II: 1093-1096; Paris.- FC&P 13-2, p. 15, ID=6360^Topic(s): reefs rudist; rudist buildups; Systematics: Mollusca; Stratigraphy: Cretaceous Seno; Geography: Italy, Sicily^^1";
- 1653 s[1650] = "MASSE J.P. (1980).- Les constructions a Cnidaires des Calcaires Urgoniens (Barremien) de Provence et leur environnement.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 85-97.- FC&P 9-2, p. 13,

- ID=5865^Topic(s): reefs; reefs, Cnidaria; Systematics: Cnidaria; Stratigraphy: Cretaceous Barr; Geography: France, Provence^^1";
- 1654 s [1651] = "TURNSEK D., MIHAJLOVIC M. (1981).- Lower Cretaceous Cnidarians from eastern Serbia.- Slovenska Akad. Znanosti in Umetnosti 4, 23: 1-54.- FC&P 10-2, p. 76, ID=6103^Topic(s): taxonomy; Cnidaria; Systematics: Cnidaria; Stratigraphy: Cretaceous L; Geography: Serbia^[many species of corals are described; two species of stromatoporoids, Milleporidium variocellatum and Dehornella virgilioi are described and illustrated; also described and illustrated is the chaetetid Chaetetopsis krimholzi]^1";
- 1655 s [1652] = "TRONCHETTI G., CAMOIN G. (1986).- Foraminifères et Rudistes du Campanien de la région de Priolo (Sicile sud-orientale). Biostratigraphie et paléoenvironnements.- Cahiers de Micropaléontologie 1, 1-2: 67-75.- FC&P 16-1, p. 15, ID=6758^Topic(s): forams, rudists; Systematics: Foraminifera; Stratigraphy: Cretaceous Camp; Geography: Italy, Sicily^^1";
- 1656 s [1653] = "HOFLING R. (1985).- Faziesverteilung und Fossilvergesellschaftungen im karbonatischen Flachwasser-Milieu der alpinen Oberkreide.- Muenchner geowissenschaftliche Abhandlungen 3: 1-241.- FC&P 15-1.2, p. 9, ID=0847^Topic(s): reefs, facies, biota; reefs, carbonates; Systematics: ; Stratigraphy: Cretaceous Sant; Geography: Alps^Includes a description of a hippuritid barrier reef and of scleractinian assemblages in adjacent lagoonal environments (Upper Cretaceous, Santonian).^1";
- 1657 s [1654] = "SANDERS D., BARON-SZABO R.C. (2003).- Cretaceous bioconstructions and coral-dominated assemblages in relation to depositional environments, Eastern Alps.- Fossil Reefs of Austria [W. Piller & B. Hubmann (eds); Schriftenreihe der Erdwissenschaftlichen Kommissionen (Österreichische Akademie der Wissenschaften)]: ??? vol pp ???.- FC&P 33-2, p. 36, ID=1173^Topic(s): reefs, overview; reefs; Systematics: ; Stratigraphy: Cretaceous; Geography: Alps E^During Cretaceous times, in the area of the future Eastern Alps, bioconstructions with corals flourished in pure carbonate and mixed clastic-carbonate environments, each with a distinct coral assemblage. In the early Aptian, on the Helvetic carbonate shelf, coral-sponge biostromes and mounds with a coral assemblage accumulated that is diversified with respect to corallite size, growth forms, polyp integration and taxa. These assemblages grew in clear, well-lit waters of moderate energy. Episodic, destructive high-energy events kept the assemblage at diversification level. The coral fauna is similar to faunas from other locations along the northern, European margin of Neo-Tethys .In the Austroalpine domain, subsequent to a phase of nappe stacking and emergence, upon middle Turonian to early Campanian transgression, deposition in mixed siliciclastic-carbonate environments prevailed. The resulting succession, the Gosau Group, contains abundant corals in a pure coral buildup, in coral/rudist mounds, and in coral-rudist level-bottoms. The corals grew under episodic stress from sediment-nutrient input. Widespread red algal encrustation indicates transient takeover of macroalgae. In mounds and level-bottoms, the coral assemblage records sedimentation and lowered light incidence by prevalence of taxa with large polyparia of plocoid, thamnasterioid orcerioid integration, and of (sub)hemispherical, foliose-lamellar and pedestal-shaped growth form; these features aid in sediment removal and/or maximize light catchment. Coral diversity ranges from 16 species in a pure coral buildup to 29 in coral-rudist mounds, and peaks at 36 species in level-bottoms within &coral marls&; with abundant, diverse solitary forms. Each coral assemblage is dominated by a few &ubiquists&. The coral fauna shares species with faunas mainly from France, Spain and Slovenia, but to a part was endemic at

least to the area of the future Eastern Alps. The coral-dominated assemblages of the Gosau Group highlight that corals can grow under low to moderately high, medium to long-term terrestrial input of siliciclastics and particulate organic matter. Fossil coral assemblages subject to sediment/nutrient stress show a range of geologically reconcilable features closely similar to Holocene "turbid-water reefs".^1";

- 1658 s[1655] = "SCHOLZ H. (1984).- Bioherme und Biostrome im Allgauer Schraffenkalk (Helvetikum, Unterkreide).- Jahrb. Geol. B.-A. 127, 3: 171-199 [in German, with English summary].- FC&P 16-2, p. 27, ID=2065^Topic(s): Urgon facies; reefs; Systematics: ; Stratigraphy: Cretaceous Apt; Geography: Switzerland^[patch-reefs and biostromes. Aptian (Urgon facies); framebuilders in patch-reefs: corals, stromatopores, chaetetids; framebuilders in biostromes: rudists; gives list of framebuilders, some species are figured]^1";
- 1659 s[1656] = "MONTY C.L.V., CAMOIN G, MAURIN A.F. (1987).- Microbial micritic encrustations and sparitic cements in Aptian mounds, Cefalu (Sicily).- Terra Cognita 7, 2-3 [E.U.G. IV Strasbourg]: 206.- FC&P 17-1, p. 10, ID=2097^Topic(s): carbonates microbial; microbial encrusters; Systematics: ; Stratigraphy: Cretaceous Apt; Geography: Italy, Sicily^^1";
- 1660 s[1657] = "BAUSCH W.M. (1996).- Noncarbonates as Controlling Factor in Reef Growth and as a Tool in Reef Stratigraphy (Examples from the Upper Jurassic of Southern Germany).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 34, ID=3592^Topic(s): reef growth, noncarbonate sediments; reefs noncarbonates; Systematics: ; Stratigraphy: Cretaceous Alb?; Geography: Germany, Swabia^In bedded limestones of the middle Swabian Alb was developed a mineralostratigraphy which allows to subdivide reef complexes, where paleontological methods fail. The results are compatible with other ones from the western Swabian Alb (Schweizer 1996). The reliability of this mineralostratigraphy therefore is established for distances of (at least) 100 km laterally.^1";
- 1661 s[1658] = "SCHOLLHORN E. (1997).- Biofacies with corals and rudists on a Aptian carbonate ramp of the Southern Pyrenees in the Segre Valley.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 241-247.- FC&P 26-2, p. 30, ID=3716^Topic(s): carbonate platforms; carbonate ramp; Systematics: ; Stratigraphy: Cretaceous Apt; Geography: Spain, Pyrenees^Sediments of Upper Aptian age are located in the central Catalan Pyrenees. Investigations were based on the associations of corals and rudists that evolved on a carbonate ramp (Read 1985). These bioconstructions were basically controlled by local influences, rather than by global processes. * The associations of corals and rudists show a clear distribution in the middle to upper parts of the ramp. Corals occur in the middle part of the inner ramp in a highly diverse species assemblage. Rudists grow in the shallowest part of the inner ramp, in parts of the transition with rapid changes in sedimentation, corals and rudists form a mixed assemblage.^1";
- 1662 s[1659] = "CSASZAR G., TURNSEK D. (1996).- Vestiges of atoll-like formations in the Lower Cretaceous of the Mecsek Mountains, Hungary.- Cretaceous Research 17: 419-442.- FC&P 28-1, p. 41, ID=3971^Topic(s): reefs atolls; reefs, atolls; Systematics: ; Stratigraphy: Cretaceous L; Geography: Hungary^Macro- and microfossils and microfacies of a few Lower Cretaceous sections in the Mecsek Mountains have been studied. Twenty five species of corals are reported for the time from the Hungarian Cretaceous. Fossils derived from the carbonate platform are often found together with those of pelagic origin and monomictic volcanoclastics,

indicating a special sedimentary environment. Based on this study the following model is proposed for the Early Cretaceous geological history of the Mecsek Mountains: instead of overall uplift and erosion giant basalt volcanoes grew above sea level until the Valanginian, whilst bathyal conditions were preserved between them. The volcanoes were bordered by gravel beaches, then sandy and silty lagoons, and the edges of submarine slopes were crowned by atoll-type build-ups. Fossils and rocks of different environments were transported down the slopes of the volcanoes and mixed. As a result of widespread erosion during the Late Cretaceous or Palaeogene only the basal parts of a few volcanoes are preserved.^1";

- 1663 s[1660] = "RAEDER M. (1994).- Der Grenzbereich Unter-/Oberkreide im Helikon, Griechenland. Mikrofazies, Biostratigraphie, Palaeogeographie und Palaeoökologie.- University of Cologne, [unpublished?] Diss.; 146 pp., 16 pls.; Koeln. [in German].- FC&P 23-2.1, p. 72, ID=4443^Topic(s): microfacies, stratigraphy, ecology; geology paleontology; Systematics: ; Stratigraphy: Cretaceous L / M; Geography: Greece, Helikon Mts^The Cretaceous sediments of the Helikon Mountains (Greece) are investigated in their microfacies, biostratigraphy, palaeogeography and palaeoecology. A detailed description of the orbitolines is given. The occurrence of reef corals in the Evangelistria sediments (Barremian - Cenomanian) is reported.^1";
- 1664 s[1661] = "PHILIP J. (1980).- Cretace superieur de Provence.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 99-109.- FC&P 9-2, p. 13, ID=5866^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Cretaceous U; Geography: France, Provence^^1";
- 1665 s[1662] = "PHILIP J. (1984).- Récifs du Crétacé supérieur du Sud-Est de la France (sommaire).- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 14.1.- FC&P 13-1, p. 11, ID=6327^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Cretaceous U; Geography: France SE^Dans le Sud-Est de la France (Provence) les formations à rudistes connaissent six périodes de développement majeur: Albien supérieur, Cénomanién moyen, Cénomanién supérieur, Turonien supérieur, Coniacien, Santonien. * Les formations à rudistes se développent sur des zones hautes (bordure du bombement durancien, rides localisées) échappant à la sédimentation terrigène liée à l'érosion de blocs cristallins bordant au sud le domaine provençal. [fragment of a short note]^1";
- 1666 s[1663] = "CAMOIN G. (1983).- Plates-formes carbonatées et récifs à Rudistes du Crétacé de Sicile.- Trav. Lab. Géol. Hist. et Pal., Univ. de Marseille, 13: 256 pp., 62 figs, 24 + 3 pls.- FC&P 13-2, p. 15, ID=6359^Topic(s): carbonate platforms; carbonates, rudists; Systematics: ; Stratigraphy: Cretaceous; Geography: Italy, Sicily^^1";
- 1667 s[1664] = "CAMOIN G., TRONCHETTI G. (1987).- Mise en évidence de phénomènes de resédimentation dans l'Albo-Cénomanién de la région de Collesano-Buonfornello (Sicile septentrionale).- Cahiers de Micropaléontologie 2, 1: 85-93.- FC&P 16-1, p. 15, ID=6759^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Cretaceous Alb - Cen; Geography: Italy, Sicily^^1";
- 1668 s[1665] = "BASSIAS J., SALOMON.D., JAKOBSHAGEN V. (1987).- Upper Cretaceous fossils from the Plattenkalk series of the Parnon (Peloponnesus, Greece).- N. Jb. Geol. Paläont. Mh. 1987, 8: 449-466.- FC&P 18-1, p. 14, ID=6774^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Cretaceous U; Geography: Greece^^1";
- 1669 s[1666] = "MASSE J.P., UCHMAN A. (1997).- New biostratigraphic data on the Early Cretaceous platform carbonates of the Tatra Mountains, Western Carpathians, Poland.- Cretaceous Research 18, 5: 713-729.-

- FC&P 29-1, p. 39, ID=7021^Topic(s): geology, reefs; geology, reefs; Systematics: ; Stratigraphy: Cretaceous L; Geography: Poland, Tatra Mts^The biostratigraphy of platform carbonates outcropping in the Polish Tatra Mountains is reappraised after a study of three sections located in the autochthonous (including the wysoka Turnia type section for Urgonian limestones) and allochthonous tectonic units. Age assignments are mainly based on calcareous algae, benthic foraminifera and rudists. Heterochrony of coral-rudist facies and their associated bioclastic and orbitolinid facies shows that the platform development and demise occurred at different times in different places. Regional tectonic processes are recognized as the dominant factors of these phenomena. The majority of foraminifera as well as rudists are considered cosmopolitan whereas some dasyclads could be potential palaeobiogeographic markers of the Preapulian Domain. [original abstract]^1";
- 1670 s[1667] = "TRABOLD G.L. (1996).- Development of the Urgonian limestones in the Delphino Helvetic realm (Northern subalpine chains, Haute-Savoie, France).- Publications du Department de Géologie et Paleontologie, Universite de Geneve 20: I-XIV + 1-185; Geneve.- FC&P 29-1, p. 40, ID=7028^Topic(s): reefs; reefs Urgonian; Systematics: ; Stratigraphy: Cretaceous L; Geography: France, Haute-Savoie^^1";
- 1671 s[1668] = "ELIASOVA H. (1991).- Quelques Scleractiniaires de la Slovaquie (Cretace et Paleogene, Tchechoslovaquie).- Zapadne Karpaty, seria paleontologia 15: 49-55.- FC&P 21-2, p. 39, ID=3327^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous - Paleogene; Geography: Slovakia^Four corals are described from the Cretaceous and Lower Tertiary of different localities in Slovakia (CSFR): Rhabdophylliopsis thomkai n.sp., Liptodendron grossi n.g., n.sp., Astraraea roberti n.sp. and Caryophyllia sp.^1";
- 1672 s[1669] = "KORDE K.B. (1975).- Cretaceous and Paleocene Hydroconozoa from the Crimea.- In Evolution and change of organic kingdom at the Mesozoic-Cenozoic Boundary: 32-38; Nauka, Moskva.- FC&P 4-2, p. 52, ID=5241^Topic(s): ; Hydroconozoa; Systematics: problematica; Stratigraphy: Cretaceous - Paleocene; Geography: Ukraine, Crimea^^1";
- 1673 s[1670] = "OGORELEC B., DOLENEC T., DROBNE K. (2007).- Cretaceous-Tertiary boundary problem on shallow carbonate platform: Carbon and oxygen excursions, biota and microfacies at the K/T boundary sections Dolenja vas and Sopada in SW Slovenia, Adria CP.- Palaeogeography, Palaeoclimatology, Palaeoecology 255, 1-2: 64-76.- FC&P 35, p. 111, ID=2445^Topic(s): stable isotopes; geology fossils; Systematics: ; Stratigraphy: Cretaceous / Paleogene; Geography: Slovenia SW^An integrated sedimentological, magnetostratigraphic, and paleontological study of the vallcebre section (south eastern Pyrenees, Spain) is carried out in order to define and portray the transition from the Cretaceous to the Tertiary in a continental setting. A robust magnetostratigraphy is correlated to the standard polarity scale in light of known biochronological constraints (charophyte, marine invertebrates, eggshells and other dinosaur remains). Our results show that this section is among the thickest stratigraphic records for the continental Maastrichtian in the Old World. Sedimentology indicates a progressive regression from marine through lagoonal to entirely continental environments. The section is dominated by mudstones deposited under low energy conditions. Exceptionally, a basin-wide regression maximum is recorded some time before the Cretaceous-Tertiary boundary (K/T). This regression maximum is marked by the input of coarse-grained (alluvial) sediments that record a dramatic change in the landscape (quiet mud plains changed to sandy floodplains deposited by high-energy currents). After a period of renewed quiescence following the regression maximum, a Cenozoic flooding took place. Such terminal Cretaceous sequence of

events has been recorded in shorter sections in several other basins from southwestern Europe. This energetic sediment input suggests that some time before the K/T event, a sudden paleoenvironmental reorganization took place in the continental basins of south western Europe.¹";

- 1674 s[1671] = "HOFLING R., MOUSSAVIAN E., GOTZ S. (1996).- Development of Cretaceous and Paleogene Reef Communities in the Alpine-Mediterranean Realm - Selected Case Studies.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 33, ID=3588Topic(s): reef communities, history; reef communities; Systematics: ; Stratigraphy: Cretaceous - Paleogene; Geography: Alpine-Mediterranean RealmThe studies of selected Cretaceous and Paleogene bioconstructions of the Alpine-Mediterranean realm show a dominance of simple and complex dendriform rudist biostromes since Albian times, especially mono- and paucispecific monopleurid, caprinid and radiolitid biostromes until the Turonian, radiolitid / hippuritid biostromes in the Late Cretaceous. They occurred in internal as well as external carbonate platform areas, sometimes in open subtidal environments. Rare rudist bioherms are limited to transgressive sequences. Massive-nodular coral-stromatoporoid-dominant bioherms and biostromes of outer and internal platform and carbonate ramp areas are characteristic for the Valanginian-Aptian time interval. Rudist-dominated reef mounds can be found frequently in Aptian-Albian and Coniacian-Campanian sequences. In the Paleogene corallinacean-dominated coral bioconstructions are numerous. Mainly tectonically controlled regional sealevel changes directed the reef growth in the Alpine realm whereas high-frequency sealevel fluctuations were responsible for the development of most of the Mediterranean platform-based bioconstructions.Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas - Miocene; Geography: AustriaThis is the first review and compilation of Austrian scleractinian corals from the K/T-boundary to the Miocene. The Austrian corals of the K/T-boundary (here defined as the period MiddleCampanian-Upper Paleocene) show closest affinities to forms that are typical of the UpperCretaceous, especially taxa of the Turonian-Lower Campanian strata of the Gosau Group. A firstmajor transition in the faunal composition took place during the late Paleocene. When the 'typicalCretaceous forms' (e.g., Heterocoenia, Paraplococoenia, Calamophylliopsis) disappeared and thefirst species of modern genera (e.g., Astreopora, Acropora, Goniastrea, Alveopora) appeared; allspecies of the latter vanished during the Eocene together with all genera which are characteristic ofthe Eocene-Oligocene period (Stylocoenia and Pattalophyllia) in other geographic areas. With thebeginning of the Miocene another significant change of the Austrian coral fauna was observed dueto the occurrence of both numerous solitary taxa (e.g., Caryophyllia, Deltocyathus, Discotrochus, and Flabellum) as well as colonial hermatypic genera (e.g., Porites and Tarbellastraea).Topic(s): ; Anthozoa reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: Italy, Liguria1 km south of Cairo Montenotte, a small fringing reef in limestone facies was formed in terrigenous sediments during the Oligocene transgression. It has a thickness of 40-60m. The lower part consists of terrigenous-influenced to pure limestone and contains isolated corals,
- 1675 s[1672] = "BARON-SZABO R.C. (2004).- Austrian scleractinian corals from the K/T-boundary to the Miocene.- Berichte des Instituts für Erdwissenschaften Karl-Franzens-Universität Graz 9: 63-66.- FC&P 33-2, p. 25, ID=1139Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas - Miocene; Geography: AustriaThis is the first review and compilation of Austrian scleractinian corals from the K/T-boundary to the Miocene. The Austrian corals of the K/T-boundary (here defined as the period MiddleCampanian-Upper Paleocene) show closest affinities to forms that are typical of the UpperCretaceous, especially taxa of the Turonian-Lower Campanian strata of the Gosau Group. A firstmajor transition in the faunal composition took place during the late Paleocene. When the 'typicalCretaceous forms' (e.g., Heterocoenia, Paraplococoenia, Calamophylliopsis) disappeared and thefirst species of modern genera (e.g., Astreopora, Acropora, Goniastrea, Alveopora) appeared; allspecies of the latter vanished during the Eocene together with all genera which are characteristic ofthe Eocene-Oligocene period (Stylocoenia and Pattalophyllia) in other geographic areas. With thebeginning of the Miocene another significant change of the Austrian coral fauna was observed dueto the occurrence of both numerous solitary taxa (e.g., Caryophyllia, Deltocyathus, Discotrochus, and Flabellum) as well as colonial hermatypic genera (e.g., Porites and Tarbellastraea).Topic(s): ; Anthozoa reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: Italy, Liguria1 km south of Cairo Montenotte, a small fringing reef in limestone facies was formed in terrigenous sediments during the Oligocene transgression. It has a thickness of 40-60m. The lower part consists of terrigenous-influenced to pure limestone and contains isolated corals,
- 1676 s[1673] = "PFISTER T. (1985).- Coral Fauna and Facies of the Oligocene Fringing Reef near Cairo Montenotte (Liguria, Northern Italy).- Facies 13: 175-226.- FC&P 15-1.2, p. 38, ID=0834Topic(s): ; Anthozoa reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: Italy, Liguria1 km south of Cairo Montenotte, a small fringing reef in limestone facies was formed in terrigenous sediments during the Oligocene transgression. It has a thickness of 40-60m. The lower part consists of terrigenous-influenced to pure limestone and contains isolated corals,

or concentrations of massive corals in coral mounds. The upper part is principally characterized by a dense framework of massive, sometimes branching corals. The coral fauna consists of 27 species, dominated by *Goniopora ramosa* or *Actinacis rollei*. 23 species were found on the reef front, non of which predominate. The reef tapers off in various directions in small units of reef limestone and biocalcarenite. The coral fauna and the reef facies are studied in detail. The vertical development of the coral limestones and lateral variations in the reef core, as well as the distal facies, are described. The corals are identified and the general character of corals and reef framework investigated. Communities and palaeoecological relations are described.¹¹;

- 1677 s[1674] = "BOSELINI F.R., PAPAZZONI C.A. (2003).- Palaeoecological significance of coral-encrusting foraminiferan associations: A case-study from the Upper Eocene of northern Italy.- *Acta Palaeontologica Polonica* 48, 2: 279-292.- FC&P 32-2, p. 52, ID=1410^Topic(s): ecology; Anthozoa Forams; Systematics: Cnidaria; Anthozoa; Stratigraphy: Eocene; Geography: Italy N^Encrusting foraminiferans, although representing an important component of the so-called cryptic assemblages in both modern and ancient reef environments, are in general poorly described and little is known as regards their association with corals. In this paper, we describe coral-encrusting foraminiferan associations in the different facies that characterize the shallowing upward parasequences of the Nago Limestone (Upper Eocene, Trentino, northern Italy). From a relatively deep reef slope up to the shallow shelf-edge, corals have been recognized to be encrust4ed by different types of foraminiferan assemblages that differ on the basis of relative abundance of species, growth form and different type of encrusted coral surface. The succession of encrusting foraminiferan assemblages is interpreted as controlled mainly by light, competition with coralline algae, hydrodynamic energy, and coral growth fabric.¹¹;
- 1678 s[1675] = "BOSELINI F.R., TREVISANI E. (1992).- Coral facies and cyclicity in the Castelgomberto Limestone (Early Oligocene, Eastern Lessini Mountains, Northern Italy).- *Rivista Italiana di Paleontologia e Stratigrafia* 98, 3: 339-352.- FC&P 22-1, p. 50, ID=3422^Topic(s): coral facies; coral facies; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene Rup; Geography: Italy N^The Castelgomberto Limestone is a 200m thick unit of Early Oligocene age (Rupelian) outcropping in the Eastern Lessini Mountains (Southern Alps of Northern Italy). The internal cyclic organization of this Oligocene unit is described and analyzed on the basis of four selected sections; about thirteen well-bedded grainstone units alternate with marly horizons rich in corals. This peculiar cyclicity is here interpreted as a response to variation in platform hydrodynamics, i.e. to smaller eustatic fluctuations affecting the Lessini Shelf reef-lagoonal complex. During highstand periods, the shelf was open and relatively deep (20-50 m), and tidal currents and periodic storms were able to distribute bioclastic sands (bars, sand waves and spillovers). During lowstand the shelf was more protected by the occurrence of marginal reefs and was colonized by patches of poritid corals, mainly branching. Moreover, the largely exposed northern areas supplied fine detritus to the shelf itself.¹¹;
- 1679 s[1676] = "HENDRY J.P., TABERNER.C., MARSHALL J.D., PEERRE C., CAREY P.F. (1999).- Coral reef diagenesis records pore-fluid evolution and paleohydrology of a siliciclastic basin margin succession (Eocene South Pyrenean foreland basin, northeastern Spain).- *Bulletin geological Society of America* Ill, 3: 395-411.- FC&P 28-2, p. 45, ID=4041^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Eocene; Geography: Spain, Pyrenean Foreland^An integrated field, petrographic, and geochemical study has determined the fluid-rock interaction history in part of an Eocene reef complex on the margins of

the siliciclastic-dominated Catalan sector of the South Pyrenean foreland basin. Results show that at least four distinct fluid systems influenced the basin margin, and demonstrate the sensitivity of reef rocks as paleohydrological archives in siliciclastic environments. The earliest calcite cements precipitated from meteoric waters at shallow burial depths, and mineralogical stabilization of reef carbonate was mostly completed during this episode. Textural and isotopic trends typical of paleoexposure surfaces are lacking, and trace elements results suggest that meteoric waters were transmitted laterally and/or upward into the reef via delta-lobe sandstone aquifers. The distribution of late cements is highly variable and fracture-fed, demonstrating the importance of deformation in controlling fluid flow subsequent to reef lithification. Isotopic and elemental compositions of burial calcites, plus their paragenetic association with barite and dolomite, show that fluids of marine parentage were expelled from compacting.¹¹;

- 1680 s[1677] = "BOSELINI F.R., RUSSO A. (1994).- Coral facies across an Oligocene fringing reef (Salento Peninsula, Southern Italy).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 261-264.- FC&P 23-1.1, p. 21, ID=4082^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: Italy S^A well-exposed Middle Chattian fringing reef complex outcropping for at least 40 km along the coastline of the Salento Peninsula (Southern Italy) is here described, contributing to a better knowledge of the evolution of Oligocene reefs in Italy and in the Mediterranean area. The fringing reef complex is represented by the Castro Limestone, an unconformity-bounded depositional sequence mantling a tectonically deformed "falaise" of Cretaceous-Eocene rocks. Stratigraphic and sedimentological features, together with paleontological characters, allow recognition of a virtually complete range of reef tract environments. Different geomorphic zones and associated coral facies, from "back reef to fore reef, are here described.¹¹;
- 1681 s[1678] = "RAMOS-GUERRERO E., BUSQUETS P., ALVAREZ PEREZ G. (1990).- Fauna coralina de las plataformas mixtas del paleogeno de las Baleares.- Boletino Soc. Nat. Baleares 33: 9-24.- FC&P 23-1.1, p. 77, ID=4172^Topic(s): taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleogene; Geography: Spain, Baleares^A systematic study of the Paleogene coral fauna in the Balearic Island has yielded 23 species of 20 genera, which are mostly recorded for the first time from this region. The faunal association is comparable to those from northern Italy, Bosnia/Herzegovina and the Ebro basin.¹¹;
- 1682 s[1679] = "BOSELINI F.R., PERRIN C. (1994).- The coral fauna of Vitigliano: qualitative and quantitative analysis in a back reef environment (Castro Limestone, Late Oligocene, Salento Peninsula, Southern Italy).- Bolletino della Societa Paleontologica Italiana 33, 2: 171-181.- FC&P 24-1, p. 54, ID=4460^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene Chatt; Geography: Italy S^The Castro Limestone, Middle Chattian in age, consists of various reef facies and has been described as a fringing reef complex developed along the Cretaceous-Eocene rocky coast of the Salento Peninsula. The reef facies outcropping near Vitigliano and the associated coral fauna, which have been previously interpreted to be part of a back reef subenvironment, are here defined both qualitatively and quantitatively. Together with palaeontological and sedimentological observations, three main quantitative methods have been used for the characterization of the back reef facies: 1) count of coral colonies on a subvertical measured surface, 2) line-transect, 3) quadrat. The composition of the coral was identified in the field mainly at the generic level and

- abundance of different genera has been analyzed. The results obtained from the various quantitative methods were compared and discussed. Moreover, the coral density has been quantified from both linear and area measurements and has been evaluated to be around 20%. However, corals occur as scattered colonies and do not form a true framework.¹¹;
- 1683 s[1680] = "PFISTER T. (1980).- Systematische und palaeontologische Untersuchungen an oligozänen Korallen der Umgebung von San Luca (Provinz Vicenza, Norditalien). [in German, with English summary].- Schweiz. palaeont. Abh. 103: 121 pp., 19 figs, 15 pls; Basel.- FC&P 10-1, p. 54, ID=5996Topic(s): systematics; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: Italy NThe Oligocene of the Marosticano features corals at three levels: at the Crosara level of lower Oligocene, outcropping only in a very restricted area, at the San Luca and the Floriano levels, probably middle Oligocene, that can be followed through the whole Marosticano. [...] In the systematic part of the present thesis, 35 species of corals are described in detail and figured. Special attention is given to synonymy and intraspecific variation. [fragments of extensive summary]¹¹;
- 1684 s[1681] = "PFISTER T. (1984).- Bioconstructions oligocènes à coraux de l''Italie du Nord.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 15.1-15.28.- FC&P 13-1, p. 11, ID=6328Topic(s): reefs; coral bioconstructions; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: Italy NEn Italie du nord des bioconstructions à coraux d'âge oligocène se rencontrent surtout en deux régions: au Vicentin et aux confins liguro-piémontais. Les deux localités faisaient partie de la même mer qui occupait l'emplacement de la plaine padane actuelle. Ces bioconstructions se formaient près de la côte des Alpes et de l'Apennin en cours de surrection. [introductory note]¹¹;
- 1685 s[1682] = "FRAVEGA P., PIAZZA M., STOCKAR R., VANNUCCI G. (1994).- Oligocene coral and algal reef and related facies of Valzemola (Savona, NW Italy).- Rivista Italiana di Paleontologia e Stratigrafia 100, 1: 423-456.- FC&P 24-1, p. 84, ID=4519Topic(s): reefs; reefs; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Oligocene; Geography: Italy NWThe terrigenous and carbonate sediments of the transgressive Oligocene cycle of the Tertiary Piedmont Basin outcropping in the area of Valzemola (Savona, western Liguria, Northwest Italy) and which are referable to the Molare Formation are analysed. The terrigenous sequence, represented by breccias, conglomerates and sandstones, overlies with an angular unconformity dolomitic or calcareous-dolomitic lithologies referable to the San Pietro dei Monti Dolomite Formation. These sequences are locally characterized by rich associations of coralline algae and corals, which by providing a stable substrate allowed the development of a true reef buildup. Subsequently the bioherm was suffocated by fluvial sandstone and conglomerate. This may be associated with an intensification in the amount of terrigenous material being brought into the basin. A progressive shallowing continues until the introduction of conditions suitable for calcareous deposition in an intertidal or supratidal environment. The analysis of this reef deposit was carried out by examining seven stratigraphic sections. The paleoecological study of the coral fauna and the algal assemblage, the latter characterized by the significant presence either of the genus Lithophyllum, or of Lithothamnion, allowed some hypothesis on the environmental conditions which characterized this sector during the Late Oligocene. Nine different facies could be shown, from those seven directly connected to the reef and two to nearshore environments proving a regressive phase. Facies I: conglomeratic-sandstone representing a stage of colonization in a dominantly terrigenous environment. Facies II: coral framestone, representing a stage of diversification ("an inner reef front"; near to the reef crest").Facies III: coral

- bafflestone representing a colonization stage in an inner reef slope; Facies IV: coral bindstone representing a stage of domination in a reef crest environment. Facies V: coral bindstone alternating with floatstone, gives evidence of a colonization stage in a carbonate environment. Facies VI: coral and algae floatstone, representing a facies of accumulated reef debris. Facies VII: coral rudstone, representing an accumulation facies comparable with that of the rubble pavement zone of the back reef. Facies VIII: conglomerates and sands of a shallow marine environment, represent a regressive sequence. Facies IX: massive limestones with undulated-zoned structures, rhizoliths, calcite veins and pisoliths, evidence of an intertidal or supratidal environment.¹¹;
- 1686 s[1683] = "MIHALY S., PETER V. (1984).- Ujabb paleoekologiai megfigyelesek a ganti közepsoeocéból [new paleoecological remarks concerning the Middle Eocene beds of the Bagolyhegy at Gant; in Hungarian].- Bulletin Hungarian [Geological?] Society 114: 263-283.- FC&P 14-1, p. 63, ID=1075^Topic(s): ecology; ecology; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: Eocene; Geography: Hungary^ [ecological observations suggesting interactions of living corals, gastropods and sponges in relatively turbulent, shallow-marine environment]¹¹;
- 1687 s[1684] = "CHERCHI A., SCHRODER R. (1988).- Ueber die wandstruktur von Septachaetetes eocenus (Demospongea) aus dem Eozän der spanischen Pyrenäen.- Senckenbergiana lethaea 68, 5/6: 321-335. [in German, with English summary].- FC&P 17-2, p. 35, ID=2196^Topic(s): wall structures; Porifera, Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Eocene; Geography: Spain, Pyrenees^New material of Septachaetetes eocenus Rios et Almela 1944 (Demospongea) from the Eocene of Samitier (Prov Huesca, Spanish Pyrenees) is being studied. The primary and diagenetic (lamellar) microstructures of the wall as well as the general morphology of the tubes of this species are identical with the corresponding characters of Acanthochaetetes seunesi Fischer 1970 (Albian - Cenomanian) and of the Recent Pacific acanthochaetetids. Therefore, Acanthochaetetes Fischer is regarded as a junior synonym of Septachaetetes. The Eocene genus Diplochaetetes Weissemel 1913 belongs to the Polychaeta sedentaria. Symbiotic serpulids within the skeleton of Septachaetetes eocenus are described.¹¹;
- 1688 s[1685] = "NEL A., GILL G.A., NURY D. (1987).- Decouverte d'empreintes attribuables a des Coelenteres Siphonophores chondrophorides dans l'oligocene de Provence [discovery of imprints assignable to Chondrophorid Coelenterate Siphonophores in the Oligocene of Provence].- C. R. Acad. Sc. Paris 305, ser. II: 637-641.- FC&P 18-1, p. 22, ID=2217^Topic(s): ; Hydrozoa, Siphonophora; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Oligocene; Geography: France, Provence^Medusa-like fossil imprints from the Oligocene basin of Provence, Southern France, are described. They assume the form of discs with radial crests, concentric wrinkles and peripheral lobes. It is proposed that they be assigned to a new genus: Discalioides (Coelenterata Siphonophorida, Chondrophorina).¹¹;
- 1689 s[1686] = "MIKUZ V. (2008).- [Eocene Gorgonacean coral remains from surroundings of Gracisce near Pazin, Istria].- Razprave Slovenska akademija znanosti in umetnosti 49, 2: 51-63, 1 pl.- FC&P 36, p. 111, ID=6544^Topic(s): ; Octocorallia Gorgonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Eocene; Geography: Slovenia, Istria¹¹;
- 1690 s[1687] = "SCHUSTER F. (2002).- Oligocene scleractinian corals from Doutsiko (Mesohellenic Basin, northwestern Greece).- Courier Forschungsinstitut Senckenberg 239: 83-127.- FC&P 33-2, p. 37, ID=1176^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Greece^The Mesohellenic Basin of northwestern Greece

is a molasse basin with thick sequences of predominantly terrigenous sedimentary rocks. Nevertheless, coral growth occurred during short periods in the Early and Late Oligocene: (1) a coral reef formed during the initial phase of basin subsidence on a palaeotopographic high, and (2) during a regressive stage in the Late Oligocene when shallow sublittoral conditions prevailed. The fauna of the coral reef is highly diverse (31 species / 25 genera) and is composed of massive dome-shaped, bulbous, branching, foliaceous, and solitary species. Like other Oligocene coral faunas from the central Mediterranean Tethys, the coral fauna is rich in members of the family Faviidae (Caulastraea, Favites, Hydnothophora, Leptoria, Montastraea) and Agariciidae (Cyathoseris, Leptoseris, Pavona). The second coral horizon is dominated by allochthonous branches of Acropora, massive growing colonies are associated and partly use these accumulations as substrate. These accumulations are interpreted as former densely growing thickets of lagoonal environments which were destroyed by storm events. Again, the most important genera are found in the family Faviidae (Agathiphyllia, Antiguastrea, Hydnothophora, Montastraea, Tarbellastraea). This study presents for the first time a comprehensive taxonomic study of Early and Late Oligocene corals from Greece. It is the first time that an Acropora dominated assemblage is reported from sedimentary sequences as old as the Late Oligocene. This study concentrates on the taxonomic description of the coral fauna.¹;

1691 s[1688] = "CAHUZAC B., CHAIX C. (1994).- La faune de coraux du Chattien de la Téoulere (Peyrehorade, Landes). Hommage a Léonard Lartigue.- Bulletin Soc. Borda 119, 436, 4: 463-484.- FC#038;P 34, p. 53, ID=1271Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene Chatt; Geography: France, Landes¹";

1692 s[1689] = "BOSSELINI F.R. (1998).- Diversity, composition and structure of Late Eocene shelf-edge coral associations (Nago Limestone, Northern Italy).- Facies 39, 1: 203-225.- FC#038;P 27-2, p. 43, ID=1474Topic(s): biocoenoses; Scleractinia, communities; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene U; Geography: Italy NDuring the Late Eocene, shelf-edge patch reefs developed on the western margin of the Lessini Shelf. The coral fauna, studied in the Nago Limestone type locality, is described and interpreted for the first time, and provides further data for better understanding of the generally poorly known Eocene reef communities. * Facies analysis was carried out across the shallowing upward succession that characterizes the well exposed type-section of the Nago Limestone. Four distinct facies are identified and a detailed qualitative-quantitative investigation has been applied to the coral-bearing facies in particular, in order to describe and quantify the distribution and palaeoecological zonation of corals. * By a comparison of sedimentological and palaeoecological data, it is possible to reconstruct a depositional model of the Nago Limestone at its type locality. In particular, the palaeoecological study clearly reveals that corals change with depth in taxonomic composition, in percentage and proportion within the framework and in growth form, allowing the definition of a relative depth coral zonation. * Three coral associations are recognized from the base to the top of the shallowing upward sequence. These differ from each other in the relative abundance of main reefbuilders, in the growth form exhibited by corals in growth position and in the density of the reef framework. These variations are interpreted as responses to major environmental controls which prevailed during the deposition of the different facies (mainly light intensity and hydrodynamic energy). * The coral species Actinacis rollei Reuss is the most abundant and ubiquitous coral of the Nago Limestone. Its adaptation to low-light levels is described here for the first time, confirming the high plasticity of this important Paleogene reef-builder. * The results of the present study are finally compared with data from other Middle-Late Eocene European

- reef sites and some common features are inferred. [original abstract]^1";
- 1693 s[1690] = "BOSELINI F.R., STEMANN T.A. (1996).- Autecological significance of growth form in the scleractinian *Actinacis rollei* Reuss (Oligocene, Lessini Mountains, Northern Italy).- *Bolletino della Societa Paleontologica Italiana*, Spec. vol. 3: 31-43.- FC&P 26-2, p. 70, ID=3749^Topic(s): ecology; Scleractinia, Actinacis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Italy N^The scleractinian coral *Actinacis* is an important component of reef communities from the Oligocene Lessini Shelf of Northern Italy. The coral-rich Castelgomberto Limestone of Rupelian age contains abundant *Actinacis* that occur as massive-laminar colonies or thin to thickly branched thickets. These two growth forms respectively dominate the coral assemblages in the alternating biocalcarenite and marly facies that compose the Castelgomberto Limestone. In the present study, we have used a combination of discriminant analysis and principal component analysis of corallite measurements to show that these two distinct colony morphs cannot be distinguished on the basis of corallite characteristics. Thus, the two growth forms represent a single species, *A. rollei*, with a colony shape that varied as an autoecological response to the differing environmental conditions that prevailed during deposition of the two facies. The massive to laminar growth form probably developed as a response to the unstable coarser-grained substrate and higher wave energies represented by the biocalcarenitic facies. The branched form is most probably adapted for coping with the large volume of fine grained sediment deposited in the quiet water, marly lagoonal environments of the Oligocene Lessini Shelf. Similar coral morphologies are found among modern corals in analogous reefal environments, although few living coral species possess a range of shape variation comparable to that of *A. rollei*. This plasticity of colony form could be partly responsible for *A. rollei* dominance in many Oligocene reef communities.^1";
- 1694 s[1691] = "BARTA-CALMUS S., ZLATARSKI V. (1971).- *Flabellum chevalieri* sp. n. et *Flabellum alloiteaui* sp. n., nouvelles espèces de Madréporaire du Priabonien de Bulgarie.- *Bulgarian Acad. of Sci., Committee of Geology* 20: 67-72.- FC&P 1-2, p. 20, ID=4671^Topic(s): taxonomy; Scleractinia, Flabellum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Bulgaria^^1";
- 1695 s[1692] = "BARTA-CALMUS S. (1973).- Revision des collections de madreporaires provenant du Nummulitique de la France du Sud-Ouest, de l'Italie et de la Yougoslavie Septentrionales.- *FC&P 2, 1*: 5-7.- FC&P 2-1, p. 5, ID=6268^Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleogene; Geography: Europe S^[travail de These de Doctorat d'Etat de France; resume par l'auteur]^1";
- 1696 s[1693] = "CHAIX C. (1999).- *Cahuzacopsammia meandrinoides* nov gen. et sp, dendrophylliid scleractinian coral from the Upper Oligocene of Aquitaine (France).- *Geobios* 32, 6: 805-813.- FC&P 29-1, p. 38, ID=7015^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene Chatt; Geography: France, Aquitaine^The study of numerous specimens of one species of scleractinian coral, outcropped within two Chattian (Upper Oligocene) localities of southern Aquitaine, showed an original set of morphological features leading to the definition of a new dendrophylliid genus, *Cahuzacopsammia*. The description of this form, made easy thanks to the very good preservation of the material, contains an approach of its variability and some aspects concerning its way of growth, by the mean of the study of this abundant population. *Cahuzacopsammia* seems to be the first-recorded meandroid Dendrophylliidae. This coral family contained so far several ploc- to ploc-meandroid genera, as well as 3 flabello-meandroid ones. This taxon is encountered in reef sediments, rich in macrofauna and large

benthic foraminifera (miogypsines, Nummulitidae, Lepidocyclines), that can be dated from the upper part of Chattian (about 24,5 My). The associated coral fauna is very diversified (85 species for Abesse outcrop and 52 for Estoti, mainly hermatypic ones). [original abstract]^1";

- 1697 s[1694] = "PLAZIAT J.C., PERRIN C. (1992).- Multikilometer-sized reefs built by Foraminifera (Solenomeris) from the early Eocene of the Pyrenean region (S. France, N. Spain). Palaeoecologic relations with coral reefs.- Palaeogeography, Palaeoclimatology, Palaeoecology 96, 3-4: 195-231.- FC&P 23-1.1, p. 11, ID=4056^Topic(s):reefs, foraminiferal; reefs; Systematics: Foraminifera; Stratigraphy: Eocene; Geography: Pyrenees^^1";
- 1698 s[1695] = "GEISTER J., UNGARO S. (1977).- The Oligocene coral formation of the Colli Berici (Vicenza, northern Italy).- Eclogae Geologicae Helvetiae 70, 3: 811-823.- FC&P 6-1, p. 29, ID=0095^Topic(s):reefs; reefs; Systematics: Stratigraphy: Oligocene; Geography: Italy, Vicenza^^1";
- 1699 s[1696] = "BOSSELINI F.R., RUSSO A. (1992).- Stratigraphy and Facies of an Oligocene Fringing Reef.- Facies 26: 145-166.- FC&P 21-2, p. 53, ID=3299^Topic(s):reefs, geology; reefs; Systematics: Stratigraphy: Oligocene; Geography: Italy s^The coastline of the Salento Peninsula (Apulia region, Southern Italy) is characterized by a rocky shore with spectacular cliffs where the investigated fringing reef complex, the so called Castro Limestone, spectacularly outcrops for at least 40km. As reconstructed from several measured sections, the Castro Limestone, which is Middle Chattian in age from our own data, disconformably mantles a tectonically deformed falaise of Cretaceous-Eocene rocks and is overlain by a remarkable erosional surface characterized by a very peculiar rhodolite rudstone. The Castro Limestone unit can be considered as a classic unconformity bounded depositional sequence representing, most probably, a shelf margin prograding complex, related to the major Middle Oligocene sea level lowstand. Stratigraphic and sedimentologic features, together with paleontological characters, allow recognition of a virtually complete range of reef environment across the reef profile. Several geomorphic zones and associated facies are described, from the most landward reef area ("back reef") across the reef flat and reef front downward to the fore reef slope, contributing to better knowledge of the evolution of Oligocene reefs and reef communities in Italy and in the Mediterranean area.^1";
- 1700 s[1697] = "DARGA R. (1992).- Geologie, Palaeontologie und Paleoekologie der sudostbayerischen unter-Priabonen (Ober-Eozan) Riffkalkvorkommen des Eisenrichtersteins bei Hallthurn (Noerdliche Kalkalpen) und des Kirchberges bei Neubeuern (Helvetikum).- Muenchner Geowiss. Abh. A23: 1-166.- FC&P 21-2, p. 54, ID=3352^Topic(s):reefs, geology; reefs; Systematics: Stratigraphy: Eocene Pria; Geography: Alps^Litho-, bio-, as well as paleocological analysis of two Lower Priobanian (Upper Eocene) reef complexes (Eisenrichterstein near Hallthurn, Northern Calcareous Alps and Kirchberg near Neubeuern, Helveticum) enable depositional reconstruction models to be established. Based on these analyses, significant deviation from previous models is suggested. The Eisenrichter complex, whose tectonic control has for the first time identified, constitutes rocks derived from a beach area (conglomerates), a lagoon (calcarenes), and a reef complex (coral limestones and associated rocks). The reef complex is characterized by distinctive bedding and the absence of a reef core. Consequently, the Eisenrichterstein complex can be regarded as a carbonate ramp. The coral limestones of Kirchberg are olistholithes. The Kirchberg quarry may, therefore, be considered as an olisthostrome exposure which is genetically related to the turbiditic Lithothamnium limestones of the Rohrdorf quarry. The geology of the southern margin of the Intrahelvetic High, from which the Kirchberg olisthostrome is derived, can be updated, due to data

gathered from the Kirchberg region and the accompanying olistholithes. The depositional model depicts a shelf rimmed with algal bioconstructions. The qualitative determination of fauna provided evidence of many different taxa (foraminifera, bivalves, gastropods, corals, bryozoans and echinoderms), which are treated in the second part. The corals *Stylocoenia polyostyla* n.sp., *Astreopora schedakena* n.sp., *Ewaldocoenia pollaplasia* n.sp., *Cyathoseris krepidoblata* n.sp. and the gastropod *Turritella caecisutilis* n.sp. have been newly described.¹¹;

1701 s[1698] = "VECSEI A., MOUSSAVIAN E., TURNSEK D. (1996).- Paleocene Reef Evolution on the Maiella Carbonate Platform (Italy).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke1 F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 32, ID=3587Topic(s): reefs, geohistory; reefs; Systematics: ; Stratigraphy: Paleocene; Geography: Italy, Maiella platform^The Maiella platform provides an example of the innovation and evolution of coral-algal reefs during the Paleocene. After the disappearance of rudist-dominated reefs around the Cretaceous / Tertiary (K/T) boundary, coral-algal reefs grew along the platform margin and top during two subsequent sealevel highstands in the Danian-Early Thanetian and Late Thanetian. The Danian-Early Thanetian reef communities are more diverse, and the constructional types more evolved than those previously known from this time. The Danian-Early Thanetian coral association differs from the Upper Thanetian association and from upper Cretaceous coral faunas, indicating that it represents a distinct evolutionary phase. Repeated emergence of the Danian-Early Thanetian reefs resulted in a complex diagenetic history. All these Paleocene reefs were displaced by gravitative redeposition.¹¹;

1702 s[1699] = "VECSEI A., MOUSSAVIAN E. (1997).- Paleocene Reefs on the Maiella Platform Margin, Italy: An Example of the Effects of the Cretaceous / Tertiary Boundary Events on Reefs and Carbonate Platforms.- Facies 36, 1: 123-140.- FC&P 26-1, p. 93, ID=3661Topic(s): reefs, facies, events; reefs; Systematics: ; Stratigraphy: Paleocene; Geography: Italy, Maiella platform^Reef facies, reef types and their biotic associations in the Maiella platform margin (central Italy) provide qualitative evidence for a significant reef decline across the Cretaceous / Tertiary (K/T) boundary, and indicate two phases of reef recovery during the Paleocene. Rudists dominated the reef community until the latest Cretaceous. A significant sea-level fall around the time of the K/T boundary is documented by a truncation surface associated with emersion. During sea-level highstands in the Danian to Early Thanetian and, more extensively, during the Late Thanetian, coral-algal patch-reefs grew along the platform margin and top. Already in the Danian to Early Thanetian, the reef communities were more diverse and the constructional types more evolved than previously known from this time. Differences between the Danian to Early Thanetian coral association, the Late Thanetian association, and Late Cretaceous coral faunas may have ecological or evolutionary causes. Repeated emergence produced a complex diagenetic history in the Danian to Lower Thanetian limestones. All Paleocene reefs were displaced by gravitative redeposition. Coral-algal reefs are less important in the Early to mid Eocene, when alveolinid foraminifera dominated on the Maiella shelf. Reefs on the Maiella platform diversified and attained large sizes in the Late Eocene to Early Oligocene, as known from other Mediterranean platforms. The external controls on the Late Cretaceous to Oligocene evolution and demise of reef communities that are most easily demonstrated with our data are sea level fluctuations and climate change. We propose that the change in reef biota and reef types across the K/T boundary and during the Early Tertiary were important causes of the parallel changes in platform growth style.¹¹;

- 1703 s[1700] = "SERRA J., BUSQUETS P., TRAVE A., MATO E., SAULA E., TOSQUELLA J., SAMSO J.M., FERRANDEZ C., BARNOLAS, ALVAREZ G., FRANQUES J., ROMERO J. (1997).- Marine and Transitional Middle / Upper Eocene Sediments of the South-Eastern Pyrenean Foreland Basin. Field Trip Guide.- 2nd Meeting of the IGCP 393 IUGS-UNESCO- Neritic Events at the Middle-Upper Eocene Boundary; 52pp; Barcelona.- FC&P 27-1, p. 10, ID=3785^Topic(s): facies, excursion guide; facies forams-corals; Systematics: ; Stratigraphy: Eocene M/U; Geography: Spain, Pyrenean Foreland^This Guidebook details the first results of the analysis of the relationship between the facies with Larger Foraminifera and Microforaminifera, and facies with corals. Within the latter, the nutrient content of the waters is analysed in terms of the Microforaminifera Communities and the diversity of coralline species. This work was undertaken by Jordi Franques as part of his Degree Thesis "Paleoecologic study of the la Triona Reef (Bartonian - Middle Eocene, Ebro basin - Vie area)" which was recently accepted by the University of Barcelona. These works will be published in greater depth in a forthcoming special edition of the magazine of the Facultat de Geologia (Universitat de Barcelona) and - Institute de Ciencies de la Tierra "Jaime Almera" (Consejo Superior de Investigaciones Cientifica) in Acta Geologica Hispanica.^1";
- 1704 s[1701] = "ALVAREZ G., BUSQUETS P., TABERNER C., URQUIOLA M.M. (1994).- Facies architecture and coral distribution in a mid Eocene reef tract, South Pyrenean Foreland Basin (NE Spain).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 249-259.- FC&P 23-1.1, p. 20, ID=4081^Topic(s): stratigraphy; reefs; Systematics: ; Stratigraphy: Eocene; Geography: Spain, Pyrenean Foreland^The La Trona reef tract (middle Eocene) formed on abandoned delta-lobe deposits of the delta complexes related to the northern margin of the South Pyrenean Foreland Basin. Facies architecture and distribution of coral genera allow one to interpret the reef environments and their evolution in space and time. The initiation of reef growth and the first stages of colonisation suggest formation during a sea-level rise, but the main phase of reef growth which brought about seaward progradation of the reef-framework above reef-talus deposits, occurred at stable high-stand sea level conditions.^1";
- 1705 s[1702] = "ALVAREZ PEREZ G., BUSQUETS P., VILAPLANA M., RAMOS-GUERRERO E. (1989).- Fauna coralina paleogena de las Islas Baleares (Mallorca y Cabrera), Espana (1).- Batailleria 3: 61-68.- FC&P 23-1.1, p. 73, ID=4156^Topic(s): taxonomy, ecology; reefs; Systematics: ; Stratigraphy: Paleogene; Geography: Spain, Baleares^Shallow mixed siliciclastic-carbonate platforms developed since the Middle Eocene to Lower Oligocene in the Balearic Islands. Coral patches and small patch-reefs developed here in a lagoon environment, not having yet found any evidence of the existence of a barrier-reef in the most distal counterparts. Maximum extent of the reef environment occurred during the Upper Priabonian and Lower Stampian. The study of corals yielded 23 species in 18 genera, most of these are reported for the first time in the Balearic Islands. The new species Acropora ramosi is described. ^1";
- 1706 s[1703] = "MARTINIUS A.W., MOLENAAR N. (1991).- A coral-mollusc (Goniaraea-Crassatella) dominated hardground community in a siliciclastic-carbonate sandstone (the Lower Eocene Roda Formation, Southern Pyrenees, Spain).- Palaios 06: 142-155.- FC&P 23-2.1, p. 32, ID=4226^Topic(s): hardground biocoenoses; hardground community; Systematics: ; Stratigraphy: Eocene L; Geography: Spain, Pyrenees^Provided sufficient time is available, hardground faunas may develop in mixed siliciclastic-carbonate sandy environments. The coral Goniaraea elegans and the bivalve Crassatella depressa are the dominant members of a Lower Eocene clastic hardground community, which developed on top of a

mixed siliciclastic-carbonate sandstone body. Sedimentological data indicate that the sandstone body was formed in a shallow marine, tidally influenced deltaic environment. Hardground formation was initiated by the development of an early carbonate fringe-cement, matrix infiltration and bioturbation. Initially, these processes caused the formation of cemented nodules. When clastic sedimentation ceased long enough, these nodules accreted into laterally continuous concretionary layers. In a few cases only, a pause in sedimentation lasted long enough for settlement of a typical hardground community. The latter hardgrounds can be easily recognized on the basis of paleontological criteria. This fauna is dominated by a *Goniaraea-Crassatella* assemblage; the associated fauna consists mainly of epifaunal or shallow infaunal species. Sponge boring in *C. depressa* valves has been intense and gives further evidence for a prolonged cessation of sedimentation in this shallow environment. The boulder shape of the hermatypic coral *Goniaraea elegans* is an ecomorph adaptation to slightly turbulent, but shallow and clear marine hard bottom environments.¹;

- 1707 s[1704] = "MOUSSAVIAN E., VECSEI A. (1995).- Paleocene reef sediments from the Maiella carbonate platform, Italy.- Facies 32: 213-222.- FC&P 24-2, p. 102, ID=4614Topic(s): reefs, sediments; reefs; Systematics: ; Stratigraphy: Paleocene; Geography: Italy, Maiella platform^Upper Cretaceous and Paleocene reef limestones from the Maiella carbonate platform show how reefs evolved during a time of faunal turn-over. Biostratigraphy and facies analysis of the reef limestones reveal the details of reef growth, composition, and age. Rudists disappeared as reef builders from the Maiella platform shortly before the Cretaceous / Tertiary boundary. Small coral-algal reefs became established in the Danian to Late Thanetian. These scleractinian-red algal dominated boundstones and framestones represent two periods of reef sedimentation and the subsequent interruption of reef growth by emersion and erosion, controlled primarily by fluctuations of relative sea-level. The coral-algal reefs evolved as the taxonomic composition of reef organisms changed. The Paleocene reef sediments are preserved as large slide blocks and as boulders redeposited from the shallow-water platform onto the slope during the course of the Paleocene.¹;
- 1708 s[1705] = "SAVAZZI E. (1982).- Commensalism between a boring mytilid bivalve and a soft bottom coral in the Upper Eocene of Northern Italy.- Paläontologische Zeitschrift 56, 3/4: 165-175.- FC&P 12-1, p. 44, ID=6187Topic(s): commensalism; bivalve coral commensalism; Systematics: ; Stratigraphy: Eocene; Geography: Italy ^The mytilid bivalve *Botula cordata* (Lamarck) from the Upper Eocene of the Venetian region, northern Italy, bored into live soft bottom corals, which reacted by forming a calcareous interseptal filling around the borehole. A chemical etching mechanism is inferred from the presence of "etch marks" on the borehole walls. The association with free-living corals capable of counteracting burial by sedimentation or accidental overturning enhanced the survival potential of the bivalve on the soft bottoms. Commensalism with soft bottom corals appears to have evolved convergently at least three times within the Mytilidae, but is unknown among other bivalves. [original summary]¹;
- 1709 s[1706] = "LOZOUET P., MOLODTSOVA T. (2008).- Filling a gap: The first occurrences of *Epiphaxum* (Cnidaria: Helioporacea: Lithotelestidae) in the Eocene, Oligocene and Miocene.- Palaeontology 51, 1: 241-250.- FC&P 36, p. 110, ID=6543Topic(s): history; Octocorallia *Epiphaxum*; Systematics: Cnidaria; Octocorallia; Stratigraphy: Eocene - Miocene; Geography: France, Aquitaine Basin^A new species of the genus *Epiphaxum* (family Lithotelestidae) is described and illustrated in detail, and compared to other species. *Epiphaxum arbuscula* sp.nov. has been collected from Upper Eocene (Priabonian), Upper Oligocene (Chattian) and Lower Miocene

(Upper Burdigalian) deposits of the Aquitaine Basin, south-west France. Epiphaxum is a poorly documented genus but its fossil record extends back to the Late Cretaceous; it was previously known only from the Paleocene (Danian). Epiphaxum arbuscula differs from all others species of the genus in the form of its colony. In contrast to the creeping colonies of previously known species, it has branched colonies. It is very common at one Upper Oligocene outcrop from which an assemblage with submarine cave remains has been described. A close relationship between the three extant species (two from the Caribbean Sea and one from the Indo-West Pacific region) and the Paleogene species is also noted. These constitute a group that has not undergone any important morphological changes for the last 65 million years. [original abstract]^1";

- 1710 s[1707] = "OOSTERBAAN A.F.F. (1990).- Notes on a Collection of Badenian (Middle Miocene) Corals from Hungary in the National Museum of Natural History at Leiden (The Netherlands).- Contr. Tert. Geol. 27, 1: 3-15. [in English, with Hungarian summary].- FC&P 19-2.1, p. 36, ID=2755^Topic(s): collections of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Miocene Bad; Geography: Hungary^Badenian corals from Hungary in the collection of the National Museum of Natural History at Leiden, The Netherlands, are systematically revised. Sixteen species belonging to 14 genera are recognized and briefly described herein. Palaeoecological notes are presented, together with data on the localities.^1";
- 1711 s[1708] = "SAINT-MARTIN J.-P., MULLER P., MOISETTE P., DULAI A. (2000).- Coral microbiolite environment in a Middle Miocene reef of Hungary.- Palaeogeography, Palaeoclimatology, Palaeoecology 160: 179-191.- FC&P 29-1, p. 66, ID=1514^Topic(s): reefs coral-microbialite, ecology; reefs ecology; Systematics: Cnidaria Monera; Anthozoa; Stratigraphy: Miocene M; Geography: Hungary^The presence of microbial crusts (microbiolites) is reported here for the first time from a Middle Miocene (Badenian) coral reef in Hungary. The succession of initiation and development of the microbial crusts is described in relation to the reef architecture. The main features of the palaeoenvironment are discussed., with focus on the associated invertebrate faunas, mostly corals, molluscs, bryozoans, and crabs. We conclude that the microbial crusts developed under normal marine conditions and were a significant contributor to reef framework development, including strengthening through calcification of the microbial organisms. Microbiolites are anticipated in other Early and Middle Miocene coral reef occurrences of the Mediterranean-Paratethys realm, and to date may have simply escaped positive recognition.^1";
- 1712 s[1709] = "BODERGAT A.M. (1975).- Ptychochaetetes (Varioparietes) resurgens nov. sp. (Cnidaria, Chaetetida) du Miocène du Burdigalien du bassin rhodanien (Miocène, France).- Géobios 8, 4: 291-301.- FC&P 4-2, p. 64, ID=5308^Topic(s): taxonomy; Chaetetida, Ptychochaetetes; Systematics: Porifera; Chaetetida; Stratigraphy: Miocene Burd; Geography: France, Rhodan Basin^Découverte dans le Miocène d'une nouvelle espèce de Chaetetida du genre Ptychochaetetes Koechlin 1947. Les organismes ont été récoltés dans le Burdigalien du Bassin rhodanien: dans le bassin de Valréas (Vaucluse) et dans l'Ain (Valromey). En plus des caractères normaux des Chaetetidae, en lame mince ont été observées une structure particulière et des sphères libres dans les tubes qui restent énigmatiques.^1";
- 1713 s[1710] = "CAHUZAC B., GAUTRET P. (1993).- Découverte, dans le Miocene inférieur des Landes (Bassin Aquitain, France) de constructions squelettiques flottantes attribuées aux Hydrozoaires et signalées pour la première fois dans le Cénozoïque français.- Comptes rendus Académie des Sciences 2, 316, 6: 853-860.- FC&P 34, p. 72, ID=1309^Topic(s): reefs hydrozoan; reefs, Hydrozoa;

- Systematics: Cnidaria; Hydrozoa; Stratigraphy: Miocene; Geography: France, Landes^^1";
- 1714 s[1711] = "KLEEMANN K. (2002).- Anthozoa und Hydrozoa aus dem Karpatium des Korneuburger Beckens (Untermiozaen; Österreich).- Beiträge zur Paläontologie 27: 275-279.- FC&P 33-2, p. 31, ID=1156^Topic(s): ; Hydrozoa, Anthozoa; Systematics: Cnidaria; Hydrozoa Anthozoa; Stratigraphy: Miocene Karp; Geography: Austria^^A few fragments of stony corals, representing either Scleractinia (Anthozoa) or Stylasterina (Hydrozoa) are described from the upper early Miocene (Karpatian) of the Korneuburg Basin north of Vienna, Austria.^1";
- 1715 s[1712] = "LANGER M. (1989).- Haftorgan, Internodien und Sklerite von Keratoisis melitensis (Goldfuss 1826) (Octocorallia) in den pliozaenen Foraminiferenmergeln ("Trubi") von Milazzo (Sizilien).- Paläontologische Zeitschrift 63, 1-2: 15-24.- FC&P 18-2, p. 41, ID=2492^Topic(s): taxonomy; Octocorallia, Keratoisis; Systematics: Cnidaria; Octocorallia; Stratigraphy: Pliocene; Geography: Italy, Sicily^Vertical and horizontal thin-sections of new material of Keratoisis from the Pliocene "Trubi" (Sicily) suggested that larger and smaller, branched and un-branched internodes belong all to a single species Keratoisis melitensis (Goldfuss 1826) of which Keratoisis peloritana (Sequenza 1864) is a junior synonym. Five different types of sklerites were found within the same deposits and prove a wide spectrum of gorgonaceans during the Pliocene in the Mediterranean. Root, internodes and sklerites of the coral suggest a paleodepth of 100-200 m for the Trubi.^1";
- 1716 s[1713] = "MIKUZ V. (2008).- [The Gorgonacean coral remains (Octocorallia) from the Middle Miocene beds near Sentilj in Slovenske Gorice, NE Slovenia].- Razprave Slovenska akademija znanosti in umetnosti 49, 2: 79-93, 1 pl.- FC&P 36, p. 111, ID=6545^Topic(s): ; Octocorallia Gorgonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Miocene; Geography: Slovenia NE^^1";
- 1717 s[1714] = "GRASSHOFF M. (1980).- Isidae aus dem Pliozaen und Pleistozaen von Sizilien (Cnidaria: Octocorallia).- Senckenbergiana lethaea 60, 4/6: 435-447.- FC&P 10-1, p. 29, ID=5928^Topic(s): ; Octocorallia, Isidae; Systematics: Cnidaria; Octocorallia; Stratigraphy: Pliocene Pleistocene; Geography: Italy, Sicily^^1";
- 1718 s[1715] = "TSARAPAS N., MARCOPOULOU-DIACANTONI A. (2005).- Tortonian Scleractinian Corals from the island of Gavdos (South Greece).- Revue de Paléontologie 24, 2: 629-637.- FC&P 34, p. 70, ID=1305^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Tort; Geography: Greece, Gavdos^This paper studies scleractinians collected from the localities Panagia, Korfe, Karave, Saghios Ioannis, Bo and Bardaris on the island Gavdos within Tortonian sediments. Eleven scleractinian species were determined. The examined scleractinian species belong to shallow water corals and provide specific information on the ecological conditions such as the depth, the temperature, the salinity, the climate, etc.^1";
- 1719 s[1716] = "MORYCOWA E., RONIEWICZ E. (1987).- Scleractinian corals from the Middle Miocene salt deposits in Carpathian Foredeep, Poland.- Acta Palaeontologica Polonica 32, 1-2: 105-119.- FC&P 17-1, p. 13, ID=2101^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Poland, Carpathian foredeep^^1";
- 1720 s[1717] = "ZIBROWIUS H. (1991).- Les scleractiniaux du Miocene au Pleistocene de Sicille et de Calabre de Giuseppe Seguenza (1864, 1880) (Cnidaria, Anthozoa).- Atti Accad. peloritana dei pericolanti, Messina, Cl. Sci. fis., matem. e natur. 67, Suppl. 1 [Bonfiglio E. (ed.): Celebrazione del 1° centenario di G. Seguenza, naturalista e

- paleontologo. Convegno di paleontologia et stratigrafia, Messina - Taormina, 22-26 maggio 1989], 1: 75-135.- FC&P 20-1.1, p. 21, ID=2808^Topic(s): Seguenza collection; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene - Pleistocene; Geography: Italy, Sicily, Calabria^1";
- 1721 s[1718] = "BARON-SZABO R.C. (1995).- Taxonomy and Palaeoecology of Late Miocen corals of NW-Crete (Gramvousa, Roka- and Koukounaras-Fms,).- Berliner geowissenschaftliche Abhandlungen E16: 569-577.- FC&P 25-1, p. 40, ID=3027^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Greece, Crete^Three new coral assemblages are described from the Late Miocene (Tortonian) of NW-Crete (Khania Province). Corals of the genera Tarbellastreaea, Favites and Goniopora are reported and their palaeoecology is discussed.^1";
- 1722 s[1719] = "BARON-SZABO R.C. (1997).- Miocene (Badenian) corals from Duplek, NE Slovenia.- Razprave Sazu IV. Razreda Sazu 38, 5: 97-115.- FC&P 27-2, p. 57, ID=3916^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Slovenia^A low-diversity scleractinian coral fauna is descibed systematically for the first time from Badenian rocks of NE Slovenia (Duplek village). The fauna comprises 6 species belonging to 4 genera: Favia melitae Chevalier, 1961, Favia macdonaldi Vaughan, 1919, Solenastreaea hyades (Dana, 1846), Tarbellastraea russoi Bosellini, 1996, Tarbellastraea aquitaniensis Chevalier, 1961, and Mussismilia vindoboniensis, Chevalier, 1961. ^1";
- 1723 s[1720] = "STEININGER F. (1973).- Die Anthozoen Fauna des Ottnangien. Chronostratigraphie und Neostratotypen. Miozaen der Zentralen Paratethys. Bd.III. M2. Ottnangien.- [journal?] Slowakische Akad. der Wissensch.: 356-374; Bratislava.- FC&P 2-2, p. 23, ID=4826^Topic(s): stratigraphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Ottn; Geography: Paratethys central^Description of 30 species from the following families: Actinastraeidae, Siderastraeidae, Poritidae, Oculinidae, Faviidae, Caryophyllidae, Flabellidae, Dendrophyllidae.^1";
- 1724 s[1721] = "HLADIL J. (1979).- Correction of published work.- FC&P 8, 1: 11-12.- FC&P 8-1, p. 11, ID=6297^Topic(s): corrigenda to published work; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Bad; Geography: Paratethys^[corrections of Miocene (Badenian) scleractinian corals lists printed with uncorrected errors in Papp et al. 1978]^1";
- 1725 s[1722] = "PIA BERNASCONI M., CORSELLI C., CAROBENE L. (1997).- A bank of the scleractinian coral Cladocora caespitosa in the Pleistocene of the Crati valley (Calabria, Southern Italy): growth versus environmental conditions.- Bolletino della Societa Paleontologica Italiana 36, 1-2: 53-61.- FC&P 29-1, p. 64, ID=7024^Topic(s): coral bank, ecology; Scleractinia Cladocora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Italy, Calabria^This paper deals with a coral bank interbedded in Pleistocene silty sands which outcrop in the Crati valley (Calabria, Southern Italy). The morphometric analysis of several colonies of Cladocora caespitosa (Linnaeus) is based on measurements concerning both the colony and the individual corallites. The significant correlations obtained from a statistical analysis indicate that the regular and unchanged growth of the bioconstructions occurred in quite a dim environment, and a deep infralittoral allocation is also suggested by the associated molluscan fauna. The paleoenvironment suffered a sudden, strong sediment input, correlated to tectonic activity, which caused the burial of the colonies. The re-colonization of the bottom took place while the bathymetric conditions remained unchanged. The definitive burial of the coral bank is marked by a transgressive phase which yielded the deposition of circalittoral clayey sediments. [original abstract]^1";

- 1726 s[1723] = "RONIEWICZ E., STOLARSKI J. (1991).- Miocene Scleractinia from Holy Cross Mountains, Poland ; Part 2. Archeocoeniid - astraeid - fungiid fauna.- Acta Geologica Polonica 41, 1: 69-83.- FC&P 21-2, p. 41, ID=3336Topic(s): revision; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Poland, Carpathian foredeep^A fauna of hermatypic Middle Miocene corals of Korytnica (central Poland) is described and illustrated. A partial revision of Dembinska-Rozkowska (1932) is given.^1";
- 1727 s[1724] = "CIVITELLI G., CORDA L., MARIOTTI G. (1987).- Lower Miocene spongiolitic facies in Ionian Islands (Greece) and their significance.- Geol. Mediterranean 14, 4: 245-253.- FC&P 18-2, p. 42, ID=2496Topic(s): spongiolitic facies; Porifera; Systematics: Porifera; Stratigraphy: Miocene L; Geography: Greece, Ionian Isls^A^1";
- 1728 s[1725] = "DULLO W.-C. (1983).- Fossilidiagenese im miozanen Leitha-Kalk der Paratethys von Oesterreich: Ein Beispiel fur Faunenverschiebungen durch Diagenese-Unterschiede.- Facies 8: 1-112.- FC&P 13-2, p. 9, ID=0616Topic(s): reefs, diagenesis; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Austria^The study includes descriptions of small patch reefs formed by massive branched corals (Porites) and bryozoans as well as their lateral facies sequences. An additional chapter compares with diagenetic effects in Recent and Pleistocene Reefs of Aqaba, Red Sea.^1";
- 1729 s[1726] = "RIEGL B., PILLER W.E. (2000).- Biostromal Coral Facies - A Miocene example from the Leitha Limestone (Austria) and its actualistic interpretation.- Palaios 15: 300-413.- FC&P 29-1, p. ???, ID=1499Topic(s): reefs, biostromes; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Austria^A^1";
- 1730 s[1727] = "MASTANDREA A., MUTO F., NERI C., PAPA ZONI C.A., PERRI E., RUSSO F. (2002).- Deep-water coral banks: an example from the "Calcare di Mendicino" (Upper Miocene, Northern Italy).- Facies 47, 1: 27-42.- FC&P 31-2, p. 28, ID=1667Topic(s): reefs, deep water; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Italy N^The "Calcare di Mendicino" is a mixed carbonate-siliciclastic informal unit of Miocene (Late Tortonian-Early Messinian), that crops out extensively in the northwestern part of the Calabria. In the Scannelle quarry near Belsito (Cosenza), four stratigraphic sections were studied to define the sedimentological and paleoecological setting. The carbonate body records the development of a deep-water coral bank characterized by a low-diverse community of azooxanthellate scleractinian (Oculina and Dendrophyllia) and stylasterine hydrozoans colonies. Two main stages of bioconstruction development can be distinguished: a thicket and a bank stage. Among the biostromal dwellers the more common are bryozoans, echinoids, benthic foraminifers, gastropods, and bivalves. A higher content of planktonic foraminifers occur in the thicket stage. The coral bank flourished within the aphotic zone, with deep currents loaded with nutrients and siliciclastic sediments. The upper part of the "Calcare di Mendicino" carbonate body has been affected by a pervasive dolomitization destroying almost completely the sedimentary structures and the biofacies. The lower part, the main object of this paper, preserves the microfacies but it experienced a widespread recrystallization obliterating the primary geochemical characteristics. The diagenetic history, partly hidden, reveals three main stages: primary marine with isopachous fibrous cements, deep burial with cavities infilled by sparry calcite, and meteoric-phreatic with dog-tooth cements.^1";
- 1731 s[1728] = "PERRY C.T. (1996).- Distribution and Abundance of Macroborers in an Upper Miocene Reef System, Mallorca, Spain: Implications for Reef Development and Framework Destruction.- Palaios 11, 1: 40-56.- FC&P 25-2, p. 41, ID=3126Topic(s):

reefs, macroborers; macroborers; Systematics: ;
 Stratigraphy: Miocene U; Geography: Spain, Mallorca^The importance of boring organisms within reef environments, as agents of framework destruction, and thus as controls to rates of reef accretion, has been widely recognized. Relatively little, however, is known about variations in the distribution of macroborers (principally sponges, bivalves and worms), within individual reef systems. The Upper Miocene reefs of Mallorca present a unique opportunity in which to assess such distributional variations. Borings are preserved as casts within the molds of former corals, and these trace fossils typically exhibit highly characteristic morphologies. Based on the distribution of different bore morphologies, it has been possible to assess variations in both the distribution and abundance of individual borers, and the intensity of boring activity across the reef system. Different parts of the reef are characterized by different associations of boring organisms, with the highest diversity of borers, and the most intense boring activity, observed within corals from the lagoonal facies. The principal control on distributional patterns appears to have been the morphology and structure of the reef framebuilders. Massive corals are always more extensively bored, and typically contain a higher diversity of boring organisms than branched or platy corals. On a more local scale, variations in sediment accumulation rates, and degree of substrate encrustation appear to have exerted some degree of control. Rates of reef accretion would have been influenced not only by the abundance of different boring organisms in different parts of the reef, but on the response of different framebuilders to boring activity. Platy and branched corals, whilst typically less intensely bored, would have been more vulnerable to the effects of boring, while massive corals, which were often extensively bored, were more capable of surviving such damage. This preservational bias has important implications for interpreting styles and rates of reef accretion.^1";

1732 s[1729] = "POMAR L. (1991).- Reef geometries, erosion surfaces and high-frequency sea-level changes, upper Miocene Reef Complex, Mallorca, Spain.- Sedimentology 38: 243-269.- FC&P 21-1.1, p. 56, ID=3268^Topic(s): geomorphology, eustacy; reefs; Systematics: ; Stratigraphy: Miocene U; Geography: Spain, Mallorca^The upper Miocene Reef Complex of Mallorca is a 20km prograding unit which crops out in sea cliffs along the southern side of the island. These vertical and exceptionally clean outcrops permit: (i) identification of different facies (lagoon, reef front, reef slope and open platform) and their geometries and boundaries at different scales, ranging from metre to kilometre, and (ii) construction of a 6-km-long high-resolution cross-section in the direction of reef progradation. This cross-section shows vertical shifts of the reefal facies and erosion surfaces linked to a general progradational pattern that defines the accretional units. Four hierarchical orders of magnitude (1-M to 4-M) of accretional units are identified by consideration of the vertical facies shifts and by which erosion surfaces are truncated by other erosion surfaces. All these orders show similar patterns: horizontal beds of lagoonal facies in the upper part (landward), reefal and slope facies with sigmoidal bedding in the central part and open-platform facies with subhorizontal bedding in the lower part (basinwards). The boundaries are erosion surfaces, horizontal over the lagoon facies, dipping basinwards over the reef-front facies and connecting basinwards with their relative conformities over the reef-slope and open-platform facies. [first fragment of extensive summary]^1";

1733 s[1730] = "SAINT MARTIN J.-P., ANDRE J.-P. (1992).- Les constructions coralliennes de la plateforme carbonatee messinienne de Malte (Mediterranee centrale).- Geologie Mediterraneenne 19, 3: 145-163. [in French, with English summary].- FC&P 23-1.1, p. 90, ID=4208^Topic(s): reefs, coral reefs; reefs; Systematics: ; Stratigraphy: Miocene Mess; Geography: Malta^The

- Messinian carbonate platform on the Maltese Island contain a scleractinian coral reefal unit overlying a basal melobesian buildup group. The coral assemblage is constituted by only few genera which display a poorly diversified architecture and growth forms. The buildup community sequence observed all along the platform shows a slightly homogenous evolution and, during the same time, a constant association with rhodophyceae. The corallian reefal unit is overlain by shallow marine sediments containing ooids and stromatolitic levels which correspond to final stage of the Messinian platform history.¹";
- 1734 s[1731] = "PAPP A., CICHA I., SENES J., STEININGER F. (eds) (1978).- Badenien. Chronostratigraphie und Neostatotypen. Miozan der Zentralen Paratethys.- Miozan der Zentralen Paratethys 6; 594 pp; Veda, Bratislava.- FC&P 8-1, p. 12, ID=6298Topic(s): stratigraphy, neostatotypes; stratigraphy; Systematics: ; Stratigraphy: Miocene Bad; Geography: Paratethys¹[stratigraphic monograph; contains also data on distribution of corals]¹";
- 1735 s[1732] = "RADWANSKI A., GORKA M., WYSOCKA A. (2006).- Middle Miocene coralgal facies at Maksymivka near Ternopil (Ukraine): a preliminary account.- Acta Geologica Polonica 56, 1: 89-103. www.geo.uw.edu.pl/agp/table/pdf/56-1/radwanski.pdf.- FC&P 36, p. 119, ID=6562Topic(s): coralgal facies; coralgal facies; Systematics: ; Stratigraphy: Miocene Bad; Geography: Ukraine, Fore-Carpathian Basin^A peculiar coralgal facies is recognized in the Lviv-Ternopil region, Ukraine, from the northern shores of the Middle Miocene (Badenian) Fore-Carpathian Basin. Its complex structure is dominated by algal buildups composed of interfingering red-algal (lithothamnian) colonies and blue-green-algal crusts, associated locally with numerous hermatypic corals (Tarbellastraea reussiana, Porites vindobonarum prima), either isolated, or overlapping each other. The holes amidst, and the crevices in, the buildups are filled with coarse bioclastic sediment (shell-grit), burrowed commonly by crustacean decapods (alpheid shrimps). The alpheid burrows, filled with coarser or finer shell-grit, served frequently as taphonomic traps for crustacean decapods (squat lobsters and crabs) and echinoids. Special attention is paid to the activity of rock-boring bivalves (Jouannetia semicaudata, Lithophaga lithophaga) in coralgal buildups and/or in particular coral colonies, some of which are redeposited, and riddled densely by bivalve borings. Emphasis is given to the environmental significance of alpheid shrimps, the tiered burrows of which are recorded in the Fore-Carpathian Basin for the first time. Crustacean decapods and echinoids are systematically studied. A comparison of the studied coralgal facies with others of the Lviv-Ternopil region, and those from the territory of Poland, indicates their faunistic and biogeographic identity. [original abstract]¹";
- 1736 s[1733] = "KERSHAW S., LI GUO, BRAGA J.C. (2005).- A Holocene coral-algal reef at Mavra Litharia, Gulf of Corinth, Greece: structure, history, and applications in relative sea-level change.- Marine Geology 215, 3-4: 171-192.- FC&P 34, p. 84, ID=1324Topic(s): reefs; reefs; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Holocene; Geography: Greece^A Holocene coral-algal reef at Mavra Litharia, south-central coast of Gulf of Corinth, Greece, is exposed from ca. 2 to 9.3 m above sea level on an uplifting footwall associated with the Eliki Fault. The reef lacks sea-level-critical species but its coralline algal assemblage indicates a ca. 10m water depth. Reef-frame components date from 9280-8730 years BP to 6343-5993 BP, so the reef frame grew between ca 10,000 and 6,000 years BP. The youngest dated shells (1860-305 years BP) from the site are accessory organisms collected from the lowest 2m outcrop, one of which (Dendropoma) grew at sea level {Stiros, S.C. and Pirazzoli, P., 1998. Late Quaternary coastal changes in the Gulf of Corinth, Greece: tectonics, earthquake, archaeology. Guidebook for

the Gulf of Corinth Field Trip, Patras University, Greece, Patras, September 14–16, 1998}. Reef history has four phases: a) growth and lithification of reef; b) development of smooth-walled dissolution pipes and caves in the reef; c) colonisation of dissolution surfaces by Mn-Fe crusts (that may be bacterially formed), barnacles, serpulid worms, and rock-boring bivalves; and d) uplift to present position where much of the reef is eroded. Sea-level history after 11,500 years BP, when rising post-glacial sea level overtopped the Rio sill and returned the Gulf of Corinth to a marine environment, is reconstructed. Calculations of interplay between sea-level rise and tectonic uplift suggest that between 11,500 and 10,000 years BP sea level rose very quickly, associated with deglaciation at the close of the Younger Dryas, MWP-1B, at a maximum of 25.6 mm/year (broadly consistent with other studies), then slowed to ca. 4.4 mm/year until 6000 years BP when sea level was ca. 3 m below modern, after which sea level rose at ca. 0.5 mm/year to modern day. Tectonic uplift rate of maximum 3 mm/year, slower than sea-level rise, means that thereef could not catch up to sea level until recent times.¹;

- 1737 s[1734] = "VACELET J., URIZ M.J. (1991).- Deficient spiculation in a new species of Merlia (Merliida, Demospongiae) from the Balearic Islands.- Fossil and Recent Sponges [J. Reitner & H. Keupp (eds)]: 170-178; Springer-Verlag, Berlin.- FCP 21-1.1, p. 60, ID=6818Topic(s): skeletal structure; Porifera, Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Spain, Balears¹[siliceous spicules are inconstant features of living calcified demosponges and may have been present also in their fossil representatives]¹;
- 1738 s[1735] = "BARRIER P., DI GERONIMO I., ZIBROWIUS H., RAISSON F. (1990).- Faune senegalienne du paleoescarpement du Capo Vaticano (Calabre meridionale). Implications neotectoniques.- Atti del quarto simposio di ecologia e paleoecologia della communita bentonica, Sorrento (1-5 nov. 1988). Torino; Museo regionale di Scienze naturali: 511-526.- FCP 20-1.1, p. 21, ID=2807Topic(s): eustacy; Systematics:; Stratigraphy: Quaternary; Geography: Italy, Calabria¹;
- 1739 s[1736] = "FIRTH C., STEWART I., MCGUIRE W.J., KERSHAW S., VTTA-FINZI C. (1996).- Coastal elevation changes in eastern Sicily: implications for volcano instability at Mount Etna.- Geological Society of London Special Publication 110 [McGuire W.J., Jones A.P. & Neuberg J. (eds): volcano Instability on the Earth and other planets]: 153-167.- FCP 25-1, p. 11, ID=2998Topic(s): geomorphology, coastal instability; Systematics:; Stratigraphy: Quaternary; Geography: Italy, Sicily¹The eastern flank of Mount Etna, Sicily has been recognized as being unstable, and three contrasting models have been proposed to account for this phenomenon, these being deep-seated spreading, shallow sliding and tectonic block movements. These models are examined by making reference to the rates and patterns of crustal movement along the eastern coastline of Sicily as determined from palaeoshoreline data. The south-eastern coastline of Sicily (Portopalo to Catania) provides no evidence of Holocene emergence. In contrast the volcanic coastline (Catania to Capo Schiso) and the northeastern shoreline (Taormina to Milazzo) display widespread evidence of coastal emergence. Radiocarbon dated remains indicate that both the volcano and northeastern Sicily have been uplifted at a rate exceeding 1.5mm per annum during Holocene times, although more recent rates of uplift may have been greater. The pattern of uplift suggests that the northeastern coastline of Sicily, including the volcanic edifice, is apparently uplifting as a coherent unit, with superficial flank movements being superimposed on a regionally uplifting sub-volcanic basement. [original abstract]¹;
- 1740 s[1737] = "PAPOYAN A.S. (1978).- Nekotorye dannye o skeletnom veshchestve korallov Armyanskoy SSR [data about the skeletal substance of corals of the Armenian SSR].- Izvestiya Akademii Nauk Armyanskoy

- SSR, Nauki o Zemle 2: 3-7.- FC&P 8-1, p. 53, ID=0226^Topic(s): skeletal mineralogy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Armenia^^1";
- 1741 s[1738] = "CHESHMEDJIEVA V.L. (1981).- Anthozoa.- Les fossiles de Bulgarie, t.V. -Cretace superieur. Grandes Foranrinifferes, Anthozoaires, Gasteropodes, Bivalvia. Ed. de l'Acad. Bulg. des. sc., Sofia / 5-11.- FC&P 15-1.2, p. 8, ID=0885^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Bulgaria^^1";
- 1742 s[1739] = "GRABNER E. (1985).- Grundzuege einer ostalpinen Volksmedizin.- Sitzber. Oesterr. Akad. Wiss., philos.-hist. Kl. 457: 1-289. [in German: outline of folk medicine in Eastern Alps].- FC&P 24-1, p. 60, ID=4471^Topic(s): folk medicine; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Alps E^In einem Kapitel der Arbeit wird ueber die Verwendung der roten Edelkoralle Corallium rubrum als Schutz- und Heilmittel berichtet. Ihr Wirkungsbereich ist sehr weit gespannt: Abwehr von Unheil (Blitz und Gewitter) und magischen Gefahren (boese Geister und boesen Blick), aber vor allem auch als Heilmittel bei verschiedensten Krankheiten, Epilepsie, Blutarmut. In dieser Funktion wurden vielfach Korallenaste an Halsketten getragen. So findet sich denn auch das Korallenastchen als Kinderamulett auf vielen Bildwerken des Spaetmittelalters dargestellt. Erste Nachrichten ueber das Tragen von Korallen als geheimnisvolles Abwehrmittel finden sich bereits bei Plinius d.A. (1. Jahrh. n. Chr), der dies von den Indern berichtet.^1";
- 1743 s[1740] = "MIHALY S. (1981).- Hungarian literature on fossil Anthozoa.- FC&P 10, 2: 33-60.- FC&P 10-2, p. 33, ID=6074^Topic(s): bibliography; corals bibliography; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Hungary^The bibliography presented herewith includes data and references concerning fossil corals from Hungary; an exhaustive material published in geological and palaeontological works up to 1978. * The author has thought it advisable to give, in addition to conventional librarian data, lists of species as well. * On the one hand, these are indicative of the composition of the coral fauna, on the other hand, they are quick in being informative in the service of coral specialists, whenever they may need information on references, in Hungarian works, to single species. The lists of references have been grouped by geological ages. [original introductory part]^1";
- 1744 s[1741] = "CHESHMEDJIEVA V.L. (1987).- Tzankovichaetetes fischeri gen.n., sp.n., du Turonien superieur a l'ouest du village de Ljalinci (Tran, SO de la Bulgarie).- C.R. Acad. Bulg. Sci. 40, 3: 71-73.- FC&P 20-2, p. 33, ID=2895^Topic(s): ; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: Bulgaria^Dans cette publication on donne la description de l'espece Tzankovichaetetes fischeri gen.n., sp.n.^1";
- 1745 s[1742] = "MANUTSOGLU E., SOUJON A., REITNER J., DORNSIEPEN U.F. (1995).- Relikte lithistider Demospongiae aus der metamorphen Plattenkalk-Serie der Insel Kreta (Griechenland) und ihre palaobathymetrische Bedeutung.- Neues Jahrbuch fuer Geologie und Palaeontologie, Monatshefte 1995, 4: 235-247. [in German, with English abstract].- FC&P 24-2, p. 91, ID=4597^Topic(s): bathymetry; Porifera Demospongia; Systematics: Porifera; Demospongiae; Stratigraphy: ; Geography: Greece, Crete^The discovery of extended colonies of lithistid demosponges in the upper parts of the chert-bearing metamorphic platy limestones (Plattenkalk) in the Ida mountains on Crete island allows to conclude on their sedimentary depositional conditions. According to the spreading maximum of these types of silicosponges, the water depth under which they evolved has probably not exceeded 300-400m. We suggest a sedimentary regime settled on the margin of the carbonate platform at the transition to the slope. Further on the porifera do give a hint on

- the origin of at least parts of the large-scale chert deposits in the Plattenkalk Series of the external Hellenides.^1";
- 1746 s[1743] = "BALTRES A. (1973).- Inventarul hydrozoarelor si chaetetidelor din Romania [inventaire des Hydrozoaires et des Chaetetides de Roumanie].- Inst. Geol. Dari Seama Sedintelor, Roman 59, 3: 5-38.- FC&P 4-1, p. 46, ID=5184^Topic(s):distribution; Hydrozoa, Chaetetida; Systematics:Cnidaria Porifera; Hydrozoa Chaetetida; Stratigraphy:; Geography:Romania^^1";
- 1747 s[1744] = "MORYCOWA E. (2009).- Korallowce Scleractinia z wapieni egzotycznych typu sztramberskiego polskich Karpat zewnetrznych. [Scleractinian corals from Stramberk-type limestones of the Polish Outer Carpathians; in Polish].- Geologia 34, 3/1: 129-137.- FC&P 36, p. 100, ID=6523^Topic(s):exotics in flysch; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:; Geography:Poland, Carpathians^^1";
- 1748 s[1745] = "GRUBIC A. (1983).- Sphaeractinia poljaki Grubic sa Prokletija. [Sphaeractinia of poljaki Grubic from Prokletije; in Serbian with English summary].- Vesnik Zavoda geol. geofiz. istraz. 41: 167-170; Beograd.- FC&P 14-2, p. 25, ID=6712^Topic(s):; Scleractinia Sphaeractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:???; Geography:Dinaric Mts, Prokletije^^1";
- 1749 s[1746] = "OEKENTORP K. (2006).- Alexander von Schouppe.- FC&P 34: 116-120.- FC&P 34, p. 116, ID=7255^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^[list of coral papers by von Schouppé; attached is his portrait and a list of his biographical notes]^1";
- 1750 s[1747] = "GRUBIC A. (1983).- Rezultati paleontoloskih i biostratigrafskih ispitivanja sferaktinida iz Srbije i Crne Gore [results of palaeontological and biostratigraphic study of Sphaeractiniids from Serbia and Montenegro; in Serbian, with English summary].- Rasprave Zavoda geol. geofiz. istraz. 21: 1-51; Beograd.- FC&P 14-2, p. 25, ID=6711^Topic(s):; Scleractinia Sphaeractiniidae; Systematics:Cnidaria; Scleractinia; Stratigraphy:???; Geography:Montenegro^^1";
- 1751 s[1748] = "HUBMANN B. (1996).- Einige pathologische Befunde an favositiden und heliolitiden Korallen des Grazer Palaeozoikums.- Mitt. Abt. Geol. und Palaeont. Landesmuseum Joanneum 54: 113-135.- FC&P 25-2, p. 37, ID=3117^Topic(s):pathologies; Tabulata, Heliolitida; Systematics:Cnidaria; Tabulata Heliolitida; Stratigraphy:; Geography:Austria, Styria^Pathologic phenomena on corals of the Graz Paleozoic were not mentioned so far. Current studies on tabulate corals stored in the collections of the Institute for Geology and Paleontology at the Graz University and newly collected specimens show that pathologic symptoms are no exceptional features.^1";
- 1752 s[1749] = "FLUGEL E., FLUGEL-KAHLER E. (1980).- Algen aus den Kalken der Trogkofelschichten der Karnischen Alpen.- Carinthia II, Sonderh. 36: 113-182; Klagenfurt.- FC&P 10-1, p. 26, ID=5907^Topic(s):; Algae reefs; Systematics:algae; Stratigraphy:; Geography:Alps, Carnic^^1";
- 1753 s[1750] = "SENOWBARI-DARYAN B. (1978).- Ein neuer Fundpunkt von Placklesia multipora Bilgütay aus den Koessener Schichten des Feichtensteins bei Hintersee (Salzburg, Oesterreich).- Mitt. Ges. Geol. Bergbaustud. Oesterr. 25: 198-203; Wien.- FC&P 10-1, p. 27, ID=5914^Topic(s):; Algae; Systematics:algae; Stratigraphy:Koessen beds; Geography:Alps N^^1";
- 1754 s[1751] = "MEYER R.K.F. (1994).-'Moosburg 4", die erste Kernbohrung durch den Malm unter der bayerischen Molasse.- Erlanger geologische Abhandlungen 123: 51-81. [in German, with English abstract].- FC&P 24-2, p. 79, ID=4558^Topic(s):geography, reefs; geology; Systematics:; Stratigraphy:

; Geography: Germany, Bavaria^The drill hole Moosburg 4 intersected 985m of Tertiary and Cretaceous sediments followed by 134m of Purbeck-facies and the whole of the Malm with a thickness of 453m which was cored through-out. The Malm alpha and beta (Oxfordian, 67m thick) an the Malm gamma (Lower Kimmeridgian, 30-35m thick) underneath the Molasse could be compared bed by bed with the equivalent beds in the Franconian Alb and their identical development could be shown in detail. The individual marl beds of the Malm gamma in particular could be traced in similar thickness over a distance of 100km thus reflecting the very quiet depositional conditions on the southern Bavarian platform. The sponge limestones and dolomites of the Malm delta/epsilon (Middle/Upper Kimmeridgian) show a similar thicknesses in both areas of approximately 100m (here a leveling out of the relief by shallowing of the sea occurred at the boundary between Malm delta/epsilon). Two sections, one from Neuburg to Ampfing (fig. 9), the other from Anzing to Giftthal (fig. 10), however, show the variable facies developments in the platy limestones and the shallow water reefs of the Malm zeta (Tithonian). The microfacies proves an increasing constriction of the sea basin beginning at different points in time in the individual basins and reaching its climax in the evolution of the saline facies of the Purbeck. Without a sharp boundary the partly fossil-rich limestones of the Upper Malm pass into the fossil-free limestones and dolomites of the Purbeck with its characteristic dark "tonflaser" texture. Oolites, evaporitic laminites and solution breccias are interspersed throughout. In the Moosburg area a clear subdivision into a lower oolitic and an upper breccia bearing Purbeck is absent.^1";

- 1755 s[1752] = "MOOSLEITNER G. (1995).- Das Rotelwand-Riff und seine Umgebung.- Fossilien 4: 230 ff. [in German].- FC&P 24-2, p. 102, ID=4613^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: ; Geography: Austria?, Rotelwand^1";
- 1756 s[1753] = "SOTAK J., LINTNEROVA O. (1994).- Diagenesis of the Veterlin reef complex (Male Karpaty Mts., Western Carpathians): isotope geochemistry, cathodoluminescence, and fluid inclusion data.- Geologica carpathica 45, 4: 239-254.- FC&P 24-2, p. 107, ID=4620^Topic(s): reef complexes, stable isotopes; reef complex, stable isotopes; Systematics: ; Stratigraphy: ???; Geography: Slovakia, Carpathians^The void structures of the Veterlin Limestone are cemented by radiaxial fibrous calcite (RFC), which originated by transformation from the original metastable forms of carbonate. In the transmitted light, the cement of the remaining pores is shaped as blade and blocky pseudospars, while under cathodoluminescence it is structured as zonal luminescent scalenohedral calcite (SHC) and dull euhedral calcite (EHC). Nucleation of neomorphic pseudospars on crystals of predate high-Mg cement occurred in conditions of relatively shallow burial. Saddle dolomite is another product of the burial diagenesis. Seawater values of δ180 (-1.2 to -4.5%) and δ13C (+1.5 to +4.1%) or marine values influenced by mixing (values with a wider distribution of δ13C) are characteristic for isotopic composition of cements in the Veterlin Limestone. The final generation of cements (blocky pseudospars BPS) shows the influence of burial fluids with depletion of δ180 (-6 to -9%) and preservation of positive values of δ13C (marine burial trend). The calculated isotopic temperatures from cements ranged between 18 to 60 °C. Homogenization temperatures of fluid inclusions are not consistent with crystallization temperatures of the burial cement, in accordance to their reequilibration under overheating and neomorphism. The Th of the fluid inclusions (155 - 350 °C) probably correspond to the peak-temperature conditions of the Veterlin Limestone, which is also partly the same as that obtained from the CAI of conodonts (110 - 200 °C). The presented diagenetic (cementation) model reflects more really our knowledge about the depositional conditions and also spatial distribution of facies in the Veterlin reef complex.^1";
- 1757 s[1754] = "BERNIER P., GAILLARD C. (1980).- Bioconstructions du Jura

- meridional.- Geobios Mem. special 4 [26th Geol. Congress (Paris) Guidebook; excursion 140C (Paleoenvironnements et bioconstructions d'Europe occidentale)]: 55-75.- FC#038;P 9-2, p. 13, ID=5863^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: ; Geography: Jura Mts^1";
- 1758 s[1755] = "BODA J. (1964).- Catalogue Originalium Fossilium Hungariae. Pars Zoologica.- Magy. All. Foldt. Int. Budapest: 3-229.- FC#038;P 10-1, p. 30, ID=5937^Topic(s): ; fossil types; Systematics: ; Stratigraphy: ; Geography: Hungary^[the Catalogue with abstracts in four languages (English, French, German and Russian) contains the data of coral originals from Hungary up to 1960; it gives the name of types, stratigraphic and age data, localities, title of publications and their present place of occurrence; to our great regret many of the types were lost, however in such cases the title of their publication is indicated; the Catalogue includes the data of 2 Hydrozoa (Triassic) and 99 Anthozoa species (10 Carboniferous, 5 Permian, 10 Triassic, 6 Jurassic, 30 Cretaceous, 24 Eocene, 8 Oligocene and 4 Miocene)]^1";
- 1759 s[1756] = "BOSELLINI A., LOBITZER H., BRANDNER R., RESCH W., CASTELLARIN A. (1980).- The complex basins of the Calcareous Alps and palaeo-margins.- Abhandlungen der Geologischen Bundesanstalt 34 [Field Guide of the 26th CGI]: 287-325.- FC#038;P 10-2, p. 10, ID=6045^Topic(s): reefs; geology, reefs; Systematics: ; Stratigraphy: ; Geography: Alps^field guide of the 26th CGI^1";
- 1760 s[1757] = "KUZMICHEVA E.I. (1972).- Nouvelles données sur l'écologie des Scléractinies du Crétacé inférieur de Crimée, du Petit Caucase et de l'Asie centrale. [en russe] .- Bulletin Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii 47, 6: 112-120.- FC#038;P 4-1, p. 44, ID=5169^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Crimea, Caucasus, Central Asia^1";
- 1761 s[1758] = "GELDSETZER H.J., JAMES N.P., TEBUTT G.E. (eds) (1988).- Reefs: Canada and Adjacent Areas.- Canadian Association of Petroleum Geologists Memoir 13.- FC#038;P 19-2.1, p. 40, ID=2765^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: fossil; Geography: Canada^Although this volume does not contain taxonomic studies of stromatoporoids, their paleoecological role is discussed in many of its papers.^1";
- 1762 s[1759] = "DEBRENNE F., WOOD R. (1990).- A new Cambrian sphinctozoan sponge from North America, its relationship to archaeocyaths and the nature of early sphinctozoans.- Geol. Mag. 127, 5: 435-443.- FC#038;P 20-1.1, p. 71, ID=2856^Topic(s): Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Cambrian; Geography: America^A new early Cambrian sponge of sphinctozoan organization named Polythalamia americana nov. gen. et sp. is described from Nevada and Alaska, USA. P. americana nov. gen. et sp. shows little resemblance to other Cambrian reported sphinctozoans, but is similar to late Palaeozoic to early Mesozoic forms from Europe and Asia, e.g. Stylothalamia and Amblysiphonella. The polyphyletic origin of sphinctozoans based upon spicule criteria from younger examples is therefore corroborated by the varied morphology and clearly widespread palaeogeographic distribution of Cambrian forms, which were hitherto recognized only from Australia. P. americana nov. gen. et sp. possesses a relatively small, globular multi-chambered calcareous skeleton, with thin but densely perforate walls and a central retrosiphonate, perforate spongocoel. The skeleton is composed of an irregular microstructure of unknown, but probable calcitic, original mineralogy. There are no spicules or primary internal structures, but secondary vesicular filling tissue is present. The pore organization, however, is directly comparable to archaeocyaths, e.g. coccinocyathines, and this character is taken to be

the only synapomorphy available for taxonomic and phylogenetic purposes. Indeed, *P. americana* nov. gen. et sp. is closely associated with a diverse archaeocyath assemblage and draws attention to morphological similarities between some archaeocyaths and sphinctozoans, thus questioning the criteria at present used to distinguish between these groups. Accordingly, a list of nomenclatural synonymies is given to aid comparison. Coscinocyathine archaeocyaths possess chambered juvenile stages and *P. americana* nov. gen. et sp. is suggested to represent an aspiculate lineage of sphinctozoan grade which may be derived from forms such as *Clathricoscinus* by neoteny. It appears that at least three clades of sphinctozoan-grade calcified sponges were present by end of early Cambrian time and their occurrence in association with island arcs of the palaeopacific rim is confirmed.¹¹;

- 1763 s[1760] = "ANSTEY R.L., CHASE T.L. (1974).- Geographic diversity of late Ordovician corals and bryozoans in North America.- *Journal of Paleontology* 48, 6: 1141-1148.- FC&P 4-1, p. 29, ID=5092Topic(s): biodiversity; Anthozoa Bryozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: America N^^1";
- 1764 s[1761] = "JULL R.K. (1976).- Review of some species of Favistina, Nyctopora and Calapoecia (Ordovician corals from North America).- *Geological Magazine* 113: 457-467.- FC&P 8-1, p. 54, ID=5496Topic(s): revision; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: America N^Material from the H.A. Nicholson's collection, University of Aberdeen, provides information on three of Nicholson's species. Syntypes of Favistina calicina are described and the lectotype designated. Topotypes of Nyctopora billingsii are compared with an earlier description of the type thin sections. Columnopora cribriformis is considered synonymous with Calapoecia huronensis Billings, itself a poorly understood species; redescription of the type of the latter species shows it to be separate from *C. canadensis* Billings. Calapoecia ungava Cox is reinterpreted with a lectotype designated, and Nicholson's material is placed with this species. All specimens are from eastern North America and of Upper Ordovician age excluding the Middle Ordovician *N. billingsii* and *G. canadensis*. [original summary]¹¹;
- 1765 s[1762] = "ELIAS R.J. (1984).- Paleobiologic significance of fossulae in North American Late Ordovician solitary rugose corals.- *Paleobiology* 10: 102-114.- FC&P 14-1, p. 45, ID=0958Topic(s): biology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: America N^^1";
- 1766 s[1763] = "ELIAS R.J. (1984).- Paleobiology of solitary rugose corals, late Ordovician of North America.- *Palaeontographica Americana* 54: 533-537 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 45, ID=0959Topic(s): biology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: America N^^1";
- 1767 s[1764] = "ELIAS R.J., ZEILSTRA R.G., BAYER T.N. (1988).- Paleoenvironmental reconstruction based on horn corals, with an example from the Late Ordovician of North America.- *Palaios* 03: 22-34.- FC&P 17-2, p. 26, ID=2178Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: America N^^1";
- 1768 s[1765] = "ELIAS R.J. (1991).- Environmental cycles and bioevents in the Upper Ordovician Red River-Stony Mountain solitary coral province of North America.- *Papers of geological Survey Canada* 20, 9 [Barnes C.R. & Williams S.H. (eds): Advances in Ordovician Geology]: 205-211.- FC&P 20-2, p. 47, ID=2901Topic(s): geohistory, geography; Rugosa; Systematics: Cnidaria;

Rugosa; **Stratigraphy:** Ordovician U; **Geography:** America N^Stratigraphic sequences within the Red River-Stony Mountain Province record two major environmental cycles in a vast area of epicontinental seas. The Red River Cycle began with a transgressive phase in the middle Edenian that reached its maximum in the early Maysvillian, and was followed by a regressive phase during the later Maysvillian and early Richmondian. The transgressive phase of the Stony Mountain Cycle reached its peak in the middle Richmondian, and was followed by a regressive phase during the later Richmondian and Gamachian. In general, the greatest water depth and most open marine conditions were attained during the first cycle, and seas were shallowest and most restricted toward the end of the second cycle. Recognition of the transgressive maxima, when deposition was most widespread, permits chronostratigraphic correlation throughout the province (and likely beyond). Bioevents involving evolution and dispersion of solitary rugose corals in the Red River-Stony Mountain Province, as well as fluctuations in the relative abundance taxa, were closely related to changes in water depth and degree of environmental restriction during the two cycles. The first major evolutionary event took place during the transgressive maximum of the Red River Cycle, when water depth in some areas exceeded the limit for corals and they were confined to basin margins and structural highs. The second occurred at the end of the Red River regressive phase, when most areas became inhospitable and corals were restricted to the centres of cratonic interior basins and to cratonic margin areas of the province. Corals became widely dispersed during the subsequent transgressive phase of the Stony Mountain Cycle. Late in the regressive phase of that cycle, taxa were introduced from outside the red River-Stony Mountain Province, and the endemic corals became extinct.¹;

- 1769 s[1766] = "ELIAS R.J. (1979).- Late Upper Ordovician solitary rugose corals of eastern North America.- Cincinnati University, unpublished Ph.D. dissertation, 514 pp.- **FC#038;P 8-2**, p. 28, ID=5693^**Topic(s):** solitary; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Ordovician U; **Geography:** America N^[unpublished Ph.D. Thesis]¹;
- 1770 s[1767] = "ELIAS R.J. (2010).- Stability strategies and hydrodynamic behavior of liberosessile solitary rugose corals (Ordovician; Red River-Stony Mountain Province, North America).- Palaeoworld 19, 3-4: 368-373.- **FC#038;P 36**, p. 53, ID=6437^**Topic(s):** ecology, stability strategies; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Ordovician U; **Geography:** America N^In the Late Ordovician Red River-Stony Mountain Province of North America, four closely related genera of solitary rugose corals are represented exclusively by liberosessile species: *Salvadorea*, *Grewingkia*, *Deiracorallium*, and *Lobocorallium*. These rugosans benefitted from innovative and in some cases unique strategies involving corallum form, which improved stability with respect to the substrate and currents, and took advantage of water flow during life. Trochoid form was a compromise for ensuring adequate stabilization of the corallum by sediment, while keeping the calice rim sufficiently elevated above the substrate. In life orientation with the convex cardinal side of the corallum facing down, triangulate and trilobate cross-sectional shapes offered resistance to lateral tipping or rotation. Depressed coralla resisted gravity-induced subsidence or tilting. with the convex side facing downcurrent, the streamlined shape of compressed and triangulate forms improved stability by reducing drag. Trilobate form may have had a drag-reducing **splitter plate** effect. Strategies for drag reduction were especially beneficial for corals inhabiting relatively high-energy environments, but the greatest significance may have been in reducing fatalities due to dislodgement during storms. The hydrodynamic behavior of coralla in life position, especially if leaning downcurrent, resulted in beneficial water flow. Vortices ascending from the substrate on the downcurrent side provided the polyp

- with water drawn from both the mainstream and the substrate surface. Such circulation facilitated feeding, enhanced the quantity and variety of food, and delivered other necessary substances. Wastes and gametes could be effectively expelled from the polyp and removed downcurrent without entrainment into the food-bearing flow. Functional analysis of the fascinating range of corallum forms in the Red River-Stony Mountain Province provides insight into paleobiology and paleoecology, which is applicable to many Paleozoic solitary rugosans.¹";
- 1771 s[1768] = "ELIAS R.J. (1995).- Origin and relationship of the Late Ordovician Red River-Stony Mountain and Richmond solitary rugose coral provinces in North America.- Ordovician Odyssey: Short Papers for the Seventh International Symposium on the Ordovician System [J.D. Cooper, M.L. Droser & S.C. Finney (eds.); Pacific Section of Society for Sedimentary Geology (SEPM), Book 77]: 85-88.- FC;P 26-2, p. 4, ID=6878Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: America N¹";
- 1772 s[1769] = "ELIAS R.J. (1989).- Extinctions and origins of solitary rugose corals, latest Ordovician to earliest Silurian in North America.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 319-326.- FC;P 19-1.1, p. 14, ID=2550Topic(s): extinctions, origins; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U / Silurian L; Geography: America N¹";
- 1773 s[1770] = "MCLEAN R.A. (1997).- Rugose coral faunas.- In: B.S. Norford: Correlation chart and biostratigraphy of the Silurian rocks of Canada., International Union of Geological Sciences Publication 35: 16-19, 66-67.- FC;P 28-1, p. 9, ID=3950Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Canada¹";
- 1774 s[1771] = "WATKINS R. (2000).- Corallite size and spacing as an aspect of niche-partitioning in tabulate corals of Silurian reefs, Racine Formation, North America.- Lethaia 33, 1: 55-63. [?].- FC;P 29-1, p. 61, ID=1468Topic(s): niche-partitioning; Tabulata, ecology; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: America N¹Tabulate corals are common in reefs of the Silurian (Wenlockian) Racine Formation in Wisconsin and Illinois, North America. Variation in size and spacing of corallites in this fauna represents an aspect of niche-partitioning that is probably related to feeding. Corallite morphospace, represented by a plot of corallite diameter versus number of corallites per square cm, is characteristically partitioned among favositines, alveolitines, halysitines, syringoporids, and heliolitines, usually with minimal overlap between these major taxonomic groups. Within all groups except alveolitines, morphospace occupied by each major taxon is partitioned further between forms with small corallites and forms with larger corallites. This is probably related to differences in feeding, with larger corallite forms specializing in tentacular capture of larger prey, and smaller corallite forms specializing in smaller prey involving capture by cilia-directed sheets of mucus as well as by tentacles. Feeding-based differences among tabulates augmented niche-partitioning effected by colony form and relation to substrate. Cerioid, cateniform, coenenchymal, and fasciculate colony types in the Racine fauna were primarily adapted to a soft substrate. Ragged edges of colonies indicate growth during episodic sedimentation and colonies were partially buried during life. Most tabulates are scattered through wackstone and packstone and were not major contributors to reef growth. [original abstract]¹";
- 1775 s[1772] = "YOUNG G.A. (1997).- Tabulate coral faunas.- In: B.S. Norford (ed.): Correlation Chart and Biostratigraphy of the Silurian Rocks of Canada. International Union of Geological Sciences, Publication No. 35:

- 19-22, 67.- FC&P 28-1, p. 11, ID=3953Topic(s):distribution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Canada^^1";
- 1776 s[1773] = "OLIVER W.A.jr, PEDDER A.E.H. (1979).- Biogeography of Late Silurian and Devonian rugose corals in North America.- Historical biogeography, plate tectonics and the changing environment [Gray J. & Boucot A. J. (eds); Oregon State University Press]: 131-145.- FC&P 9-1, p. 32, ID=0252Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: America N^Includes 36 tables of generic distribution data and maps illustrating a stage by stage analysis of the fluctuating provincialism between eastern and western North America.^1";
- 1777 s[1774] = "PLUSQUELLEC Y. (2006).- Révision de Hadrophyllum orbigny Milne-Edwards & Haime, 1850 (Coelenterata, Rugosa) du Dévonien d'Amérique du Nord et discussion sur la systématique des Hadrophyllidae.- Geodiversitas 28, 2: 199-226.- FC&P 34, p. 35, ID=1238Topic(s): revision; Rugosa, Hadrophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: America N^The revision of the types and "topotypes" of Hadrophyllum orbigny Milne-Edwards & Haime, 1850 brings new data on this species and on the genus Hadrophyllum. The type species, H. orbigny, is known from the Eifelian (costatus-kokelianus conodont zones) of Eastern Americas Realm. A lectotype is selected in the original material. A detailed study of the morphology shows important variations concerning the shape of the corallum, the length of the cardinal septum, the interseptal ridges and the fossuloids. The septal apparatus consists of costosepta, it is why the "epitheca" is lacking. The corallum is massive, no dissepiments nor tabulae, and the wall is septothecal. The fibrous nature of the septa is pointed out. The polyp enclosed widely the corallum; H. orbigny was capable of automobility. The synonymy of the genus is reviewed; only two species can be referred to it, the type species and H. asturicum. The systematics of the "Hadrophyllidae" is revised, especially the weyer's one (1975) and two new sub-families, the Hadrophyllinae and the Microcyclinae n. subfam., are erected.^1";
- 1778 s[1775] = "MCLEAN R.A., SORAUF J.E. (1989).- The distribution of rugose corals in Frasnian outcrop sequences of North America.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillan N. J. et al. (eds): Devonian of the World], v. 3: 379-396.- FC&P 18-1, p. 20, ID=2216Topic(s): biostratigraphy; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: America N^^1";
- 1779 s[1776] = "OLIVER W.A.jr, PEDDER A.E.H. (1989).- Origins, migrations, and extinctions of Devonian Rugosa on the North American Plate.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 231-237.- FC&P 19-1.1, p. 13, ID=2541Topic(s): biohistory; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: N American plate^^1";
- 1780 s[1777] = "FAGERSTROM J.A. (1983).- Fieldguide to North American Stromatoporoid Collecting Localities Part II: Devonian of Ontario, Michigan, and Ohio.- Department of Geology, University of Nebraska-Lincoln, 11-19.- FC&P 13-1, p. 48, ID=0518Topic(s): sampling sites; stroms; Systematics: Porifera; Stromatoporoida; Stratigraphy: Devonian; Geography: America N^^1";
- 1781 s[1778] = "FAGERSTROM J.A. (1981).- Stromatoporoid niche variation and diversity in Devonian reef and biostromal communities in Ontario, New York and Indiana.- Geological Society of America, Abstracts with Programs 13: 277.- FC&P 13-1, p. 48, ID=0521Topic(s):

- ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: America N^1";
- 1782 s[1779] = "STOCK C.W., BURRY-STOCK J.A. (2004).- New data reinforce the conclusion that the inter-realm barrier in North America was selectively breached by the stromatoporoid *Habrostroma centrotum* during the Lochovian Age (Early Devonian).- Geological Society of America, Abstracts with Programs 36, 5: 91-92.- FC&P 33-2, p. 43, ID=1200^Topic(s): biogeography; stroms, Habrostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Lochk; Geography: America N^1";
- 1783 s[1780] = "STOCK C.W. (1997).- Paleobiogeographical range of North American Devonian stromatoporoids: roles of global and regional controls.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 281-288.- FC&P 26-2, p. 31, ID=3720^Topic(s): biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: America N^The paleobiogeographic distribution of stromatoporoids in North America during the Devonian displays a progressively westward retreat in the Eastern most occurrences of the group throughout most of the period. When viewed in paleogeographic terms, this Recent westward retreat represents a Devonian northward and equatorward retreat. It is concluded that during the Early Devonian eustatic sea level was the major factor controlling stromatoporoid distribution. The influx of siliciclastic sediments, resulting from the Acadian Orogeny in particular, progressively forced stromatoporoids from the then southern parts of North America during the Middle and Late Devonian. It was not until the latest Devonian (Famennian) that global cooling seems to have had a significant impact on stromatoporoid distribution in North America.^1";
- 1784 s[1781] = "TAPANILA L., EKDALE A.A. (2004).- Impact of an impact: benthic recovery immediately following the late Devonian Alamo event.- Geological Society of America, Abstracts with Programs 36, 5: 313. [abstract] - FC&P 34, p. 107, ID=1377^Topic(s): extinctions, impacts, Alamo event; impacts; Systematics: ; Stratigraphy: Devonian; Geography: America N^The impact preceded the F/F event by 3 Ma. Stromatoporoids overlie the breccia and the Alamo impact had no lasting effect on the community.^1";
- 1785 s[1782] = "SANDO W.J. (1990).- Third supplement to checklist of North American Late Paleozoic coral species (Coelelenterata, Anthozoa).- FC&P 19, 2.1: 16-20.- FC&P 19-2.1, p. 16, ID=6791^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic U; Geography: America N^This note is the third in a series of supplements to the checklist published as U.S. Geological Survey Bulletin 1387 (Sando 1974). * The original checklist is an objective list of formally named coral species that were described from rocks of Mississippian, Pennsylvanian, and Permian age through 1973. The first supplement (Sando 1980) made additions and corrections to the original checklist through 1978, the second (Sando 1986), through 1983. * The present paper adds coverage of the literature through 1989 and includes one name missed previously. * The format followed herein is the same as that of the original checklist. [original introduction to the checklist]^1";
- 1786 s[1783] = "SANDO W.J., BAMBER E.W., ARMSTRONG A.K. (1977).- The zoogeography of North American Mississippian corals.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et récifs coralliens fossiles; Paris, 1975]: 175-184.- FC&P 6-1, p. 27, ID=0067^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: America N^Proposes 5 zoogeographic provinces and 5 subprovinces based on distribution of coralliferous facies, degrees of endemism, and generic similarities.^1";
- 1787 s[1784] = "SANDO W.J. (1977).- North American Mississippian coral biostratigraphy.- Concepts and methods of biostratigraphy: 483-496

- [Kauffman E. G. & Hazel J. E. (eds)].- FC&P 6-2, p. 16, ID=0134^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: America N^1";
- 1788 s[1785] = "SANDO W.J., BAMBER E.W., ARMSTRONG A.K. (1975).- Endemism and similarity indices: Clues to the zoogeography of North American Mississippian corals.- Geology 3, 11: 661-664.- FC&P 5-1, p. 30, ID=5367^Topic(s): biogeography, quantitative approach; corals endemism vs similarity; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: America N^1[quantitative approach to paleozoogeography]^1";
- 1789 s[1786] = "LAMBERT L.L., CONNOLLY W.M., STANTON R.J. (1986).- Preferred depth of abundant Pennsylvanian Chaetetetes.- 4th North American Paleontological Convention.- FC&P 15-2, p. 44, ID=0746^Topic(s): ecology, bathymetry; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: America N^1They flourished in 2-5 m of water, or less.^1";
- 1790 s[1787] = "SUCHY D.R., WEST R.R. (1986).- A Pennsylvanian cryptic community associated with chaetetid reefs.- 4th North American Paleontological Convention.- FC&P 15-2, p. 46, ID=0757^Topic(s): reefs; cryptic communities; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: America N^1";
- 1791 s[1788] = "CONNOLLY W.M., LAMBERT L.L., STANTON R.J.jr (1989).- Paleocology of Lower and Middle Pennsylvanian (Middle Carboniferous) Chaetetetes in North America.- Facies 20: 139-168.- FC&P 19-1.1, p. 41, ID=2626^Topic(s): ecology; Chaetetida Chaetetetes; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: America N^1Chaetetetes lived in environments from intertidal to below wavebase in areas of normal carbonate sedimentation; water energy probably ranged from quiet to high; it grew in a wide range of shallow subtidal conditions but its optimum growth seems to have taken place in the shallowest water; its growth form was related to many environmental and biologic parameters^1";
- 1792 s[1789] = "CONKIN J.E., BRATCHER T.M., CONKIN B.M. (1976).- Palaeacis cuneiformis Haime 1857, in Milne-Edwards 1860, emended: its morphology, ontogeny, and stratigraphic significance.- Univ. of Louisville Studies in Paleontology and Stratigraphy 5: 27 pp., 5 pls, 8 text-figs., 2 tables.- FC&P 5-2, p. 10, ID=5438^Topic(s): phylogeny; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous L; Geography: America N^1An orientation of the corallum is established and the growth sequence is ascertained by determination of the order of addition of corallites and development of surface ornamentation. Palaeacis cuneiformis ranges from the Middle Meramecian Salem Formation to the Middle Chesterian Glen Dean Formation, but in any frequency of numbers, it is definitive for the Salem Formation. Several other species of Palaeacis have stratigraphic significance within the Mississippian System of North America; further, Palaeacis enormis - P. bifida - P. obtusa - P. cavernosa - P. carinata seem to represent an evolutionary lineage.^1";
- 1793 s[1790] = "SANDO W.J. (1977).- The status of North American upper Paleozoic coral biostratigraphy.- Journal of Paleontology 51, 1: 1-22.- FC&P 6-1, p. 27, ID=0066^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: America N^1Summary of history and utility of corals in zonation of North American upper Paleozoic rocks^1";
- 1794 s[1791] = "SANDO W.J. (1980).- Supplement to checklist of North American late Paleozoic coral species (Coelenterata, Anthozoa).- Journal of Paleontology 54, 3: 632-633.- FC&P 9-2, p. 42, ID=0330^Topic(s): list of species; coral species;

- 1795 Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: America N^^1";
s[1792] = "SANDO W.J. (1986).- Second supplement to Checklist of North American Late Paleozoic Coral Species (Coelenterata, Anthozoa).- Journal of Paleontology 60, 3: 780-781.- FC&P 15-2, p. 32, ID=0696^Topic(s): list of species; coral species; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: America N^^1";
- 1796 s[1793] = "SANDO W.J. (1991).- Third supplement to checklist of North American late Paleozoic coral species.- FC&P 19, 2.1: 16-20.- FC&P 20-2, p. 59, ID=2938^Topic(s): list of species; coral species; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: America N^^1";
- 1797 s[1794] = "SANDO W.J. (1974).- Checklist of North American Late Paleozoic coral species (Coelenterata, Anthozoa).- U.S. Geol. Survey Bull. 1387; 36 pp.- FC&P 4-1, p. 37, ID=5133^Topic(s): list of species, 578 records; coral species; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: America N^AN objective list of coral species described from the Mississippian, Pennsylvanian, and Permian rocks of North America includes 578 entries, of which four are now known to be from older rocks and four are probably erroneous references to older species. The list includes information on the original references for all species and the geologic age and geographic area from which the species have been described.^1";
- 1798 s[1795] = "WILSON E.C. (1980).- Redescription of type specimens of the Permian rugose coral waagenophyllum columbicum Smith, 1935, type species of Heritschioides Yabe, 1950.- Journal of Paleontology 54, 1: 85-92.- FC&P 9-1, p. 38, ID=0275^Topic(s): types redescribed; Rugosa, Heritschioides; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: America N^The western North American Lower Permian colonial rugose Heritschioides Yabe 1950 (Coelenterata: Anthozoa) has a short cardinal septum and an inconspicuous open, septal, cardinal fossula. waagenophyllum columbicum Smith 1935, the type species, is redescribed and the type specimen refigured to demonstrate existence of these and other characters. Eight other nominal species and 2 unnamed ones are verified as Heritschioides from Alaska, Nevada, and Oregon. The genus also occurs in California. Reports of it in Texas, Japan, and Russia are doubtful or erroneous.^1";
- 1799 s[1796] = "WILSON E.C. (1974).- Bibliographic index of North American Permian Rugose and Tabulate Coral species.- Journal of Paleontology 48, 3: 598-606.- FC&P 4-1, p. 41, ID=5153^Topic(s): bibliographic index; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Permian; Geography: America N^This index lists 190 citations, with 59 references, for North American Permian corals (Coelenterata: Rugosa and Tabulata).^1";
- 1800 s[1797] = "NEDLER ARAI M. (1992).- Research on coelenterate biology in Canada through the early twentieth century.- Archives of Natural History 19, 1: 55-68.- FC&P 24-1, p. 61, ID=4472^Topic(s): research history; Cnidaria biology; Systematics: Cnidaria; Stratigraphy: Recent; Geography: Canada^This paper traces the history [of research] on Canadian coelenterates after 1854. During the nineteenth century preliminary exploration of the Canadian fauna was done primarily by Canadian geologists or by foreign scientists, particularly from the United States of America. In the early twentieth century, the study of coelenterates developed within Canada. A.B. Macallum examined the composition of the medusae Aurelia and Cyanea, J.P. Munich, C. Mclean Fraser, and R.E. Foerster did taxonomic work on, respectively, the anthozoa, hydroids and hydromedusae. Each contributed more widely to the development of marine biology in Canada, especially to the establishemnt of the Biological Board of Canada, later the Fisheries

- Research board.^1";
- 1801 s[1798] = "FAGERSTROM J.A. (1978).- Stromatoporoid niche variation in Devonian reef and biostromal communities in eastern North America and western Germany.- 10th International Sedimentological Congress 1: 193A.- FC&P 8-1, p. 49, ID=0204^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: America N, Germany^^1";
- 1802 s[1799] = "ROWETT C.L. (1975).- Provinciality of late Paleozoic invertebrates of North and South America and a modified intercontinental reconstruction.- Pacific Geology 10: 79-93.- FC&P 6-2, p. 16, ID=0133^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Paleozoic U; Geography: Americas^^1";
- 1803 s[1800] = "VASCONCELLOS A.C.de (1997).- Phylogenetic analysis of some lophophyllid corals from the Amazon basin and the Midcontinent region (USA).- FC&P 26, 1: 17-21. [Thesis abstract] - FC&P 26-1, p. 17, ID=6876^Topic(s): phylogeny, cladistics; Rugosa Lophophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: Americas^A phylogenetic analysis including some Amazonian lophophyllid corals and similar forms from the Midcontinent region in USA was done. The Amazonian forms included *Stereostylus lemzi* and *S. mendesi*; whereas *Lophophyllidium proliferum*, *L. girtyi*, *L. compressum*, *L. minutum*, *L. idonium*, *L. ignotum*, *L. angustifolium*, *Stereostylus lenis* and *S. perversus* are the North-American species under analysis. *S. leinzi* and *S. mendesi* were regarded as metaspecies, for their lack of synapomorphies. having *L. ignotum* as sister group according to the cladogram produced (Figure 1). * The inclusion of the Amazonian metaspecies into the genus *Lophophyllidium* is also suggested. The derived phylogenetic tree brings new insights to the North-American species, as follows: (1) *S. perversus* should be included in the genus *Lophophyllidium* and (2) either the range extensions of *L. proliferum*, *L. compressum*, *L. girtyi* and "*Stereostylus*" *perversus* are older than previously considered or their type localities are of Morrowan age. The paleobiogeographic pattern depicted by the phylogenetic tree suggests a faunal connection between the Amazon Basin and the US Midcontinent region during the late Morrowan (Figure 2). * The information provided by another phylogenetic analysis including *Lophophyllidium palaeum* and *L. wewokanum* (Meridas Andes, Venezuela) and *L. sauridens* (Western Interior, New Mexico, United States) also supports the previous phylogenetic tree and further suggests (1) either a longer range extension for the Venezuelan species or (2) a Morrowan age to the Merida part of the Palmarito Formation (Figure 3 and 4). [abstract of a M.Sc. Thesis presented in the Department of Geology at Universidade Federal do Rio de Janeiro, August 1996; see Vasconcellos 1996]^1";
- 1804 s[1801] = "VASCONCELLOS A.C.de (1996).- Relações filogenéticas entre as espécies de corais lofofilídeos do Carbonífero Médio da Bacia do Amazonas (Para, Brasil) e da Região Mesocontinental (Centro-Oeste, EUA).- Rio de Janeiro, Universidade Federal do Rio de Janeiro, M.Sc. Thesis, 210 pp. [M.Sc. Thesis] - FC&P 26-1, p. 17, ID=6877^Topic(s): ; Rugosa Lophophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: Americas^^1";
- 1805 s[1802] = "ROWETT C.L. (1977).- Provinciality of late Paleozoic corals of North and South America and a modified pre-drift reconstruction.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et récifs coralliens fossiles; Paris, 1975]: 190-196.- FC&P 6-1, p. 26, ID=0064^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Americas^Modification of positions of continents in Pennsylvanian and Permian suggested by paleozoogeographic relationships of corals^1";
- 1806 s[1803] = "PEDDER A.E.H., MCLEAN R.A. (1982).- Lower Devonian

cystiphyllid corals from North America and Eastern Australia, with notes on the genus *Utaratuia*.- *Geologica et Palaeontologica* 16: 57-110.- **FC&P 12-1**, p. 32, ID=1902^Topic(s):; *Rugosa*, *Cystiphyllida*, *Utaratuia*; Systematics: *Cnidaria*; *Rugosa*; Stratigraphy: Devonian L; Geography: America N, Australia E^Material, representing 15 species, is described from the Blue Fiord Formation of Ellesmere Island, Road River and Michelle Formations of Yukon Territory, McColley Canyon Formation of Nevada, Point Hibbs Formation of Tasmania, and the Garra Formation of New South Wales. 2 genera [*Cytaroplasma* and *Peronophyllum*] and 10 species are new; their probable ages are determined primarily from conodonts. Associated faunas are identified, enabling 13 of the species to be assigned to 10 named communities.^1";

1807 s[1804] = "TURNER E.C., JAMES N.P., NARBONNE G.M. (1997).- Growth dynamics of neoproterozoic calcimicrobial reefs, Mackenzie Mountains, Northwest Canada.- *Journal of Sedimentary Research* 67: 37-45.- **FC&P 26-2**, p. 89, ID=3776^Topic(s): growth dynamics; reefs, calcimicrobial; Systematics: Stratigraphy: Neoproterozoic; Geography: Canada NW^Neoproterozoic buildups of the Little Dal Group grew in a deep-water epicratonic basin. These kilometer-scale reefs display aggradational and progradational geometries comparable to those described from Phanerozoic reefs. Four phases of reef growth correspond to four regional shale-to-carbonate packages in laterally equivalent offreef strata. The lower, shaly part of each package is interpreted to reflect transgressive to highstand deposition. The upper carbonate part of each package reflects carbonate precipitation in the water column as a result of postulated basin restriction and increased salinity during sea-level lowstand. Reefs nucleated at the beginning of the first major transgressive event. Reefs typically aggraded during transgressive intervals, but could also prograde or contract, likely depending on the rate of relative sea-level rise versus reef growth rate. Reefs prograded during regressions, probably owing to reduction of accommodation space. They shed talus at lowstand in response to increased erosion and / or progradation over unstable substrates. Reef growth ended with return of shallow-water conditions. The overall architecture of aggradation and progradation demonstrates that the Neoproterozoic alcimicrobial reef ecosystem was capable of responding to environmental changes in the same way as the more extensively studied, ecologically complex, and faunally diverse buildups of the Phanerozoic.^1";

1808 s[1805] = "DEBRENNE F., PEEL J.S. (1986).- *Archaeocyatha* from the Lower Cambrian of Peary Land, central North Greenland.- *Ra pp. Groenlands Geol. Unders.* 132: 39-50.- **FC&P 16-1**, p. 78, ID=2026^Topic(s): *Archaeocyatha*; Systematics: *Porifera*; *Archaeocyatha*; Stratigraphy: Cambrian L; Geography: Greenland N^Three new species are described and assigned to genera known from the upper part of the Lower Cambrian (Toyonian) of Altai fold belt Region and Siberian Platform. It is the first discovery of *Archaeocyatha* in this region of the globe.^1";

1809 s[1806] = "ZHURAVLEV A.Yu. (1987).- *Archaeocyatha*.- *Trudy Paleont. Inst.* 224 [Voronova L. G., Drozdova N. A., Esakova N. V., Zhegallo E. A., Zhuravlev A. Yu., Rozanov A. Yu., Sayutina T. A. et Uchatinskaya G. T. (eds): *Lower Cambrian Fossils from the Mackenzie Mountains (Canada)*]: 19-43.- **FC&P 17-1**, p. 43, ID=2171^Topic(s): *Archaeocyatha*; Systematics: *Porifera*; *Archaeocyatha*; Stratigraphy: Cambrian L; Geography: Canada, Mackenzie Mts^^1";

1810 s[1807] = "LAFUSTE J., DEBRENNE F. (1977).- Presence de deux types de microstructure chez *Archaeocyathus atlanticus* Bill. (Cambrien inferieur, Labrador, Canada).- *Geobios* 10, 1: 103-106.- **FC&P 6-1**, p. 31, ID=5526^Topic(s): microstructures; *Archaeocyatha* microstructures; Systematics: *Porifera*; *Archaeocyatha*; Stratigraphy: Cambrian L; Geography: Canada, Labrador^^1";

- 1811 s[1808] = "ROWLAND S.M. (1981).- Archaeocyathid reefs of the Southern Great Basin of North America.- US Geol. Surv. Open File Report 81-743.- FC&P 11-1, p. 55, ID=6127^Topic(s): ; archaeocyathan reefs; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: USA, Great Basin^^1";
- 1812 s[1809] = "PRATT B.R. (2002).- Occurrence of the siliceous sponge spicule Konyrium (Hexactinellida) in the Upper Cambrian of the Mackenzie Mountains, northwestern Canada.- Journal of Paleontology 76, 3: 763-766.- FC&P 31-2, p. 10, ID=7117^Topic(s): spiculae; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cambrian U; Geography: Canada NW^[…] because spicule form is not restricted to individual taxa and many sponge species secrete a variety of spicule shapes, it is difficult to gauge true siliceous sponge diversity and to explore their biostratigraphic utility using only isolated spicules. * An exception to this biostratigraphic limitation is provided by unusual, probably hexactinellid, spicules belonging to the two known species of Konyrium. Consisting of radially disposed blades (in the Upper Cambrian) or "flying buttresses";, termed "arches"; (in the Middle Ordovician), this distinctive group seems to be unique and aberrant in siliceous sponge spicule shape, in that no modern counterparts have yet been reported (e.g., Koltun, 1970; Boury-Esnault and Rützler, 1997). In this paper I document the occurrence of Konyrium mariae Bengtson, 1986, in the Upper Cambrian (Steptoean) of northwestern Canada... [excerpts from a short note]^1";
- 1813 s[1810] = "BRUNTON F.R., LONG D.G.F. (1989).- Upper Lower Cambrian Renalcis mounds in the Scoresby Bay Formation, northeastern Ellesmere Island.- Canadian Society of Petroleum Geologists, Memoir 13 [Geldsetzer H. H. J., James N. P. & Tebbutt G. E. (eds): Reefs, Canada and Adjacent Areas]: 139-140.- FC&P 19-1.1, p. 22, ID=2582^Topic(s): mud mounds; renalcis mounds; Systematics: Cyanophyta; Stratigraphy: Cambrian L; Geography: Canada, Arctic^^1";
- 1814 s[1811] = "JAMES N.P., KLAPPA C.F. (1983).- Petrogenesis of early Cambrian reef limestones, Labrador, Canada.- Journal of Sedimentary Petrology 53, 4: 1051-1096.- FC&P 13-1, p. 25, ID=0404^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Cambrian L; Geography: Canada, Labrador^Bioherms and biostromes in the Lower Cambrian Forteau Formation of southern Labrador and western Newfoundland are rich in skeletal and nonskeletal components and display a wide spectrum of synsedimentary and postdepositional cements. Through petrography, cathodoluminescence, and microprobe analysis, three styles of particle preservation can be differentiated:1. skeletons with excellent fabric retention as nonferroan calcite (trilobites and Salterella) or both ferroan and nonferroan calcite (echinoids and sponge spicules);2. skeletal molds completely filled by nonferroan calcite spar, or occasionally a second stage of equant ferroan calcite and dolomite as well (archaeogastropods, hyolithids, brachiopods, ?coelenterates, and Chancelloria);3. fibrous to microcrystalline components which are now either well preserved as nonferroan calcite or are molds filled by equant ferroan calcite and dolomite or both (ooids, archaeocyathans, and the alga Renalcis). Synsedimentary cements, localized, to reefs, are:1. rays or botryoids in which each acicular crystal is a spar-filled mold; or2. rinds of fibrous calcite commonly with fascicular-optic properties or a partially dissolved fabric in which the solution voids are now filled with iron-rich, equant calcite cement.^1";
- 1815 s[1812] = "JAMES N.P., KOBLUK D.R. (1978).- Lower Cambrian patch reefs and associated sediments: southern Labrador, Canada.- Sedimentology 25: 1-35.- FC&P 7-2, p. 14, ID=5608^Topic(s): reefs sedimentology; reefs, sedimentology; Systematics: ; Stratigraphy: Cambrian L; Geography: Canada, Labrador^^1";

- 1816 s[1813] = "TAPANILA L., COPPER P., EDINGER E. (2004).- Environmental and substrate control on Paleozoic bioerosion in corals and stromatoporoids, Anticosti Island, eastern Canada.- *Palaios* 19, 3: 292-306.- FC&P 34, p. 107, ID=1376^Topic(s): bioerosion; ecology; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoida; Stratigraphy: Paleozoic; Geography: Canada E^Bioerosion was a common process affecting corals and stromatoporoids in reef and off-reef facies on the carbonate ramp that spanned the Ordovician-Silurian boundary on Anticosti Island. The probable worm boring Trypanites was the dominant macroboring, penetrating more than 40% of 2,500 massive tabulate corals and stromatoporoids examined, occasionally in dense concentrations. The frequency of macroboring was influenced by conditions at the facies level reflected by changes in grain size, water depth, storm reworking of sediments, and the nature of the skeletal mass bored. These factors regulated exposure time of the host-substrate surface to the watermass and thus influenced bioerosion. Bored specimens are most common in muddy off-reef facies, moderate in sandy off-reef facies, and less common in reefs. In off-reef facies, storm-enhanced deposition and reworking of sediments were most important in the burial of eligible host substrates. In reefs, the high competition for space by encrusting epizoa, combined with sedimentation, limited macroborers that preferred to excavate dead skeletal substrates. Skeletal density was the most important property of the host substrate in controlling boring frequency. Macroborers favored a dense host skeleton likely for its enhanced mechanical strength and adaptability for unlined borings, despite requiring greater energy for excavation. High-relief host skeletons were bored more frequently than tabular forms, since their greater capacity to shed sediment would have resulted in more prolonged exposure above the seafloor. The probable bivalve boring Petroxestes peria is rare. Temporal changes in boring frequency appear to reflect local shifts in facies and relative sea level. Mass-extinction events near the O/S boundary, which eliminated some host corals and stromatoporoids, had no apparent effect on boring frequency.^1";
- 1817 s[1814] = "ELIAS R.J. (1998).- Corals in the Cincinnatian (Upper Ordovician) of the Cincinnati Region (Ohio-Indiana-Kentucky).- *Mid-America Paleontology Society Digest* 21, 4: 41-50.- FC&P 27-1, p. 46, ID=3800^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: USA, Cincinnati region^^1";
- 1818 s[1815] = "CARAMANICA F.P. (1974).- Ordovician corals of the Williston Basin periphery.- *Dissertation abstracts international* 35 (1974), 1: 408-B.- FC&P 4-2, p. 56, ID=5258^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: America N, Williston Basin^^1";
- 1819 s[1816] = "BOLTON T.E., SANFORD B.V., COPELAND M.J., BARNES C.R., RIGBY J.K. (1977).- Geology of Ordovician rocks, Melville Peninsula and region, south-eastern district of Franklin.- *Bulletin Geol. Surv. Canada* 269: VIII + 137 pp.- FC&P 7-2, p. 19, ID=5625^Topic(s): geology; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: Canada?^[includes descriptions of two streptelasmatis and a number of tabulates]^1";
- 1820 s[1817] = "BOLTON T.E. (1980).- Colonial coral assemblages and associated fossils from the late Ordovician Honorat Group and White Head Formation, Gaspé Peninsula, Québec.- *Papers of geological Survey Canada* 80-1C: 13-28.- FC&P 10-1, p. 50, ID=5965^Topic(s): biostratigraphy; coral assemblages; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: Canada, Québec^Four distinct coral assemblages are recognizable in the Late Ordovician rocks of Gaspé Peninsula, two in the Honorat Group and two in the White Head Formation. The Honorat Group faunules consist of an association of: * Favistina honoratensis

Bolton, *Calapoecia anticostiensis* Billings and *Saffordophyllum* sp. A, overlain by * *Plasmoporella rarivesiculosa* n.sp., *Propora* sp., and *Paleofavosites* sp. A, along with the stromatoporoid *Beatricea* (*Aulacera*) sp. * The White Head Formation assemblages consist of: * *Propora conferta* Milne-Edwards & Haime, *P. speciosa* (Billings), *Calapoecia anticostiensis* Billings, *Catenipora* sp. aff. *C. aequabilis* (Teichert), *Paleofavosites* sp. B., *Lobocorallium vaurealensis* (Twenhofel), and *Bodophyllum* (?) sp. in the lower assemblage, and * *Paleofavosites capax* (Billings), *Propora* sp. aff. *P. speciosa* (Billings), *Catenipora* sp. and *Lobocorallium vaurealensis* (Twenhofel) in the upper assemblage. Several of the White Head species are common to Late Ordovician rocks of Anticosti Island, Quebec. [original summary]^1";

- 1821 s[1818] = "YOUNG G.A., ELIAS R.J. (1999).- Coral distribution and associations in the Upper Ordovician Stony Mountain Formation of Manitoba.- *Acta Universitatis Carolinae Geologica* 43, 1/2: 429-432.- FC&P 29-1, p. 8, ID=7008^Topic(s): distribution, ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: Canada, Manitoba^^1";
- 1822 s[1819] = "WORKUM R.H., BOLTON T.E., BARNES C.R. (1976).- Ordovician geology of Akpatok Island, Ungava Bay, District of Franklin.- *Canadian Journal of Earth Sciences* 13: 157-178.- FC&P 5-1, p. 32, ID=5382^Topic(s): geology, fossils; geology, paleontology; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Ordovician; Geography: Canada?^[an account of a borehole section through the Ordovician of Akpatok Island with descriptions of corals, stromatoporoids and conodonts]^1";
- 1823 s[1820] = "BOLTON T.E. (1986).- *Chaetetipora* (Anthozoa, Tabulata) in the Upper Ordovician rocks of central and eastern Canada.- *Current Research B, Geological Survey of Canada* 86-1B: 107-110.- FC&P 15-2, p. 35, ID=0719^Topic(s): taxonomy; Chaetetida Chaetetipora; Systematics: Porifera; Chaetetida; Stratigraphy: Ordovician U; Geography: Canada E^Three chaetetid coral specimens from the Late Ordovician (Richmondian-Gamachian) of Anticosti Island, Quebec and northeastern Manitoba are assigned to *Chaetetipora ellesmerensis* Norford, a species originally described from northern Ellesraere Island, Canadian Arctic.^1";
- 1824 s[1821] = "RIGBY J.K., DESROCHERS A. (1995).- Lower and Middle Ordovician demosponges of the Mingan Islands, Gulf of St. Lawrence, Quebec.- *Paleontological Society Memoir* 41 (*Journal of Paleontology* 60, 4, suppl.): 35 pp., 14 pls, 5 figs, 1 table.- FC&P 25-1, p. 45, ID=3046^Topic(s): taxonomy; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Ordovician M; Geography: Canada, Quebec^New collections, as well as original type material, of Lower and Middle Ordovician sponges from the Mingan Island Archipelago are described and figured from the Mingan and Romaine Formations. *Archaeoscyphia minganensis* (Billings, 1859), *Hudsonospongia minganensis* Raymond and Okulitch, 1940, *H. irregularis* Raymond and Okulitch, 1940, *H. duplicata* Raymond and Okulitch, 1940, *Zittelella varians* (Billings, 1861a), and *Eospongia roemeri* Billings, 1861, are redescribed from original type specimens and new collections. The species *Archaeoscyphia pulchra* (Bassler, 1927), *Rhopalocoelia clarkii* Raymond and Okulitch, 1940, *Psarodictyum magnificum* Raymond and Okulitch, 1940, and *Lissocoelia ramosa* Bassler, 1927 are reported and described from the Mingan Islands for the first time. To these sponges are added the new species *Anthaspidella amplia*, *Archaeoscyphia undulata*, *Hudsonospongia nodosa*, and *Zittelella grossa*, which are described from type specimens from the Mingan Formation. The assemblage from 12 localities from the Mingan Formation, and one from the Romaine Formation, represents one of the most diverse demosponge faunas from eastern North America. Sponges in most of the localities

- accumulated as transported debris or lag gravels, but locally, some grew in small reefoidal mounds and also accumulated as adjacent debris. [original abstract]^1";
- 1825 s[1822] = "DIXON O.A. (1974).- Late Ordovician Propora (Coelenterata, Heliolitidae) from Anticosti Island, Quebec, Canada.- Journal of Paleontology 48, 3: 568-586.- FC&P 4-1, p. 30, ID=5097^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: Canada, Quebec^Description anatomique et histologique de Propora conferta et de P. speciosa.^1";
- 1826 s[1823] = "ELIAS R.J., YOUNG G.A. (2000).- Enigmatic fossil encrusting an Upper Ordovician rocky shore on Hudson Bay, Canada, is a coral.- Journal of Paleontology 74, 1: 179-180.- FC&P 29-1, p. 8, ID=7005^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: Canada, Hudson Bay^An enigmatic encruster from the Upper Ordovician rocky shore exposed near Churchill, Manitoba, was recently described by Johnson et al. (1998). The specimen was found attached to a quartzite boulder enclosed in carbonate matrix. The matlike, calcareous fossil consists of densely packed, vertical, cylindrical columns with upward-radiating structures issuing from their centers. It was identified as a new genus and species, Storeacolumnella hudsonensis, of uncertain taxonomic affinity but with possible characteristics of sponges and calcareous green algae. In particular, the radiating structures within columns were compared with spicules of a sclerosponge and with the siphon system of siphonous green algae. * We are engaged in a comprehensive study of corals from the locality at which the enigmatic encruster was obtained. Based on material prepared to date, and following an examination of the two thin sections illustrated by Johnson et al. (1998, fig. 3), we can demonstrate that their specimen is a heliolitid tabulate coral. It represents the genus Ellisites Dixon, Bolton, and Copper, 1986. [introductory part of a short note]^1";
- 1827 s[1824] = "WESTPHAL K.W. (1974).- New fossils from the Middle Ordovician Platteville Formation of southwest Wisconsin.- Journal of Paleontology 48, 1: 78-83.- FC&P 4-1, p. 40, ID=5148^Topic(s): new taxa; paleontology, Hydrozoa ?; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Ordovician M; Geography: USA, Wisconsin^[description of Disconia pentamerus n.g. n.sp.]^1";
- 1828 s[1825] = "JOHNS R.A. (1994).- Ordovician lithistid sponges of the Great Basin.- Dissertation published by Nevada Bureau of Mines and Geology (NBMG) open-file report 94, 1; 140 pp., 16 pls.- FC&P 24-1, p. 74, ID=4506^Topic(s): taxonomy; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: Ordovician; Geography: USA, Great Basin^[The introduction into the characters used for classification of lithistid sponges includes a discussion of biospecies- and morphospecies-concepts, as well as morphological and phylogenetic methods in the taxonomy of sponges. Spicule types, skeletal architecture and canal systems realized by the lithistid demosponges are described and illustrated. Further the special problems of taxonomic classification within the polyphyletic "Lithistida" are summarized. Descriptive systematic paleontology is the major part of this work. All the sponge genera and species investigated belong to the Orthocladina, which have been investigated after thorough statistical analyzes of traditional classification characters such as channel distribution and pore size. The new findings leads to important revisions of the Orthocladina.] Extract from the abstract: Fossiliferous strata with abundant lithistid demosponges were studied at several horizons and localities within the Lower and Middle Ordovician Pogonip Group of the Great Basin. The collection of over 700 excellently preserved lithistid sponges from these localities has allowed a much-needed description and revision of the suborder Orthocladina. The family Anthaspidellida has been

redefined to include only those orthoclads with a fairly regular channel disposition and a skeleton typically dominated by dendroclones that horizontally join adjacent trabs. A new family, the Strepsolenidae, has been erected to hold those genera that have a more irregular channel pattern and a skeleton in which polyclonid dendroclones usually connect to each other to traps of different distances from the exterior. The taxonomy of many previously described sponges has also been revised. Four new genera and thirteen species are described.¹¹;

- 1829 s[1826] = "ELIAS R.J. (1980).- Upper Ordovician solitary rugose corals of the Cincinnati Arch region, Ohio - Indiana - Kentucky.- Geological Society of America, Abstracts with Programs 12, 5: 224-225.- FC&P 9-1, p. 31, ID=0247Topic(s): solitary; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: America N, Cincinnati ArchOnly two solitary species, Grewingkia canadensis and Streptelasma divaricans, are known from this horizon and area.¹¹;
- 1830 s[1827] = "ELIAS R.J. (1980).- Borings in solitary rugose corals of the Selkirk Member, Red River Formation (Late, Middle or Upper Ordovician), southern Manitoba.- Canadian Journal of Earth Sciences 17: 272-277.- FC&P 9-1, p. 55, ID=0248Topic(s): borings in; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician; Geography: Canada, ManitobaBorings occur in solitary rugose corals from the Selkirk Member of the late Middle or Upper Ordovician Red River Formation in southern Manitoba. They are assigned to Dictyoporus garsonensis n. ichnosp., which was produced by algae, and Trypanites weisei Magdefrau 1932, made by spionid polychaete annelids. Most, and possibly all, borings occurred while the host corals were alive and in life position. The location and relative abundance of borings support interpretations that unattached curved solitary corals lay with the convex cardinal side in the sediment and the concave counter side facing upward during life, whereas straight conical forms were oriented upright in the sediment. These ichnospecies suggest that host corals lived in very shallow marine environments. [original summary]¹¹;
- 1831 s[1828] = "ELIAS R.J. (1983).- Late Ordovician solitary rugose corals of the Stony Mountain Formation, southern Manitoba, and its equivalents.- Journal of Paleontology 57, 5: 924-956.- FC&P 13-1, p. 31, ID=0439Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Canada, ManitobaTwo large cratonic interior basins, the williston and Hudson, were situated within the Red River - Stony Mountain Solitary Province, which occupied most of North America during Late Ordovician time. Helicelasma selectum (Billings 1865), Deiracorallium angulatum gunni n.subsp., Loboccrallium trilobatum trilobatum (Whiteaves 1895), and Bighornia cf. B. patella (Wilson 1926) are known from the Stony Mountain Formation of southern Manitoba. The presence of identical species in Saskatchewan and Wyoming suggests that one assemblage inhabited the Williston Basin. The Hudson Basin assemblage comprises species that also occur in the williston Basin, species closely resembling williston Basin forms, and taxa that do not occur in the Williston Basin. Solitary Rugosa within the Red River - Stony Mountain Province in eastern North America are most closely related to those of the williston Basin. The eastern cratonic margin assemblage includes species that were introduced from the continental interior, species not found in the interior, and the genera Streptelasma and Bodophyllum, which were restricted to cratonic margin areas of the province. Taxa in western Canada and northern North America appear to be most closely related to those of the Hudson Basin. Assemblages in the southwestern United States are not known at the specific level, but the presence of Bighornia, Deiracorallium, and triangulate to trilobate species of Grewingkia and possibly Lobocorallim indicates that they belong to the Red River - Stony Mountain Province. Studies of

Ordovician solitary Rugosa suggest that cratonic interior basins were centres of evolution, diversification, and dispersion. The Middle to Late Ordovician diversification of Paleozoic corals coincide with the Tappan transgression, which was the most extensive in the Phanerozoic, and with the initial development of cratonic interior basins, which were characteristic of much of the Paleozoic. These factors may have been important in the Ordovician radiation of the Paleozoic fauna; in general.¹;

- 1832 s[1829] = "ELIAS R.J. (1982).- Latest Ordovician solitary rugose corals of Eastern North America.- *Bulletins of American Paleontology* 81, 314: 1-116.- **FC#038;P 11-2**, p. 29, ID=1828**Topic(s):** solitary; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Ordovician U; **Geography:** America NE^{This study comprises comprehensive taxonomic, paleoecologic, biostratigraphic, and paleobiogeographic analyses of latest Ordovician (Richmondian and Gamachian; Ashgill) solitary rugose corals in eastern North America. The corals are assigned to three provinces distinguished on the basis of assemblages and characteristic species. The distribution of these provinces, as well as taxa within them, was determined by regional environmental parameters related to paleogeography. [initial fragment of extensive summary; described taxa are: *Streptelasma divaricans* (Nicholson 1875), *Grewingkia canadensis* (Billings 1862), *G. deltensis* n.sp., and *G. rustica* (Billings 1858) in Richmondian of the Province; *Helicelasma randi* Elias 1981 and *Bighornia* cf. *B. patella* (A.E. Wilson 1926) in the Maquoketa Subprovince; *Streptelasma rankini* n.sp., *S. affine* (Billings 1865), *Helicelasma selectum* (Billings 1865), *Deiracorallium angulatum* (Billings 1862), *Grewingkia penobscotensis* n.sp., *G. pulchella* (Billings 1865), *Grewingkia* sp., *Lobocorallium trilobatum vaurealense* (Twenhofel 1928), *Kenophyllum?* sp., *Bodophyllum neumani* n.sp., *Bodophyllum?* sp., *B. englishheadense* n.sp., *Bighornia* cf. *B. patella* (A.E. Wilson 1926), and *Paliphyllum ellisense* (Twenhofel 1928) in the Maritime Subprovince; *Streptelasma leemonense* n.sp., *Streptelasma* sp., *S. subregulare* (Savage 1913), and *Bodophyllum shorti* n.sp. in the latest Ordovician (?Gamachian) Edgewood Province]¹;}
- 1833 s[1830] = "ELIAS R.J. (1982).- Paleocology and biostratinomy of solitary rugose corals in the Stony Mountain Formation (Upper Ordovician), Stony Mountain, Manitoba.- *Canadian Journal of Earth Sciences* 19: 1582-1598.- **FC#038;P 12-1**, p. 38, ID=1913**Topic(s):** ecology; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Ordovician U; **Geography:** Canada, Manitoba¹;
- 1834 s[1831] = "ELIAS R.J., BRANDT D.S., CLARK T.H. (1990).- Late Ordovician solitary rugose corals of the St. Lawrence Lowland, Quebec.- *Journal of Paleontology* 64, 3: 340-352.<http://www.jstor.org/pss/1305581>.- **FC#038;P 19-2.1**, p. 28, ID=2743**Topic(s):** ; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Ordovician U; **Geography:** Canada, Quebec^{Two species of solitary rugose corals occur in Late Ordovician strata of the St. Lawrence Lowland. *Grewingkia canadensis* (Billings 1862) appears in the upper part of the Nicolet River Formation (upper St. Hilaire Member) and is far more common in the overlying Pontgravé River Formation. A single specimen of *Streptelasma divaricans* (Nicholson 1875) is known from the Pontgravé River. Their presence confirms that this area is situated within the Richmond Province and that the upper Nicolet River, as well as the Pontgravé River, is Richmondian in age. Solitary Rugosa were introduced to this biogeographic province during an early Richmondian transgression, marked in the upper Nicolet River Formation by a coarser clastic interval. That event permits correlation between the St. Lawrence Lowland in the eastern part of the Richmond Province and the North American type Upper Ordovician (Cincinnatian Series) of the Cincinnati Arch region in the western part of the province. A comparative morphologic, paleoecologic, and biostratinomic analysis of}

- solitary corals indicates that normal, low-energy conditions were interrupted occasionally by high-energy events (probably storms) during deposition of the upper Nicolet River and Pontgravé River Formations. Water depth increased northwestward in the St. Lawrence Lowland area. Deposition of these siliciclastic prodelta to delta front sediments was generally continuous and the sedimentation rate was usually high because of rapid basin subsidence and comparatively close proximity to the Taconic Mountains. In the western part of the Richmond Province, farther from the source area, carbonate as well as clastic sediments accumulated, periods of nondeposition were more frequent, and the sedimentation rate was relatively low. Corals disappeared from the St. Lawrence Lowland area during the Richmondian, when delta top facies of the Bécancour River Formation succeeded the Pontgravé River Formation due to a glacio-eustatic regression and progradation of the Queenston Delta. [original abstract]^1";
- 1835 s[1832] = "BOLTON T.E. (1979).- Some Late Ordovician colonial corals from eastern Canada.- Paper geol. Surv. Canada 79-1B: 1-12.- FC&P 8-2, p. 38, ID=5716^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Canada E^[a new species of Favistina is described and the relationship of Favistina, Paleophyllum and Cyathophylloides is discussed]^1";
- 1836 s[1833] = "ELIAS R.J. (1983).- Middle and Late Ordovician solitary rugose corals of the Cincinnati Arch region.- US Geological Survey Professional Paper 1066N: 1-13.- FC&P 12-2, p. 36, ID=6222^Topic(s): solitary; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M/U; Geography: America N, Cincinnati Arch^^1";
- 1837 s[1834] = "NELSON S.J. (1981).- Solitary streptelasmatic corals, Ordovician of Northern Hudson Bay Lowland, Manitoba, Canada.- Palaeontographica A172, 1-3: 1-71, 3 tabs., 48 figs., 8 pls.- FC&P 10-2, p. 62, ID=6077^Topic(s): ; Rugosa, Streptelasmaticidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician; Geography: Canada^[two groups of solitary streptelasmatic rugosans are distinguished in the Middle-Upper Ordovician of North America: symmetrical corals (Grewingkia wigmorei sp.n., species of Salvadorea gen.nov.) and asymmetrical corals (some species of Grewingkia, species of Deiracorallium and Lobocorallium). Distribution, taxonomy and possible phylogeny of these corals is discussed; extracted from extensive summary]^1";
- 1838 s[1835] = "ELIAS R.J. (1981).- Solitary rugose corals of the Selkirk Member, Red River Formation (late Middle or Upper Ordovician), Southern Manitoba.- Bulletin geol. Surv. Can. 344: 1-53.- FC&P 10-2, p. 68, ID=6085^Topic(s): ; Rugosa, Streptelasmaticidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M/U; Geography: Canada, Manitoba^[systematic descriptions of streptelasmaticids, including new species of Grewingkia, Helicelasma and Deiracorallium; * in addition, a new family assigned to the Zaphrenticae is based on the new genus and species Complexophyllum leithi, which appears to show septal insertion on either side of a pair of counter septa and additional septa between the counter and alar clusters as well as usual rugosan insertion; * general remarks include a summary of Red River - Stony Mountain Province rugose coral faunas]^1";
- 1839 s[1836] = "BOLTON T.E., NOWLAN G.S. (1979).- A Late Ordovician fossil assemblage from an outlier north of Aberdeen. Lake, District of Keewatin.- Bulletin geological Survey of Canada 321: 1-26.- FC&P 9-1, p. 43, ID=0244^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Keewatin^A Late Ordovician fossil assemblage is described from limestone of an outlier on the Canadian Shield, north of Aberdeen Lake, District of Keewatin. The megafaunal assemblage includes the coral genera

- Palaeophyllum, Lobocorallium, Bighornia, Grewingkia, Saffordophyllum, Trabeulites, Calapoecia, Protochiscolithus, Paleofavosites, Tollina, and Troedssonites, and a new species of the cephalopod Armenoceras. Most of the coral species are characteristic of the Churchill River Group of the Hudson Bay area. The conodont fauna includes the biostratigraphically diagnostic species Plegagnathus dartoni s.f., P. nelsoni. s.f. and Belodina profunda, indicating a late Maysvillian to Richmondian age. Three new species of Panderodus are described, but not named formally, and a species of Walliserodus similar to Silurian forms is described and discussed. [original summary]^1";
- 1840 s[1837] = "PEL J. (1975).- Beatricea from the Ordovician of Hell Land, North Greenland.- Groenland Geol. Unders. Rapp 75: 31-34.- FC&P 6-2, p. 17, ID=0143^Topic(s): taxonomy; stroms, Beatricea; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Greenland^^1";
- 1841 s[1838] = "BOLTON T.E. (1988).- Stromatoporoidea from Ordovician rocks of central and eastern Canada.- Geological Survey of Canada Bulletin 379: 17-45.- FC&P 17-1, p. 40, ID=2158^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Canada^Species illustrated and described are: Labechia (2 species), Stromatocerium (2 species), Cystistroma (1 species), Pachystylostroma (?) (2 new species - P. copelandi, P. miriamae), Cystostroma (3 unnamed species), Aulacera (5 species), Clathrodictyon (4 species, 3 unnamed), Ecclimadictyon (1 species).^1";
- 1842 s[1839] = "STEWART L., ELIAS R.J., YOUNG G.A. (2010).- Stromatoporoids and colonial corals hosting borers and linguloid brachiopods, Ordovician of Manitoba, Canada.- Palaeoworld 19, 3-4: 249-255.- FC&P 36, p. 133, ID=6596^Topic(s): endobionts; endobionts, stroms, corals; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Ordovician; Geography: Canada, Manitoba^There have been very few published reports of stromatoporoids and colonial corals with borings that contain linguloid brachiopods; all are from the Ordovician and/or Silurian in just four areas of eastern Canada and northwestern Europe. Here, we report the discovery of an earlier Ordovician occurrence, in both stromatoporoids and corals, and expand the geographic range of such associations to central Canada. In the Upper Ordovician Selkirk Member of the Red River Formation, southern Manitoba, the stromatoporoid Stratodictyon and tabulate coral Protochiscolithus commonly contain cylindrical macroborings representing the ichnogenus Trypanites, almost certainly produced by worms. In a few specimens, a small proportion of borings contain single linguloids. The linguloids occur predominantly in borings with relatively large diameters, but their occurrence with respect to boring length and their vertical location within borings are random. They are interpreted as nestlers that occupied vacant borings throughout life. Although some of the borings were covered over by subsequent growth of the host or recolonization of its surface, there is no evidence of embedment structures in stromatoporoids or corals that would indicate interaction of the host with either the borers or linguloids. This is comparable to occurrences in the Ordovician of Manitoulin and Anticosti islands in eastern Canada, in that the linguloids are found within Trypanites borings without associated embedment structures. In the Silurian of Anticosti, Gotland, and the Welsh Borderlands, however, some borings were further developed into embedment structures during upward growth of the hosts, indicating that these relationships involved some type of symbiosis. [original abstract]^1";
- 1843 s[1840] = "DIXON O.A. (2010).- Endobiotic Cornulitids in Upper Ordovician Tabulate Corals and Stromatoporoids from Anticosti Island, Quebec.- Journal of Paleontology 84, 3: 518-528.- FC&P 36, p. 75, ID=6478^Topic(s): cornulitid endobionts; endolithic organisms; Systematics: Porifera Cnidaria; Stromatoporoidea

Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Anticosti Island^Conoidal shells of *Cornulites celatus* n.sp. occur commonly within host coralla of *Propora conferta* Milne-Edwards and Haime, 1851, sensu lato, from the Laframboise Member of the Ellis Bay Formation (Ashgill: Upper Ordovician) at Pointe Laframboise on western Anticosti Island. Examples have also been found at the same locality in the tabulate corals *Paleofavosites* sp., *Acidolites arctatus* Dixon, 1986, and *A. compactus* Dixon, 1986, and the stromatoporoid *Ecclimadictyon* sp., but not in other associated tabulate coral species. Growth interference between the shells and their hosts indicates a commensal relationship. *C. celatus* apparently had a more limited paleoenvironmental range than its principal coral host species, which occurs abundantly elsewhere on the island without its endobiotic partner. The diagnosis of *Cornulites* is emended to include forms having a two-layered shell wall with a distinctive outer layer consistently preserved as prismatic calcite. This new species extends the known stratigraphic range of cornulitids in commensal relationships with corals and stromatoporoids from the Silurian back to the Upper Ordovician. [original abstract]^1";

1844 s[1841] = "OTTE L.J. (1977).- Genotypic, ecologic and diagenetic variation in *Labechia huronensis* (Billings) 1865 from the Millersburg Member, Lexington Limestone (Middle Ordovician) of Kentucky.- North Carolina University; M.S. thesis, unpublished.- FC&P 8-1, p. 50, ID=02111^Topic(s): variability; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: USA, Kentucky^[unpublished]^1";

1845 s[1842] = "LEE D.-J., ELIAS R.J. (2000).- Paleobiologic and evolutionary significance of corallite increase and associated features in *Saffordophyllum newcombae* (Tabulata, Late Ordovician, southern Manitoba).- *Journal of Paleontology* 74, 3: 404-425.- FC&P 29-1, p. 60, ID=1118^Topic(s): increase; Tabulata, *Saffordophyllum*; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: Canada, Manitoba^*Saffordophyllum newcombae* Flower, 1961, displays unique abilities and an unprecedented range in types of corallite increase. Cerioid growth was characteristic, but colonies on soft substrates could grow in a tollinaform manner during early astogeny. The capacity for recovery from damage and partial mortality is amazing. Rejuvenation may have been accompanied by peripheral expansion in some cases. Rapid regeneration could involve axial increase. Circular lacunae that formed during recovery became sites of rapid lateral increase or corallite decrease. * Two types of axial increase occurred within coralla. Lateral increase was concentrated mainly along the basal wall and adjacent to certain circular lacunae. In typical cerioid parts of the corallum, lateral increase seldom yielded "adult" corallites, but incipient lateral offsets could be numerous. The level of colony integration was probably moderately high. There was likely soft-tissue continuity among polyps, coordination of polyp behavior, subjugation of individuals for the good of the colony, and perhaps astogenetic control. * *Saffordophyllum newcombae* is considered to be a tabulate coral, although one type of axial increase is similar to that in a few rugose corals and the other type of axial increase as well as possible peripheral expansion resemble modes of increase in some coralline sponges. Lateral increase is considered compatible with cnidarian rather than poriferan biology. Corallite size is typical of tabulates. *Saffordophyllum* may not be the direct ancestor of favositid tabulates, and may not even be closely related to them; *S. newcombae* is very different from *Paleofavosites* and *Favosites*. * The remarkable range in forms of increase discovered in *S. newcombae* demonstrates the critical need for detailed paleobiologic studies, if we are to understand the early evolutionary history of corals and to establish reliable criteria for distinguishing various coral groups and homeomorphs. [original abstract]^1";

- 1846 s[1843] = "LEE D.-J., ELIAS R.J. (2004).- Paleobiologic features of *Trabeculites maculatus* (Tabulata, Late Ordovician, southern Manitoba).- *Journal of Paleontology* 78, 6: 1056-1071.- FC&P 33-2, p. 18, ID=1119^Topic(s): biology; Tabulata, Trabeculites; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: Canada, Manitoba^Detailed analysis of certain growth characteristics in *Trabeculites maculatus* contributes to an understanding of the paleobiology and phylogeny of early tabulate corals. Some coralla of *T. maculatus* contain peculiar, vertically oriented cylindrical lacunae (open areas) that are lenticular, or in one case circular, in cross section. The nature of these structures and their relation to adjacent corallites suggest that they were formed by the coral in response to soft-bodied biotic associates of unknown taxonomic affinity. *Trabeculites maculatus* is an unusual tabulate coral featuring both axial and lateral modes of corallite increase. Axial increase was common, often occurring in association with rejuvenation following injury and less commonly involving normal, undamaged corallites. Lateral increase of normal corallites was typical, but this form of increase could also be involved in the termination of lacunae and occurred in response to a divergent growth pattern around the circular lacuna. Corallite decrease was fairly common, usually taking place adjacent to lenticular lacunae but in some cases involving normal corallites not associated with lacunae. Corallite fusion was uncommon; it could be either temporary or permanent. Conspicuous relocation of corallites and restructuring of corallite arrangement generally involved mass rejuvenation and/or regeneration, usually over a large surface area of the corallum. The growth features in *T. maculatus* are fundamentally the same as those in the co-occurring *Saffordophyllum newcombae*, including types of axial increase unknown in other tabulate corals. The basic paleobiologic similarity of these species supports the interpretation that the genera they represent are closely related phylogenetically. The relationship of these taxa to other tabulates, however, remains unresolved.^1";
- 1847 s[1844] = "BAE BOO-YOUNG, LEE DONG-JIN, ELIAS R.J. (2006).- Life-history strategies of a species of *Catenipora* (Tabulata; Upper Ordovician; southern Manitoba, Canada).- *Lethaia* 39, 2: 141-156.- FC&P 34, p. 43, ID=1248^Topic(s): growth style, chronometry; Tabulata, *Catenipora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Manitoba^Detailed study of coralla by transverse serial sections permits the determination and evaluation of life-history strategies (survival and growth characteristics) in response to different physical environments, for *Catenipora foersteri* Nelson, 1836 from the Selkirk Member, Red River Formation, in Manitoba. We recognize various modes of corallite increase: one type of axial increase, four types of lateral increase, and agglutinated patches of corallites in association with normal, undamaged corallites; and one type of axial increase, one type of lateral increase, and temporary agglutinated patches from the recovery processes of corallites damaged by sediment or bioclast influx. In addition, the formation of new ranks by lateral increase is the most effective method for rapid growth of a corallum or for reconstructing part of a corallum damaged by physical disturbances. Fluctuations in the tabularial area of corallites occur in cycles over vertical intervals ranging from 3.20 - 7.90 mm. We consider each cycle to represent annual growth. Average annual growth of three coralla ranges from 4.20- 6.27 mm. According to correlations between annual growth cycles and other growth characteristics, a high frequency of offsetting is associated with rapid vertical growth. Specifically, annual growth is relatively high in association with episodes of sediment or bioclast influx, probably generated by storms. In some coralla, however, annual growth is highest in the cycle characterized by few new corallites or by extraordinarily high rates of offsetting by normal, undamaged corallites as well as damaged corallites. This

- suggests that the vertical growth could also be affected by factors other than storm-related disturbances.¹";
- 1848 s[1845] = "EDWARDS J.C. (1988).- Lamottia (Favositida. Tabulata) from the Decorah Formation (Kirkfieldian, Ordovician) of Iowa.- Journal of Paleontology 62, 3: 424-426.- FC&P 17-2, p. 31, ID=2189^Topic(s): Tabulata, Lamottia; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: USA, Iowa^The early tabulate coral Lamottia heroensis has been identified from the Ion Member of the Decorah Formation (Upper Ordovician) in northeast Iowa. This extends the stratigraphic range of this species upward from Lower Chazyan to Kirkfieldian, and extends the geographic range from the Vermont - New York border area to include the north-central Midcontinent. Thin section and SEM studies strongly support the contention that the longitudinal pattern of alternating light and dark bands observed in corallite walls reflects a primary structural grain rather than a secondary diagenetic feature.¹";
- 1849 s[1846] = "BAE B.-Y., ELIAS R.J., LEE D.-J. (2008).- Morphometrics of Manipora (Tabulata; Upper Ordovician; southern Manitoba, Canada).- Journal of Paleontology 82, 1: 78-90.- FC&P 35, p. 62, ID=2360^Topic(s): morphometry; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Manitoba^^1";
- 1850 s[1847] = "YOUNG G.A., RUDKIN D.M., DOBRZANSKI E.P., ROBSON S., NOWLAN G.S. (2007).- Exceptionally preserved Late Ordovician biotas from Manitoba, Canada.- Geology 35, 10: 883-886.- FC&P 35, p. 67, ID=2372^Topic(s): preservation lagerstaetten; fossils Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Manitoba^^1";
- 1851 s[1848] = "TAPANILA L. (2004).- The earliest Helicosalpinx from Canada and the global expansion of commensalism in Late Ordovician sarcinulid corals (Tabulata).- Palaeogeography, Palaeoclimatology, Palaeoecology 215, 1-2: 99-110.- FC&P 33-2, p. 23, ID=1132^Topic(s): symbionts of; Tabulata, symbiosis; Systematics: Cnidaria problematica; Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Ontario^Spiral embedment cavities that formed around metazoan endosymbionts are preserved in the septa and intercorallite spaces of Columnopora and Calapoecia corals from Manitoulin Island, Ontario. These are the oldest described Helicosalpinx asturiana, and this report extends the range of these trace fossils from the Richmondian (Ashgill, Upper Ordovician) to the Givetian (upper Middle Devonian). The sinistrally coiled traces show regular morphology, suggesting a physiological basis for their shape. Coral growth parameters are not affected by the presence of Helicosalpinx, suggesting that the endosymbiont was not parasitic and not in direct competition for resources with the host. H. asturiana is interpreted as trace fossil evidence of commensalism. Two additional endosymbiotic traces occur in Late Ordovician Columnopora. The particular association of straight, cylindrical Chaetosalpinx with Columnopora is widespread during the Richmondian. A dependent association is suggested to have originated between the endosymbiont and Columnopora prior to the Richmondian expansion and to have continued into the Hirnantian (latest Ordovician). The association between this endosymbiont and host is the earliest known temporally and globally significant inter-metazoan symbiosis. Although host corals, Columnopora and Calapoecia, did not survive the end-Ordovician mass extinction events, both Chaetosalpinx and Helicosalpinx occur in other host corals during the Silurian and Devonian.¹";
- 1852 s[1849] = "COPPER P., MORRISON H. (1978).- Morphology and paleoecology of Ordovician tetradiid corals from the Manitoulin District, northern Ontario.- Canadian Journal of Earth Sciences 15, 12: 2006-2020.- FC&P 9-1, p. 44, ID=0279^Topic(s): Tabulata, Tetradiidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Ontario^The tetradiids were

the most common tabulate coral component of the Ordovician (Caradocian-Ashgillian) sequence in the Manitoulin District, locally abundant enough to form biostromal accumulations. Five species, assigned to four genera, including a new subgenus Paenetetradium, are recognized in the section. In sequence, from oldest to youngest, these species are: Tetradium (Tetradium) undulatum n.sp. from the Cloche Island Formation; Rhabdotetradium giganteum n.sp., Paratetradium capella n.sp., and Phytopsis cf. raceiaosum (Raymond) from the Cobourg Formation; and T. algae, or bryozoans, and, in biostrome concentrations, grew in very shallow waters.¹¹;

- 1853 s[1850] = "KOBBLUK D.R., NOOR I. (1990).- Coral microatolls and a probable Middle Ordovician example.- Journal of Paleontology 64, 1: 39-43.- FC&P 19-1.1, p. 58, ID=2677^Topic(s): reefs, microatolls; reefs; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician M; Geography: Canada, Ontario^A disc-shaped massive colony of Tetradium, from the Middle Ordovician Bobcaygeon Formation in southern Ontario, displays features of a coral microatoll. This is the first pre-Holocene coral microatoll yet described, indicating that some tabulate corals in level-bottom communities were growing as microatolls as do many modern colonial skeleton-secreting organisms. The microatoll therefore is not strictly a Quarternary or even a Cenozoic phenomenon, but has a fossil record that may span most of the Phanerozoic. This indicates that the special conditions necessary for microatoll growth have existed outside of reef environments, and were present before the advent of scleractinian coral reefs. It may be possible to use ancient microatolls to estimate absolute water depth at low tide, thereby providing a means for estimating maximum water depth on a local and regional scale.¹¹;
- 1854 s[1851] = "YOUNG G.A. (1995).- A new tetradiid coral from the Late Ordovician of Manitoba.- Canadian Journal of Earth Sciences 32, 9: 1393-1400.- FC&P 25-1, p. 37, ID=3022^Topic(s): new taxa; corals, Tetradiida; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: Canada, Manitoba^Tetradiids are common Ordovician fossils in many parts of the world. Their occurrence in the western interior of North America has been noted, but they have never previously been described from this region. Rhabdotetradium garsonense n.sp. occurs in the Selkirk Member of the Red River Formation at Garson, Manitoba (Late Ordovician, Maysvillian). This species is characterized by small corallites with diameters commonly 0.6 - 1.1 mm; in transverse sections these are separated from one another or occur in clumps or chains. The variability of corallite arrangement within single coralla of this species illustrates the difficulty of discriminating tetradiid genera. The diagnosis of Rhabdotetradium is revised to more clearly delineate the boundary between it and Paratetradium, which has corallites arranged contiguously in elongate chains.¹¹;
- 1855 s[1852] = "WEBB G.E. (1997).- Middle Ordovician Tetradium microatolls and a possible bathymetric gradient in tetradiid morphology.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 177-186.- FC&P 26-2, p. 27, ID=3711^Topic(s): microatolls, bathymetry; corals Tetradium; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician M; Geography: USA, Oklahoma^Tetradiid corals are abundant in the uppermost Pooleville Member of the Middle Ordovician Bromide Formation in South-central Oklahoma (USA). The regressional Pooleville Member consists of a series of stacked peritidal carbonate cycles, culminating in a regional unconformity. The vertical succession of facies in each cycle suggests an on-shore to off-shore transition from intertidal/supratidal desiccated microbial laminites, through bioturbated, poorly fossiliferous marls and micrites, to deeper subtidal fossiliferous marls and grainstones. Tetradiids occurred in the subtidal portion of each cycle. In successive cycles, the subtidal portion was shallower, or closer to shore, than that of the immediately

- preceeding cycle. The highest two cycles contain massive Tetradium, with microatolls confined to the highest cycle. The third highest cycle contains a Phytopsis (bundled tetradiid) biostrome and the next cycle down contains the finely-branching Rhabdotetradium. The occurrence of different tetradiids in successive cycles suggests a bathymetric gradient in tetradiid morphology with massive Tetradium in the shallowest settings and branching tetradiids in deeper settings. Recent scleractinian corals show a similar generalized bathymetric morphology gradient in many Indo-Pacific reefs. Pooleville Tetradium microatolls are the second oldest described metazoan microatolls, the oldest also being Tetradium.¹";
- 1856 s[1853] = "STOCK C.W., BENSON D.J. (1982).- Occurrence and distribution of fossils within and adjacent to Middle Ordovician bioherms in the southern Appalachians of Alabama.- 3rd North American Paleontological Convention, Proc. Volume 2: 517-524.- FC&P 11-2, p. 37, ID=1865^Topic(s): ; bryozoan reef; Systematics: Bryozoa; Stratigraphy: Ordovician M; Geography: USA, Alabama^Stromatoporoids are a minor constituent (1%) of the bryozoan-dominated bioherm about 5,5m thick in the Chickamauga limestone. A Pachystylostroma and a ?Labechiella are illustrated.¹";
- 1857 s[1854] = "RIGBY J.K., LEITH E.I. (1989).- Tiddalickia manitobensis, a new Dictyosponge, and an unusual specimen of the Lithistid sponge, Aulocopella winnipegensis Rauff, from the Ordovician of Manitoba.- Journal of Paleontology 63, 5: 550-553.http://www.jstor.org/pss/1305614.- FC&P 19-1.1, p. 62, ID=2690^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Canada, Manitoba^The new thin-walled vasiform dictyospongid hexactinellid, Tiddalickia manitobensis, is described from the Ordovician Red River Formation at McBeth Point on Lake Winnipeg, Manitoba. Vertical spicule bundles are an outer? part of the wall and horizontal spicule bundles an inner? different level within the wall. Bundle quadrules are only half the size of those in Tiddalickia quadrata Rigby and Webby, 1988. A complete anthaspidellid lithistid, Aulocopella winnipegensis Rauff, 1895, is described from a glacial erratic recovered from near Reston, Manitoba. [original abstract]¹";
- 1858 s[1855] = "CAMERON D., COPPER P. (1994).- Paleoecology of giant Late Ordovician cylindrical sponges from Anticosti Island, E. Canada.- Sponges in Time and Space [R.W.M. van Soest, T.M.G. van Kempen, J.-C. Braekman (eds)]: 13-21; Balkema, Rotterdam.- FC&P 23-2.1, p. 54, ID=4400^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Ordovician U; Geography: Canada, Anticosti Island^Aulacerids from the Ellis Bay Formation grew in an offshore tropical platform at or below wave base. Fallen fragments may be as thick as 25cm and as long as 2m. Forms include those with a wide core of large cysts surrounded by small cysts (Aulacera, s.s.) and a new genus (unnamed) with concentric lamellar surface penetrated by pillars. They are smooth, pustular, undulose, or nodular on the surface. They apparently grew upright, without roots, but reinforcing their bases by biocementation of the surrounding soft carbonate substrate.¹";
- 1859 s[1856] = "RIGBY J.K., NITECKI M.H. (1973).- New Archaeoscyphia (Porifera) from the Ordovician of Anticosti Island, Quebec.- Fieldiana Geology 33, 1: 1-10.- FC&P 4-1, p. 47, ID=5194^Topic(s): new taxa; Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Canada, Quebec^A new branched sponge Archaeoscyphia boltoni is described, from the lower Ellis Bay Formation in Anticosti Island, Quebec. The position of the species and genus within the family Anthaspidellidae is briefly discussed.¹";
- 1860 s[1857] = "COPPER P., GRAWBARGER D.J. (1978).- Paleoecological succession leading to a Late Ordovician biostrome on Manitoulin Island, Ontario.- Canadian Journal of Earth Sciences 15, 12: 1987-2005.- FC&P 9-1, p. 44, ID=0278^Topic(s): reefs biostromes,

- ecological succession; reefs ecology; Systematics: ;
 Stratigraphy: Ordovician U; Geography: Canada, Ontario^A
 4 m thick section in the late Ordovician sequence on Manitoulin Island
 revealed four successively shallowing carbonate environments, each with
 a distinctive fossil assemblage. The lowermost quieter water, muddy
 level bottom community was dominated by the brachiopod Zygospira. Next,
 increased laminar current action attracted smaller colonies of the
 tabulate corals Tetradium and Columnopora, and locally small banks of
 corals and stromatoporoids were built up. In the protected shallow
 subtidal community following, encrusting algae (Girvanella) and upright
 match-stick Hedstroemia were more important, alongside Columnopora. cup
 corals, and a diverse association of thick-shelled bivalves and
 gastropods. The short-term paleoecological succession terminated under
 turbulent conditions with large colonies of Labechia, rugose coral
 colonies of Cyathophylloides and tabulate corals such as Tetradium
 forming what is called the Wekwemikong biostrome.^1";
- 1861 s[1858] = "PRATT B.R., HAIDL F.H. (2002).- Reefs in a deteriorating
 epeiric sea: Upper Ordovician microbial biolithites, Red River Group,
 subsurface Saskatchewan, Canada.- Geological Society of America,
 Abstracts with Programs 34, 6: 65. [abstract] - FC&P ???,

 p. , ID=1419^Topic(s): reefs; reefs; Systematics: ;

 Stratigraphy: Ordovician U; Geography: Canada,

 Saskatchewan^1";
- 1862 s[1859] = "CROW C.J., BRANDE S., TURNER M.E., STOCK C.W., BENSON D.J.
 (2001).- Random sampling of carbonate mounds: an example from the Upper
 Ordovician of Alabama.- Sedimentary Geology 145: 173-187.- FC&P

 31-1, p. 68, ID=1643^Topic(s): reefs; reefs, Sampling;

 Systematics: ; Stratigraphy: Ordovician U; Geography:

 USA, Alabama^Paleontological and lithological studies of a
 carbonate mound provide the necessary data from which characterizations
 for that mound or locality can be constructed. These data-based
 characterizations are convenient mechanism for making qualitative
 comparisons with other mounds, as has been done in some previous
 studies that discussed Middle Ordovician (now considered Upper
 Ordovician) mounds of the Appalachian Basin. Each of these studies had
 a different focus, including the paleoecology of individual mound
 localities, issues of ecological zonation, and regional stratigraphical
 investigation. Quantitative comparisons are precluded among these
 studies because each mound was sampled using different procedures,
 resulting in paleontological data sets of dissimilar density and depth.
 Two mound localities from carbonates of the Upper Ordovician Chickmauga
 Group (Stones River equivalent) of Jefferson and Blount counties, AL,
 were chosen for study to investigate the application of random sampling
 techniques to mound populations in outcrop. One mound from each
 locality was completely censused to generate population compositional
 and structural data. The location and higher-level identification of
 each macrofossil on the surface of these mounds were recorded. These
 bryozoan-dominated data sets represent the best estimates available
 concerning the underlying population of mound constructors., dwellers,
 and occasional "visitors". Rarefaction analysis was used to
 predict the number of randomly chosen fossils needed to detect the
 major taxonomic groups from each of these populations. A computer
 program (TARGET) was written to validate rarefaction predictions by
 conducting random sampling experiments using census data sets. The
 program prompts for input of three user-defined variables that set the
 parameters of a sampling experiment and then throws randomly located
 sampling boxes at the mound data set, recording the results.
 Statistical analysis of results from these sampling experiments
 validated the predictions of rarefaction analysis and led us to employ
 a conservative approach for sampling additional mounds at these
 localities.^1";
- 1863 s[1860] = "HARLAND T.L., PICKERILL R.K., FILLION D. (1987).-
 Establishment and development of patch reefs in the intracratonic

- Ordovician sequence near Chicoutimi, Quebec.- *Lethaia* 20: 189-208.- **FC&P 16-2**, p. 34, ID=2085^**Topic(s): **reefs, patch reefs; reefs stroms; **Systematics: **; **Stratigraphy: **Ordovician M; **Geography: **Canada, Quebec^[stromatoporoids (probably *Stromatocentrum*) are significant contributors to the final phases of small reefs in the Middle Ordovician (late Trentonian to early Edenian)]^1";
- 1864 s[1861] = "ELIAS R.J., NOWLAN G.S., BOLTON T.E. (1988).- Paleontology of the type section, Fort Carry Member, Red River Formation (Upper Ordovician), southern Manitoba.- New Mexico Bureau of Mines & Mineral Resources, Memoir 44 [Wolberg D. L. (compiler): Contributions to Paleozoic Paleontology and Stratigraphy in Honor of Rousseau H. Flower]: 341-359.- **FC&P 18-1**, p. 18, ID=2205^**Topic(s): **geology, fossils; fossils geology; **Systematics: **; **Stratigraphy: **Ordovician U; **Geography: **Canada, Manitoba^^1";
- 1865 s[1862] = "PRATT B.R., HAIDL F.M. (2008).- Microbial patch reefs in Upper Ordovician Red River strata, Williston Basin, Saskatchewan: signal of heating in a deteriorating epeiric sea.- Geological Association of Canada, Special Paper 48 [Pratt B. R. et Holmden C. (eds): The Dynamics of Epeiric Seas]: 303-340. ISBN 978-1-89709-534-8.- **FC&P 35**, p. 100, ID=2428^**Topic(s): **carbonates microbial; microbial reefs; **Systematics: **; **Stratigraphy: **Ordovician U; **Geography: **Canada, Saskatchewan^These reefs defy the standard paradigm of reef evolution because the microbial framework and limited biota contrast markedly with the highly fossiliferous nature of other Middle and Upper Ordovician examples. Although ostensibly still marine, this indicates an ecologically stressed environmental setting. The Yeoman-Lake Alma transition and many similarly abrupt losses of faunal diversity in epeiric carbonate successions have been traditionally considered to record the onset of hypersalinity. A hitherto overlooked ecological factor is invoked instead: increased water temperature, a phenomenon that could have occurred in tropical epeiric seas when they became more restricted. [end-fragment of extensive abstract]^1";
- 1866 s[1863] = "YOUNG G.A., ELIAS R.J., WONG S., DOBRZANSKI E.P. (2008).- Upper Ordovician rocks and fossils in southern Manitoba.- Canadian Paleontology Conference Field Trip Guidebook 13, 97 pp.- **FC&P 35**, p. 117, ID=2454^**Topic(s): **excursion guidebook; geology fossils; **Systematics: **; **Stratigraphy: **Ordovician U; **Geography: **Canada, Manitoba^[field trip guidebook]^1";
- 1867 s[1864] = "POPE M.C., READ J.F. (1997).- High resolution stratigraphy of the Lexington limestones (late Middle Ordovician), Kentucky, U.S.A.: a cool-water carbonate clastic ramp in a technically active foreland basin.- In: James N. P. and Clarke J. A. D. (eds): Cool-water Carbonates, SEMP Special Publication 56: 410-429.- **FC&P 28-1**, p. 54, ID=3995^**Topic(s): **stratigraphy; stratigraphy; **Systematics: **; **Stratigraphy: **Ordovician M; **Geography: **USA, Kentucky^[Stromatoporoids and corals of the restricted lagoonal facies may indicate warmer, near-surface seawater temperatures especially in third-order highstands]^1";
- 1868 s[1865] = "OEKENTORP K. (2006).- Alfons Glinski.- *FC&P* 34: 114-115.- **FC&P 34**, p. 114, ID=7254^**Topic(s): **biographical; **Systematics: **; **Stratigraphy: **; **Geography: **^[list of coral papers by Glinski; attached is his portrait and links to his biographical note]^1";
- 1869 s[1866] = "BOLTON T.E. (2001).- Ordovician megafauna, southern Baffin Island, Nunavut.- Geological Survey of Canada Bulletin 557: 39-158.- **FC&P 30-1**, p. 36, ID=7080^**Topic(s): **; paleontology; **Systematics: **; **Stratigraphy: **Ordovician; **Geography: **Canada, Arctic^[Labechia sp. from the Frobisher Bay (Middle Ordovician) and Amadjuak (early Late Ordovician, Edenian-early Maysville) formations is described and figured; *Cystostroma* sp. from

- the Amadjuak Formation is also described and figured; a specimen of *Rosenella* sp. from the Amadjuak Formation at the famous Silliman Fossil Mountain locality is mentioned but not described or figured¹;
- 1870 s[1867] = "YOUNG G.A., ELIAS R.J. (1995).- Latest Ordovician to earliest Silurian colonial corals of the East-central United States.- *Bulletins of American Paleontology* 108, 347: 1-148.- **FC**;P 25-1, p. 37, ID=3023Topic(s): monograph; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U / Silurian L; Geography: USA central E^A distinctive assemblage of colonial corals occurs in uppermost Ordovician (Gamachian) to lowermost Silurian (lower Rhuddanian) strata within the east-central United States. This Edgewood Assemblage is strikingly different from Late Ordovician assemblages that preceded it in other parts of the North American cratonic interior, and differs from the Silurian assemblage that succeeded it. The Edgewood Assemblage existed during an important time of global environmental change and mass extinction. Some of the taxa have an Ordovician character; these include the youngest North American tetradiid, which is among the last representatives of an important Ordovician order. Other taxa represent first appearances of typically Silurian forms: the oldest definite plasmoporida, the earliest North American Halysites, and the first pycnostylid. [first fragment of extensive summary]¹;
- 1871 s[1868] = "ELIAS R.J., YOUNG G.A. (1992).- Biostratigraphy and biogeographic affinities of latest Ordovician to earliest Silurian corals in the east-central United States.- In Webby B.D. & Laurie J.R. (eds.): *Global Perspectives on Ordovician Geology - Proceedings of the VIth International Symposium on the Ordovician System*, University of Sydney, Australia, 15-19 July 1991; A.A. Balkema, Rotterdam]: 205-214.- **FC**;P 22-1, p. 32, ID=3385Topic(s): biostratigraphy, biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician Silurian; Geography: USA central E^A uppermost Ordovician (Gamachian) to lowermost Silurian (lowermost Llandovery) strata in the east-central United States contain a distinctive association of corals, the Edgewood Assemblage. This assemblage is dominated by solitary Rugosa of the genus *Streptelasma*. Other Rugosa, including the solitary forms *Keelophyllum*, *Grewingkia*, and *Bodophyllum*, and colonial forms *Pycnostylus* and *Palaeophyllum*, are rare. The solitary rugosans were evidently derived from species previously restricted to the North American continental margin, and are similar to those in the Dalmanitina Beds (Hirnantian) or possibly lowermost Llandovery beds of Ostergotland, Sweden, and the Guanyinqiao Beds (Hirnantian) of Guizhou Province, China. Among the Tabulata, Paleofavosites, Propora, and Halysites are most common. Catenipora, Aulopora, Rhabdotetradium, Protaraea, Acidolites, and Plasmopora are rare. Closest affinities are with tabulates in the Ellis Bay (Gamachian) and Becscie (uppermost Gamachian-lowermost Llandovery) formations of Anticosti Island and the Grande Coupe beds (Ashgill), Matapedia Group, of Gaspé Peninsula, Quebec. The Edgewood Assemblage and succeeding Silurian coral assemblage are useful for age determination and correlation of Gamachian to lower Llandovery (Rhuddanian) strata in the east-central United States.¹;
- 1872 s[1869] = "ELIAS R.J., YOUNG G.A. (1998).- Coral Diversity, Ecology, and Provincial Structure During a Time of Crisis: The Latest Ordovician to Earliest Silurian Edgewood Province in Laurentia.- *Palaios* 13, 2: 98-112.<http://www.jstor.org/pss/3515483>.- **FC**;P 27-1, p. 46, ID=3801Topic(s): diversity, ecology, biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician Silurian; Geography: Laurentia^The latest Ordovician to earliest Silurian Edgewood Province in the cratonic interior of Laurentia contained a post-extinction coral fauna. These corals inhabited a broad range of shallow-marine, carbonate environments. Diversity generally increased

along a gradient from restricted, low-energy, relatively turbid conditions, to open, high-energy, low-turbidity conditions. Changes in diversity involved progressive addition or subtraction of stenotopic species within a single association dominated by opportunistic, ecologic generalists. Patterns and trends in diversity, abundance, and distribution reflected locally variable environmental parameters and an overall gradient from the continental interior toward the open ocean. Structural characteristics of the Edgewood Province differed from those of Late Ordovician pre-extinction and Early Silurian recovery faunas in the Laurentian cratonic interior. These included the low total diversity, the abundance and strong dominance of a single, solitary rugosan species, and the lack of distinct, specialized, recurring species associations. The origin, overall structure, and fate of the province were determined by factors operating on a broad scale. Nutrient enrichment and related environmental destabilization in the Laurentian epeiric sea during the end-Richmondian regression were probably significant factors in extinctions among Late Ordovician "perched faunas", including corals. This would have occurred as nutrients provided by runoff from expanding terrestrial areas became concentrated in the shrinking sea. During the Gamachian and early Rhuddanian, elevated nutrient levels and environmental instability within the small sea were likely instrumental in maintaining the structure of the Edgewood Province. By the late Rhuddanian, transgression had expanded the sea and reduced the effects of runoff sufficiently to permit the Silurian recovery of corals.¹;

- 1873 s[1870] = "SCRUTTON C.T. (1975).- Corals and stromatoporoids from the Ordovician and Silurian of Kronprins Christian Land, Northeast Greenland.- Medd. om Groenland 171, 4: 1-43.- FC&P 5-1, p. 32, ID=5381Topic(s): taxonomy; corals, stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Ordovician Silurian; Geography: Greenland NEThe Lower Palaeozoic stratigraphy of Northeast Greenland is revised on the basis of coral and stromatoporoid faunas. 10 species of Rugosa, 15 (including 2 new) species of Tabulata and 2 species each of heliolitids and stromatoporoids are described.¹;
- 1874 s[1871] = "DIXON O.A. (1986).- The heliolitid coral Acidolites in Ordovician-Silurian rocks of Eastern Canada.- Journal of Paleontology 60, 1: 26-52.- FC&P 15-1.2, p. 34, ID=0821Topic(s): taxonomy; Heliolitida, Acidolites; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician / Silurian; Geography: Canada EAcidolites Lang, Smith and Thomas occurs in upper Middle and Upper Ordovician, Lower and lower Middle Silurian rocks of Ontario and Quebec. On Anticosti Island, Quebec, the genus is represented by A. tenuis (Billings) in the Upper Ordovician (Gamachian) Ellis Bay Formation; the new species A. arctatus, A. compactus and A. helianthus in the Ordovician-Silurian boundary beds at the top of the Ellis Bay Formation; the new species A. arctatus, A. compactus and A. lindstromi in the lower Llandoveryian Becscie Formation; A. arctatus in the mid-Llandoveryian Gun River Formation; and an unnamed species in the upper Llandoveryian Jupiter Formation. The lower Llandoveryian Clemville Formation of the Gaspé Peninsula, Quebec, contains Protaraea clemvillensis Park, now considered to be Acidolites. The upper Middle to lower Upper Ordovician Cobourg Formation near Ottawa, Ontario, contains A. cf. arctatus, formerly included in Protaraea vetusta (Hall). The lower Wenlockian Amabel Formation in southern Ontario contains a species of Acidolites as yet unnamed.¹;
- 1875 s[1872] = "MCAULEY R.J., ELIAS R.J. (1990).- Latest Ordovician to earliest Silurian solitary rugose corals of the east-central United States.- Bulletins of American Paleontology 98, 333: 82 pp., 14 pls.- FC&P 19-2.1, p. 28, ID=2744Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U / Silurian L; Geography: USA central E¹;
- 1876 s[1873] = "ELIAS R.J. (1992).- New information on latest Ordovician to

earliest Silurian solitary rugose corals of the east-central United States.- Oklahoma Geological Survey, Bulletin 145 [Chaplin J.R. & Barrick J.E. (eds.): Special Papers in Paleontology and Stratigraphy - A Tribute to Thomas W. Amsden]: 113-125.- **FC**;P 22-1, p. 32, ID=3384^**Topic(s)**: **new records**; **Rugosa**; **Systematics**: **Cnidaria**; **Rugosa**; **Stratigraphy**: **Ordovician U** & **Silurian L**; **Geography**: **USA central E**^New information on latest Ordovician to earliest Silurian solitary Rugosa of the east-central United State is of biostratigraphic, paleoecologic, and paleoenvironmental significance. The distribution of these corals indicates an age of Early Llandoveryian for the youngest strata of the Keel Formation in south-central Oklahoma. Basal beds of the Cochrane Formation, which overlies the Keel, are evidently diachronous, ranging in age from the Early Llandoveryian to late Early or younger Llandoveryian. In west-central Illinois and northeastern Missouri, solitary corals indicate that the Bowling Green Dolomite is a discrete unit that is younger than the Noix Limestone and Bryant Knob Formation and the Cyrene Formation, which is a lateral facies equivalent of the Noix-Bryant Knob. In northeastern Illinois, Streptelasma subregulare occurs beneath a bed containing Early Llandoveryian graptolites in the Schweizer Member of the Wilhelmi Formation. That coral has a range of Gamachian to early Early Llandoveryian, and it remains a possibility that Schweizer strata below the position of the graptolite bed are Gamachian in age. Coralla of S. subregulare are abundant on several beds immediately above stromatolithes in the basal Wilhelmi at one locality, suggesting that the species could live in very shallow water and thrived when normal marine conditions appeared during the latest Ordovician-earliest Silurian transgression that brought seawater over the eroded surface of the underlying Maquoketa Group. Directional orientations of those coralla indicate currents from the south and possibly southwest. Data from the Mosalem Formation in northwestern Illinois and eastern Iowa confirm that solitary rugose corals of the Edgewood and Silurian assemblages do not co-occur and that the Edgewood assemblage was succeeded by the Silurian assemblage.^1";

1877 s[1874] = "ELIAS R.J., YOUNG G.A. (2001).- Rugose coral morphology during time of crises: the latest Ordovician to earliest Silurian Edgewood Province in Laurentia.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 034-040.- **FC**;P 30-1, p. 19, ID=7060^**Topic(s)**: **morphology**, **time of crisis**; **Rugosa**; **Systematics**: **Cnidaria**; **Rugosa**; **Stratigraphy**: **Ordovician U** & **Silurian L**; **Geography**: **America N**, **Edgewood Province**^Analysis of the post extinction Edgewood rugosan fauna reveals that basic morphologic patterns related to the latest Ordovician mass extinction are similar to those for the Late Devonian and latest Permian mass extinctions. Advantageous characters during times of crisis are solitary form, fasciculate colony type, simple morphology, and high variability. Characters associated with susceptibility to extinction are colonial form in general, cerioid colony type in particular, and complex morphology. * Nutrient enrichment and related environmental destabilization in the Edgewood sea probably favored solitary corals and colonies with low integration. Such conditions would have been ideal for the dominant species Streptelasma subregulare, a solitary, morphologically simple but extraordinarily variable, opportunistic, ecologic generalist. Solitary and fasciculate corals were perhaps best able to cope with increased movement of sediment, which may have occurred during the latest Ordovician regressive phase. * within the Edgewood Province, diversity and morphologic complexity generally increased along an environmental gradient from low energy, relatively turbid, restricted conditions, to high energy, low turbidity, comparatively open conditions. Only species that produced morphologically simple skeletons were able to survive in restricted, presumably stressful conditions. The more complex coralla

of species confined to favorable open marine conditions may have permitted firmer attachment of polyps and greater polyp activity. This would have been advantageous for survival in higher water energy and for rejection of coarser sediment. The ability of *S. subregulare* to produce a wide range of morphologies suitable for survival throughout the environmental gradient was evidently instrumental in its success during this time of crisis. [original abstract]^1";

1878 s[1875] = "BOLTON T.E. (1981).- Late Ordovician and early Silurian Anthozoa of Anticosti Island, Quebec.- Subcommission on Silurian Stratigraphy, Ordovician-Silurian Boundary Working Group. Field Meeting, Anticosti-Gaspe, Quebec 1981, vol. II: Stratigraphy and Paleontology [P.J. Lesperance (ed.)]: 107-135.- FC&P 10-2, p. 73, ID=6083^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Ordovician U - Silurian L; Geography: Canada, Ontario^Corals are present throughout Ordovician and Silurian rocks of Anticosti Island; they are the dominant elements of the biostromes and/or bioherms in the upper beds of each formation. Distinct Late Ordovician and Early Silurian coral assemblages are illustrated for the upper Ellis Bay, Becscie, Gun River, Jupiter and Chicotte formations. Only a few taxa range throughout the sequence. [original summary]^1";

1879 s[1876] = "PANDOLFI J.M. (1985).- Late Ordovician and Silurian of the Eastern Great Basin, Part 5. Colonial Corals from the Ely Springs Dolomite.- Contr. Biol. Geol. Milwaukee Public Museum 61: 1-95.- FC&P 15-2, p. 60, ID=6752^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Ordovician U - Silurian; Geography: USA, Great Basin^Twenty species of colonial rugose and tabulate corals from the Late Ordovician Ely Springs Dolomite of the Eastern Great Basin in Nevada and Utah are described. Included are two new tabulate species. *Agetolites budgei* and *Catenipora sheehani*. The colonial corals from the basal Ixex Member include *Calapoecia anticostiensis* and *Nyctopora* sp. Colonial corals from the Lost Canyon Member are *Calapoecia anticostiensis*, *Paleofavosites poulsenii*, *P. okulitchi*, *P. sp. cf. P. capax*, *P. mccullochae*, *Palaeophyllum* sp. cf. *P. radugini*, *P. gracile*, *P. humei*, ? *Billingsaria parvituba*, *Agetolites budgei* n.sp., *Catenipora workmanae*, *C. sp. cf. C. foerstei*, and *Tollina* sp. Colonial corals from the Floride Member include *Calapoecia anticostiensis*, *C. sp. cf. C. coxi*, *Paleofavosites poulsenii*, *P. mccullochae*, *P. okulitchi*, *P. sp. cf. P. transiens*, *P. sp. cf. P. capax*, and ? *Billingsaria parvituba*. The colonial corals from the Ely Springs Dolomite are characteristic of the 'Arctic Ordovician' faunal belt. [original summary]^1";

1880 s[1877] = "NESTOR H., COPPER P., STOCK C.W. (2010).- Late Ordovician and Early Silurian stromatoporoid sponges from Anticosti Island, eastern Canada: crossing the O/S mass extinction boundary.- NRC Research Press, Ottawa, 163 pp., 28 text-figs., 28 pls. ISBN 13 9780660199306.- FC&P 36, p. 118, ID=6560^Topic(s): extinctions O/S; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician U - Silurian L; Geography: Canada, Anticosti Island^During Late Ordovician and Early Silurian time, from 450 to 428 million years ago, stromatoporoid sponges were some of the most common and abundant fossils in shallow water tropical settings of the Anticosti Basin (Gulf of St Lawrence). They formed dense, massive coralline skeletons of calcium carbonate, some up to a meter or more across, especially in reef environments, but also in deeper waters of the Anticosti shelf, down to the margins of the photic zone, where light faded. The Anticosti Basin reveals one of the most fossiliferous carbonate sequences worldwide for rocks of this age, straddling a global mass extinction boundary, and thus revealing not only those taxa that became extinct, but also how the seas were repopulated in an equatorial setting after the mass extinction. The mass extinction has been correlated to globally cooling climates of the time, and southern hemisphere glaciation in North Africa. This

monograph describes, for the first time, the skeletal architecture of these abundant and exquisitely preserved sponges from Anticosti, and includes more than 300 skeletons selected from ca. 2000 field localities [3000 skeletons from 200 localities?!], assigned to 14 genera, of which 4 are new, and 35 stromatoporoid species, of which 18 are new. These are illustrated by 56 figures and plates and fill a major gap in our global knowledge of the reef building stromatoporoids, especially during the Early Silurian and latest Ordovician. All materials are precisely geographically and stratigraphically defined from the Vaureal through Chicotte formations over a nearly a kilometer thick section, and their ecologic distribution plotted across shallow to deeper water facies. Oil and gas exploratory drilling in the Gulf of St Lawrence will ultimately reveal what happened in the deeper water offshore facies, not exposed on Anticosti Island itself. [original abstract]^1";

- 1881 s[1878] = "TAPANILA L., COPPER P. (2002).- Endolithic trace fossils in Ordovician-Silurian corals and stromatoporoids, Anticosti Island, eastern Canada.- Acta Geologica Hispanica 37, 1: 15-20.- FC&P 31-2, p. 31, ID=1671^Topic(s): endobionts, trace fossils; endolithic trace fossils; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Ordovician Silurian; Geography: Canada E^Bioerosion was a significant process in the destruction of reef-building skeletons in early and mid-Paleozoic marine carbonate settings. Ordovician-Silurian corals and stromatoporoids from Anticosti Island show a limited diversity of macroborings, dominated by Trypanites, but also includes rare of an Ordovician bivalve boring (Petroxestes pera), described for the first time in Early Silurian stromatoporoids. Two problematic embedment structures, one containing lingulid brachiopods, resemble borings but did not contribute to bioerosion. The distribution of the embedment structures and Petroxestes pera are restricted by facies and skeletal substrate. Trypanites is relatively nonspecific, occurring in reef and off-reef facies and in most skeletal substrates; it does not appear to have been affected by the Late Ordovician mass extinction. ^1";
- 1882 s[1879] = "JOHNSON M.E., BAARLI B.C. (1987).- Encrusting corals on a latest Ordovician to earliest Silurian rocky shore, southwest Hudson Bay, Manitoba, Canada.- Geology 15: 15-17.- FC&P 16-1, p. 64, ID=1974^Topic(s): rocky shores; Tabulata, ecology; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician / Silurian; Geography: Canada, Manitoba^Paleozoic tabulate corals are generally thought to have been free standing, with flattened disc-shaped to dome-shaped morphology providing a degree of stability in shallow-water, high-energy environments. The ability to encrust has previously been suggested by patterns of competitive overgrowth in certain species. Definitive proof of encrustation by favositid corals is exhibited in an extraordinary example of an ancient rocky shore exposed for 350 m on Hudson Bay near Churchill, Manitoba. Carbonate strata attributed to the Upper Ordovician Port Nelson or Lower Silurian Severn River Formation locally transgress a massive Precambrian quartzite. An ancient shoreface is clearly marked by large, smoothly eroded boulders of the dark quartzite, commonly 2-10 m in diameter. The boulders are burried in coarse carbonate debris, but corals up to 20 cm in diameter are found cemented directly onto the surface of some boulders. Deep pitting of many boulders to a depth of 2-3 cm was contemporaneous and may have been promoted by unpreserved encrusters such as sponges or anemones.^1";
- 1883 s[1880] = "TAPANILA L., COPPER P. (2001).- Environmental controls on bioerosion in a Paleozoic carbonate ramp, Anticosti Island, Quebec.- Geological Association of Canada Annual Meeting, St. Johns.- FC&P 30-1, p. 37, ID=1548^Topic(s): bioerosion; bioerosion, ecology; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: Canada, Quebec^Trypanites is the dominant macroboring in corals and stroms,

[40% bored] at the Ordovician/Silurian boundary. Boring frequency increased in denser and higher forms and is postulated to have been directly proportional to water depth. There is no change in boring frequency at the O/S boundary. Denser colonies offer borers greater strength and allow them to avoid lining borings. Skeletons that were buried rapidly are less bored. [abbreviated abstract] ^1";

- 1884 s[1881] = "COPPER P. (2001).- Reefs during the multiple crises towards the Ordovician-Silurian boundary: Anticosti Island, eastern Canada, and worldwide.- Canadian Journal of Earth Sciences 38, 2: 153-171.- FC&P 30-1, p. 5, ID=1608^Topic(s): reefs, extinctions; reefs; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: Canada E^Multiple latest Ordovician (Rawtheyan-Hirnantian) glaciations in central Africa, with concomitant global sea-level lowstands and cooler, restricted, equatorial carbonate shelves and ramps, interrupted by warmer interstadial highstands, had a dramatic global impact on the tropical shallow-water reef ecosystem and carbonate production. With the Ordovician-Silurian boundary strata on Anticosti Island as a global standard for a carbonate shelf-ramp setting, the latest Ordovician and earliest Silurian reveal three reef phases, ended by three extinctions. The first extinction, towards the end of the Rawtheyan, affected the last "Richmondian"-type reefs (Vaureal Formation, Mill Bay Member). The second extinction was less pronounced, ending with reefs at the base of the Prinsta Member (Ellis Bay Formation), interpreted as the top of the Normalograptus extraordinarius graptolite Subzone. The third and most severe extinction phase capped the Laframboise patch reef complex (Ellis Bay Formation), at the top of the Normalograptus persculptus Zone. In the paleotropics, the Hirnantian interglacials showed higher biodiversity than either the preceding Rawtheyan or following Rhuddanian (early Llandovery) warm intervals, a feature perhaps achieved by high innovation rates via introduction of "Silurian" reef biotas during the Hirnantian. The Anticosti reef succession is compared with latest Ordovician reefs from northwestern Europe (Baltic Basin and UK), the northwestern margins of Gondwana (Spain and Austria), the Urals, Siberia, Kazakhstan, northeast Russia, and China. Reefs show a global decline from the late Caradoc through late Ashgill, marked by hiatuses towards the O-S boundary. A protracted 3-4 million-year recovery phase for Early Silurian tropical marine biotas, generally without reefs, marked the succeeding Rhuddanian; full reef recovery was delayed until the mid-Aeronian. [original abstract]^1";
- 1885 s[1882] = "COPPER P. (1989).- Upper Ordovician and Lower Silurian reefs of Anticosti Island, Quebec.- Canadian Society of Petroleum Geologists, Memoir 13: 271-276.- FC&P 18-1, p. 19, ID=2208^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Ordovician U - Silurian L; Geography: Canada, Quebec^^1";
- 1886 s[1883] = "COPPER P. (1978).- Paleoenvironments and paleocommunities in the Ordovician-Silurian sequence of Manitoulin Island.- Michigan Basin geol. Soc., spec. Pap. 3: 41-61.- FC&P 9-1, p. 54, ID=5845^Topic(s): biocoenoses; ecology; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: Canada, Manitoulin Isl.^During Middle Ordovician (Caradocian / Blackriverian) to Late Silurian time (Ludlovian / Lockportian) the Manitoulin area on the northeastern fringes of the Michigan Basin were covered by shallow, subtropical to tropical seas. The area was situated south of the paleoequator with a continental landmass composed of weathered, probably hilly, unvegetated Precambrian rock terrain to the North and East. Prevailing long-shore current systems probably moved water counter-clockwise from the Appalachian region as deduced from the presence and thickness of black, green and red shales during Late Ordovician and Early Silurian, and the probable location and size of paleo-continent. Dominance of carbonate sediments and occurrence of red beds in the sequence, presence of rich calcareous algal flora,

stromatoporoid, tabulate and rugose coral fauna, prominent sponge-coral biostromes of the Ordovician, bioherms of the Manitoulin Dolomite (Llandoveryan), biostromes of the Fossil Hill Formation and bioherms of the Amabel Formation (Wenlockian-Ludlowian) indicate equatorial climates and prevailing shallow conditions. Deeper water phases and phases characterized by rapid influx of mud in shallow waters, periodically prevented growth and proliferation of benthic communities. The figures show a reconstruction of the different communities corresponding to the special facial development.^1";

- 1887 s[1884] = "BOLTON T.E. (1981).- Ordovician and Silurian Biostratigraphy, Anticosti Island, Quebec.- Subcommittee on Silurian Stratigraphy, Ordovician-Silurian Boundary Working Group. Field Meeting, Anticosti-Gaspe, Quebec 1981, vol. II: Stratigraphy and Paleontology [P.J. Lesperance (ed.)]: 41-59.- FC&P 10-2, p. 75, ID=6095^Topic(s): biostratigraphy; fossils, stratigraphy; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: Canada, Ontario^[this paper reviews the stratigraphic distribution of stromatoporoids (and many other fossil groups) in the Anticosti section; the following species are illustrated but not described: Ecclimadictyon fastigiatum, Labechia n.sp. aff. L. mirabilis - L. banksi, Intexodictyon sp., Labechia sp. aff. L. prima - L. aldonensis, Labechiella sp. aff. L. regularis group, Clathrodictyon sp. aff. C. borealis, C. sp. aff. C. variolare group, C. sp. aff. C. regulare, C. sp., Actinodictyon sp. cf. A. suevicum, Ecclimadictyon sp.]^1";
- 1888 s[1885] = "FREITAS T.A.de (1990).- Stratigraphy, mud buildups, and carbonate platform development of the Upper Ordovician to Lower Devonian sequence, Ellesmere, Hans, and Devon islands, Arctic Canada.- Ottawa University Unpubl. Ph.D. thesis; xvi + 441 pp.- FC&P 20-1.1, p. 15, ID=2790^Topic(s): reefs, carbonates; reefs; Systematics: ; Stratigraphy: Ordovician U - Devonian L; Geography: Canada, Arctic^1";
- 1889 s[1886] = "LAUB R.S. (1979).- The corals of the Brassfield Formation (Middle Llandovery; Lower Silurian) in the Cincinnati Arch region.- Bulletin of American Paleontology 75, 305: 1-457.- FC&P 9-1, p. 35, ID=0264^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Llan; Geography: America N, Cincinnati Arch^Fifty-four species of corals (29 rugose, 19 tabulate, 6 heliolitid) have been identified from the Brassfield Formation (limestone, dolomite and claystone of mid-Llandovery [Lower Silurian] age) in the Cincinnati Arch region of the United States. Included are one new rugosan genus (Schizophylactis), four new rugosan species (Streptelasma scoleiforme, Dinophyllum semilunum, Paliphyllum regulare, Pycnactis tenuiseptatus), three new tabulate species (Favosites densitabulatus, Catenipora favositomima, Syringolites vesiculosus), and one new rugosan subspecies Paliphyllum suecicum Neumann 1968 brassfieldense). Coral assemblages of different, apparently environmentally controlled character are concentrated in the north and the southeast parts of the region. The Brassfield coral fauna appears to have been largely restricted to the present Cincinnati Arch region during mid-Llandovery time. Closest affinities on the species level during this period are with the corals of Anticosti Island (Canada). Eight of twelve species pre-date the mid-Llandovery, some existing as early as the Late Ordovician. The oldest members of the Brassfield coral fauna were found in a number of areas throughout the world, rather than in a single ancestral homeland. At least half the coral species survived the end of the mid-Llandovery, and spread into a large portion of the submerged continental areas of the world.^1";
- 1890 s[1887] = "LAUB R.S. (1975).- The ancestry, geographical extent, and fate of the Brassfield Coral Fauna (Middle Llandovery, North America).- Bulletin of American Paleontology 67, 287: 275-286.- FC&P 4-2, p. 58, ID=5278^Topic(s): phylogeny; Anthozoa;

- Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Llan; Geography: USA, Ohio, Indiana, Kentucky^To date, 55 coral species have been identified from the Brassfield Formation of Middle Llandovery age, in the Cincinnati Arch area (SW Ohio, SE Indiana and N Central Kentucky). This fauna was restricted to a relatively small area.^1";
- 1891 s[1888] = "LAUB R.S. (1975).- The Brassfield Formation.- FC&P 4, 1: 10-13.- FC&P 4-1, p. 10, ID=6283^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Llan; Geography: USA, Cincinnati region^The Brassfield Formation is a parcel of dolomite, echinodermal limestone, and silty clay, well-exposed in the vicinity of the Cincinnati Arch (southeast Indiana, southwest Ohio and north-central Kentucky) of the United States. Berry and Boucot (1970) assign it an age of Middle Llandovery, making it one of the oldest Silurian units in North America. * In recent studies of the Brassfield, I have found that it contains a coral fauna of considerable richness, both as to numbers of specimens and taxonomic variety. Of interest is the fact that this is the first appearance in the fossil record of a considerable number of species, which are found later in the Silurian in other parts of the world. [initial part of a short note presenting distribution of Rugosa, Tabulata and Heliolitida within the Brassfield Formation]^1";
- 1892 s[1889] = "PEDDER A.E.H., MCLEAN R.A. (1976).- New records and range extensions of seven rugose coral genera in Silurian strata of north western and arctic Canada.- Papers of Geological Survey Canada 76-1C: 131-141.- FC&P 7-2, p. 21, ID=5637^Topic(s): biostratigraphy; corals, stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: Canada N^ [the genera concerned are Denayphyllum, Ketophyllum, Prohexagonaria, Ptychophyllum, Radiastrea, Kymocystis and Spinolasma]^1";
- 1893 s[1890] = "FREITAS T.A.de, NOWLAN G.S. (1998).- A new, major reef tract and overview of regional Silurian reef development, Canadian Arctic and north Greenland.- 002 Bulletin of Canadian Petroleum Geology 46, 3: 327-349.- FC&P 27-2, p. 68, ID=3937^Topic(s): reefs; reefs; Systematics: Cnidaria Monera; Anthozoa; Stratigraphy: Silurian; Geography: Canada, Arctic, Greenland N^A recently discovered Silurian reef tract in the high Canadian Arctic has an exposed length of more than 150km and is locally more than 500m thick. The reefs occur within a Silurian ramp and rimmed shelf-margin sequence about 2km thick. Conodont biostratigraphic data indicate that the reefal strata are late Llandovery to Ludlow in age, and reefs are composed largely of coral-microbial boundstone. The corals are mainly digitate rugosans and large halysitids, associated with fewer stromatoporoids and lithistid sponges. However, most of the reefal strata consist of microbialite, which encrusts skeletal metazoans or is massive or thromboidal. Microbialite microstructure consists mainly of clotted micrite or laminated micrite associated with common Renalcis, other calcimicrobes, and locally abundant early marine cements. Other reef rock types include stromatolite-rich lime mudstone, cementstone, zebroid stromatolite-bearing lime mudstone, crinoidal grainstone, and, rarely, stromatoporoid boundstone. The reefs formed on the shelf margin and prograded basinward in three distinct phases during Wenlock and Ludlow time. Underlying Llandovery, shelf-margin facies are highly dolomitized and may represent an original stromatoporoid boundstone. Overlying late Ludlow to Pridoli carbonates were deposited on a prograding carbonate ramp, dotted with small coral-stromatoporoid and other biostromes. [first fragment of extensive abstract]^1";
- 1894 s[1891] = "GAO J.-G., COPPER P. (1997).- Growth rates of Middle Palaeozoic corals and sponges: Early Silurian of Eastern Canada.- Proceedings 8th International Coral Reef Symposium 2: 1651-1656.- FC&P 29-1, p. ???, ID=1497^Topic(s): sclerochronology; Porifera, Anthozoa; Systematics: Porifera

- Cnidaria; Anthozoa; Stratigraphy: Silurian L; Geography: Canada E^Vertical annual skeletal growth rates were compared for 27 species of tabulate corals, solitary and colonial rugose corals, and two species of stromatoporoid sponges from the shallow water, tropical, biostromal Upper Llandoverly Fossil Hill Fm. of Manitoulin Island, northern Ontario. All displayed clear periodicity in density band variations from internal tabulae, cysts, lamellae, septa and pillars, or external annuli, indicating a common environmental growth factor. Growth banding is attributed largely to seasonal cycles: finer circadian growth banding was not observed, lunar peaks were difficult to verify. Growth rates varied from 2 to 9 mm/yr for tabulates, from 4.3 to 27.2 mm/yr for rugosans and 0.8 to 3.1mm/yr for stromatoporoids. Growth rates had a strong genetic component varying generically and architecturally, with rugosans able to grow faster than tabulates, and with stromatoporoids exhibiting the slowest rates. Such rates are comparable to growth rates in some Recent hermatypic scleractinians, suggesting that mid-Palaeozoic corals possessed zooxanthellate symbionts. Stromatoporoids, like living cryptic sclerosponges, possibly lacked symbionts: their growth rates were among the slowest measured.^1";
- 1895 s[1892] = "WATKINS R. (1991).- Guild structure and tiering in a high-diversity Silurian community, Milwaukee County, Wisconsin.- Palaios 06: 465-478.- FC&P 23-2.1, p. 68, ID=4436^Topic(s): reefs, guild structures; inter-reef biota; Systematics: Porifera Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: USA, Wisconsin^Fine-grained, inter-reef carbonates of the Silurian (Wenlockian) Racine Formation, Milwaukee County, Wisconsin, formed in a generally quiet-water environment below wave base. These strata preserve a level-bottom community which contains 27 guilds and 89 species of skeletal macrofauna. No sedimentary transport of the fauna is apparent, but breakage of shells by predation and reorientation and dispersal of skeletal material by bioturbation are significant taphonomic features. Most suspension-feeding guilds are represented by epifaunal sponges, corals, bryozoans, brachiopods, conocardiids, cornulitids and annelids which occupied a tier from 0 to 2cm above the bottom. This tier was also occupied by a vagile fauna of gastropods and trilobites. Most skeletal material, as determined by point count, was produced by three guilds of suspension-feeding crinozoans which occupied two higher tiers, from 2 to 6cm and 6 to 25cm above the bottom. Soft-bodied burrowers included suspension-feeding worms which fed at the sediment surface and extended to at least 2cm depth, and a lower tier of deposit feeding worms which extended to about 10cm depth. Three guilds of cephalopods represent predators within the community. The brachiopod component of this community represents a typical Silurian "Dicoelusia community"; a type of Silurian assemblage which has been previously characterized as an ecologically simple, brachiopod-dominated fauna. Detailed results from the Racine study suggest that many so-called Silurian brachiopod communities were actually tiered, high-diversity communities dominated by crinozoans.^1";
- 1896 s[1893] = "BOURQUE P.-A., AMYOT G. (1988).- Stromatoporoid coral reefs of the upper west Point reef complex, Late Silurian, Gaspé, Quebec.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 251-257.- FC&P 19-2.1, p. 40, ID=2766^Topic(s): reefs; strom-coral reefs; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Silurian U; Geography: Canada, Quebec^1";
- 1897 s[1894] = "SADORF E.M. (1994).- Coral and stromatoporoid abundance and diversity in the Laporte City Formation of eastern Iowa.- University of Iowa, unpublished M.Sc. thesis; 40 pp.- FC&P 26-1, p. 78, ID=3652^Topic(s): biodiversity; corals stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Silurian; Geography: USA, Iowa^Coral and stromatoporoid

abundance, composition, diversity, and colony shape were studied in this level bottom community, these groups become more abundant as sea level shallows upwards but there is no change in composition or diversity in the sequence. Stromatoporoid height-width ratios increase upsection possibly caused by decrease in sedimentation rate and increase in energy. Stromatoporoid width increases upward throughout the sequence. Stromatoporoid height increases in the lower two-thirds of the sequence possibly caused by increased light, temperature, and longer life spans due to decreased sedimentation.¹;

1898 s[1895] = "DIXON O.A. (1979).- Late Silurian Plasmoporid and Stelliporellid corals (Heliolitidae) from the Canadian Arctic.- Journal of Paleontology 53, 3: 642-650.- FC&P 9-2, p. 49, ID=0367^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Canada, Arctic^Squameolites dissectus n.sp., Stelliporella cf. S. podolica Bondarenko and other Stelliporella-like corals occur sparsely in biohermal and bioherm flank rocks of the Red Bay Formation on Somerset Island. Heliolitids referable to these genera, although more common in Europe and Asia, have rarely been reported in North America. Two of the stelliporid specimens possess characters that suggest a further assessment is necessary of the status and relationship of the genera Stelliporella wentzel, Derivatolites Bondarenko and Podollites Bondarenko. The morphological variability in these species strongly confirms the need to base new taxa on assemblages rather than single specimens.¹;

1899 s[1896] = "NOBLE J.P.A., YOUNG G.A. (1984).- The Llandoverly-wenlock heliolitid corals from New Brunswick, Canada.- Journal of Paleontology 58, 3: 867-884.- FC&P 13-2, p. 42, ID=0562^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian Llan Wen; Geography: Canada, New Brunswick^A large collection of heliolitid coral from the Silurian Limestone Point Formation and La Vieille Formation of northern New Brunswick is described. They include at least seven species. Two species of Propora, two species of Plasmopora and three species of Heliolites are recognized, of which several are new in North America and one new species of Heliolites is erected. Analysis of variance statistics on detailed measurements of morphological parameters used in taxonomy, based on a series of sections cut through selected colonies, indicate that any random section except that cutting the most juvenile stage of growth will provide a good estimate of the colony mean and variance for each parameter.¹;

1900 s[1897] = "DIXON O.A. (1999).- Upper Silurian Heliolitine corals, Canadian Arctic: Taxonomic method, keys to identification, and biogeographic relationships.- Journal of Paleontology 73, 6: 1002-1014.- FC&P 29-1, p. 59, ID=1494^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Canada, Arctic^Taxonomy of heliolitine corals, and tabulate corals in general, benefits from analysis of larger assemblages of coralla that approximate populations. Quantitative data derived from such assemblages allow intraspecific variation to be tested rigorously and illustrated, and similar, co-occurring species to be discriminated using normal patterns of continuous population variation. Field collection and analysis necessarily involve recording and comparing assemblages from the full spectrum of sedimentary facies available at any one stratigraphical level and from the maximum available stratigraphic range. The large published taxonomic literature on heliolitine corals is a daunting obstacle to identification at the species level because a substantial part appears to involve taxonomic splitting to a degree inconsistent with variation known in modern coral species. The heliolitine corals studied occur in Ludlow-age ramp and shelf carbonate facies in the Boothia Uplift region in the southern Arctic archipelago of Canada. The "population" approach resulted in

discrimination of 18 morphotaxonomic species, belonging to five genera and four families. A few select morphologic characters, incorporated in simple identification keys, are particularly helpful in distinguishing the 11 heliolitid and four stelliporellid species present, and are useful in screening the voluminous literature on species of Heliolites. Six of the species compare closely to Silurian species reported from central Kazakhstan, West Siberia, and Northern China; few are shared with other regions. The principal affinities are consistent with occurrence in the Uralian-Cordilleran paleogeographic region in the Silurian northern hemisphere. Eight species do not appear to be recorded in published literature elsewhere and are apparently endemic.¹¹;

- 1901 s[1898] = "YOUNG G.A., NOBLE J.P.A. (1990).- Silurian Heliolitidae (Anthozoa, Tabulata) from the Chaleurs Bay region, Canada.- Journal of Paleontology 64, 1: 44-60.- FC&P 19-1.1, p. 24, ID=2590^Topic(s): distribution; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Canada, Baie des Chaleurs^The Early to Late Silurian sedimentary rocks of the Limestone Point and La Vieille Formations of Northern New Brunswick and the Anse a Pierre-Loiselle, La Vieille, and Gascons Formations of the Gaspé Peninsula possess diverse and abundant tabulate coral faunas that include six species of Heliolitidae distributed among Heliolites and Stelliporella. Two species, Heliolites laxus and Heliolites distinctus are new. A revised concept of the genus Heliolites is proposed. The Heliolitidae from this region show a substantial degree of endemism and are most similar to northern European faunas. * The distribution of individual heliolitid species was under a high degree of facies control. The heliolitids are more restricted in distribution than are other groups of Tabulata in this region and are most abundant in open shelf and carbonate bank facies.¹¹;
- 1902 s[1899] = "DIXON O.A. (1989).- Species Definition in Heliolitine Corals of the Lower Douro Formation (Upper Silurian), Canadian Arctic.- Journal of Paleontology 63, 6: 819-838.- FC&P 19-1.1, p. 50, ID=2662^Topic(s): species concept; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Canada, Arctic^Specimens representing Heliolites diligens Bondarenko 1966, H. aff. H. luxaboreus Yang 1978, and H. tchernyshevi Bondarenko 1966, are common and Heliolites sp. and Stelliporella sp. are rare in diverse coral assemblages associated with lithistid sponge reefs in deep shelf or ramp limestone facies of the Douro Formation. Heliolites diligens, a more widely adapted, possibly "opportunistic" species, occurs abundantly in lower diversity stromatoporoid / coral assemblages from nonreefal, shallower shelf limestone facies. Detailed systematic study of approximately contemporaneous populations of these Ludlovian heliolitid species shows that all are morphologically variable; assessment of this variability qualitatively and quantitatively is critical to species definition and recognition. Heliolites diligens is the most variable, with wide intercolony variation in septal development, corallite wall configuration, and spacing of horizontal skeletal elements. This apparently represents morphological plasticity rather than differences that can be ascribed to distinct species. Conspecificity of the more extreme and dissimilar variants can be inferred from study of large assemblages of coeval specimens. The other species, with more narrowly defined, discrete variation fields, are more readily distinguished from each other.¹¹;
- 1903 s[1900] = "LEE D.-J., YOUNG G.A., NOBLE J.P.A. (1990).- Heterochronic evolution in the Heliolites interstinctus-decipiens lineage of the Chaleur Bay region, eastern Canada.- Lethaia 23, 1: 11-20.- FC&P 19-2.1, p. 34, ID=2752^Topic(s): heterochronic evolution; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Canada E^A study of the Heliolites interstinctus-decipiens lineage from the Silurian of the

Chaleur Bay region, eastern Canada, indicates that most morphological characters of this lineage, including tabularium diameter, coenenchymal tubule diameter and corallite spacing, remain relatively invariable through a Llandovery to Pridoli interval of about 20 million years. In contrast, septal development and corallite wall crenulation show pronounced evolutionary changes due to heterochrony, as shown by comparison of astogenies throughout the lineage. The reduction of septa and the replacement of crenulate corallites by smooth ones in the 'decipiens' type descendent appear to have been by paedomorphosis from the 'interstinctus' type ancestor. The problems of speciation in this lineage are discussed including the alternative hypotheses of a speciation event in the early Ludlow or a phyletic trend within a single species whose longevity is due in part to the stabilization processes of niche separation.¹¹;

1904 s[1901] = "YOUNG G.A., NOBLE J.P.A. (1990).- Silurian Proporidae and Plasmoporidae (Anthozoa, Tabulata) from the Chaleurs Bay Region, Canada.- Journal of Paleontology 64, 2: 184-199.- FC;P 19-2.1, p. 35, ID=2754Topic(s):taxonomy, facies; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Canada, Baie des Chaleurs^Six species belonging to the families Proporidae and Plasmoporidae occur in the Lower and Upper Silurian rocks of the Limestone Point and La Vieille Formations of northern New Brunswick and of the Anse a Pierre-Loiselle, La Vieille, and Gascons Formations of the Gaspé Peninsula of Quebec. The three species of Propora are widely distributed but show varying faunal affinities, while both species of Plasmopora, Plasmopora logani and Plasmopora corrugata, are new and are almost endemic. Revised concepts of Propora and Plasmopora are proposed. The holotype specimen for the type species of Camptolithus was examined and confirms the genus as distinct from Propora, rather than a synonym as has been previously suggested. * The facies distribution of these corals is variable. In general, the proporids, which mostly occur in facies indicating shallow carbonate banks and patch reefs, are more restricted in distribution than the plasmoporids, which occur in these facies and also in others representing a variety of open-shelf environments.¹¹;

1905 s[1902] = "DIXON O.A. (1993).- Coral communities and implications for paleoenvironments: Silurian heliolitine corals in a carbonate ramp setting, Canadian Arctic.- Palaios 8: 18-30.- FC;P 23-2.1, p. 41, ID=3365Topic(s):ecological indicators; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Canada, Arctic^Heliolitine corals occur in the Ludlow-age Douro Formation on Somerset and neighboring islands. The corals occur in argillaceous carbonate rocks deposited on a regionally extensive ramp. Contemporaneous coral assemblages from different areas show marked differences in community characteristics that reflect a range of paleoenvironments, some more suited and others less suited to the heliolitines. Some of the paleoenvironmental differences are implied more strongly by the coral assemblages than by regionally subdued variations in enclosing carbonate facies. Optimal conditions for heliolitine corals in the region were apparently in a 'mid-ramp' position, as suggested by numerically abundant, diverse, low-dominance species assemblages, with a greater proportion of flat-based and discoid colonies. These grew more rapidly and to larger sizes, had greater longevity, and show less growth interference from sedimentation than contemporaneous assemblages elsewhere in the formation. Variations in growth form in different species suggest differences in the relative importance of inheritance and environment as controls.¹¹;

1906 s[1903] = "DIXON O.A. (1996).- Heliolitine corals of the upper Douro formation (Upper Silurian), Canadian arctic islands.- Journal of Paleontology 70, 5: 718-740.http://www.jstor.org/pss/1306476.- FC;P 26-1, p. 65, ID=3634Topic(s): Heliolitida;

- Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Canada, Arctic^Heliolitine corals are closely associated with lithistid sponge-dominated reef mounds in Ludlow carbonate ramp facies on Somerset Island. The corals occur abundantly in argillaceous, fossiliferous wackestone immediately flanking and capping the reef mounds, less commonly in calcilutite mudstone within the reefmounds, and with sharply decreasing abundance in nodular argillaceous wackestone to mudstone away from the reef mounds. Exhaustive field collection, and systematic study that included biometric analysis of collected assemblages, indicates that ten heliolitine species are present, including the new species *Heliolites furyi*, *H. garnieri*, and *H. greineri*, and two unidentified species, *Heliolites* sp. A, and *Podolites?* sp. The occurrence of *H. subdeciapiens* Klaamann 1984, *H. tchernyshevi* Bondarenko 1966, *H. cf. H. rariformis* Tchi 1976, *Stelliporella* cf *S. podolica* Bondarenko 1971, and *Squameolites anomalus* Tchi 1976 indicates an affinity with Eurasian rather than North American faunas of equivalent age. Many new species have been ascribed to *Stelliporella* since the mid- 1970s; most lack the diagnostic axial structures of the genus and are more appropriately regarded as belonging to *Heliolites*. Newly defined structures termed septal florets occur commonly in *H. garnieri* and very rarely in three other species of *Heliolites*. Effective taxonomic use of septal development requires very careful study because of the degree of intraspecific and intracolony variation in some species.^1";
- 1907 s[1904] = "DIXON O.A. (1998).- Heliolitine corals of the topmost Douro and overlying formations (Upper Silurian), Canadian Arctic Islands.- *Journal of Paleontology* 72, 6: 937-966.- FC&P 28-1, p. 11, ID=3954^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Canada, Arctic^A taxonomic report on the youngest of three successive Ludlow-age faunas in the Boothia Uplift region of the southern Arctic archipelago.^1";
- 1908 s[1905] = "DIXON O.A. (2010).- Fossilized polyp remains in Silurian *Heliolites* (Anthozoa, Tabulata) from Nunavut, Arctic Canada.- *Lethaia* 43, 1: 60-72.- FC&P 36, p. 74, ID=6477^Topic(s): soft parts; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Canada, Arctic^Calices within a substantially silicified corallum of *Heliolites garnieri* Dixon, 1996, from the lower part of the Barlow Inlet Formation (Ludlow) on south-western Devon Island, contain what appear to be the silicified remains of soft tissues of coral polyps. These remains apparently represent the peristomal portion of an oral disc, incorporating a symmetrical radial array of 12 spicules (intra-polyp sclerites), and a membrane-like, possibly epidermal structure. These remains, and more non-descript material in a few coralla belonging to two other species of *Heliolites*, occur at local intra-corallum discontinuities where polyps died, but the surrounding colony continued skeletal construction. Their preservation indicates that, before the organic remains were fully destroyed by decomposition, they were rapidly enclosed and sealed by precipitation of micro crystalline quartz or a precursor, and that the failed calices were capped rapidly by local construction of basal epitheca. Clusters of hollow microspheres were also preserved at these discontinuities, suggestive of micro-organisms with a predilection for sites of tissue decay; these microbial decay agents possibly helped to isolate microenvironments conducive to early precipitation of silica. [original abstract]^1";
- 1909 s[1906] = "RIGBY J.K., CHATTERTON B.D.E. (1994).- A new hexactinellid sponge from the Middle Silurian of the Mackenzie Mountains, Northwest Territories, Canada.- *Journal of Paleontology* 68, 2: 218-223.<http://www.jstor.org/pss/1306063>.- FC&P 23-2.1, p. 57, ID=4408^Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Silurian M; Geography: Canada, NW

Territories^Several specimens of the small hexactinellid, *Cyathophycus mackenziensis* n.sp., were collected from pale brown, shaly mudstone of the Road River Formation. The sponges are of Wenlock age and were collected from near Avalanche Lake, Mackenzie Mountains, Northwest Territories, Canada. The small, steeply obconical sponges have skeletons in crudely ranked quadrules to at least third-order, with first-order openings generally 2mm high and 1mm wide. Successive orders decrease in stages approximately half that of larger elements. A moderately irregular dermal(?) layer with circular parietal gaps is suggested in some specimens. The new species is consistently finer textured than either the type species *Cyathophycus reticulatus* Walcott, 1879, or the later described *Cyathophycus quebecensis* Dawson, 1889.

[original abstract]^1";

1910 s[1907] = "FREITAS T.A.de (1989).- silurian Archaeoscyphia from the Canadian Arctic: a case for simplified generic taxonomy in the anthaspidellid lithistids (Porifera).- Canadian Journal of Earth Sciences 26: 1861-1879.- FC&P 19-1.1, p. 22, ID=2585^Topic(s): taxonomy; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: Silurian; Geography: Canada, Arctic^^1";

1911 s[1908] = "NARBONNE G.M., DIXON O.A. (1984).- Upper Silurian lithistid sponge reefs on Somerset Island, Arctic Canada.- Sedimentology 31: 25-50.- FC&P 13-1, p. 52, ID=6354^Topic(s): sponge reefs; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: Silurian U; Geography: Canada, Arctic^The Upper Ludlow Douro Formation contains the first reported Silurian sponge reefs. These relatively small (5-35m diameter) mound-shaped structures contain, on average, 35% lithistid demosponges. Reefs are surrounded by irregular haloes of crinoid debris; abundance and diversity of all fossil groups decrease away from the reefs. Each reef is underlain by a lens of crinoid wackestone to grainstone rich in crinoid holdfasts; trepostomate bryozoans, solenoporacean algae and rhynchonellid brachiopods are locally common. The bulk of each reef consists of lime mudstone with abundant lithistid sponges. This is capped by a thin layer of wackestone with abundant tabulate and rugose corals and fewer lithistid sponges, calcareous algae, trepostomate bryozoans and stromatoporoids. This zonation, in which a sponge colonization community was replaced by a coral diversification community, is similar to that reported from some Middle Ordovician, Upper Jurassic and Holocene sponge reefs. * The Douro sponge reefs were relatively low structures, with about 3m maximum topographic relief. They grew on a broad carbonate platform, probably in warm, tranquil, turbid waters of normal or near-normal marine salinity. Periodic influxes of terrigenous mud adversely affected reef size, and caused biotic changes. Some of the reef lime mud was derived from non-reef sources, but significant quantities were also produced on the reefs. Reefs underwent syndimentary lithification, bioerosion and minor storm erosion. Fabrics and compositions of sparry calcite in cavities record three generations of meteoric cementation. Originally siliceous spicules of the lithistid sponges were dissolved and the moulds later filled with sparry calcite. Early dissolution of siliceous spicules is common in reef environments, and may have caused fossil sponges to be under-represented in ancient reefs.^1";

1912 s[1909] = "PARKIN W.G. (1986).- The coral *Thuliocyclus prominens* n.gen. and sp. (Rugosa: Palaeocyclusidae) from the Upper Silurian of the Canadian Arctic archipelago.- Journal of Paleontology 60, 1: 53-60.- FC&P 15-1.2, p. 25, ID=0870^Topic(s): new taxa; Rugosa, Palaeocyclusidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Canada, Arctic^^1";

1913 s[1910] = "KESSLING R.V., CHASE T.L., DEVORE C.H., LATTANZI R.D. (1973).- A new species of *Fletcheria* from the Middle Silurian Fiborn Limestone of Michigan.- Contrib. Mus. Paleont. Univ. Michigan 24, 9: 87-99.- FC&P 3-2, p. 39, ID=4954^Topic(s): new taxa;

Rugosa, Fletcheria; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian M; Geography: USA, Michigan^A new species of the rugose coral Fletcheria, F. acanthina from the Middle Silurian Fiborn Limestone member of the Hendrick's Formation (Burnt Bluff Group) in the Northern Peninsula of Michigan, is characterized by well-developed amplexoid major septa and acanthine minor septa.^1";

- 1914 s[1911] = "MERRIAM C.W. (1973).- Silurian Rugose Corals of the Central and Southwest-Great Basin.- US Geol. Survey Prof. Paper 777: 66 pp., 16 pls.- FC&P 4-2, p. 59, ID=5281^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: USA, Great Basin^Corals representing 13 families of Silurian Rugosa from limestones and dolomites of the central and southwest Great Basin are described, classified and figured. Coral-bearing Silurian beds of this province occur in two contrasting carbonate rock facies: the eastern dolomite belt and the intermediate limestone belt. A third major Silurian rock suite characterizes the western, or Pacific Border, belt, which extends from the western Great Basin to northern California and southeastern Alaska. * On the basis of rugose corals and associated fossils, the Great Basin Silurian is subdivided as five coral zones, lettered A through E in ascending order. These provisional zones are a result of detailed stratigraphic studies and geologic mapping of reference sections in areas extending from the Inyo Mountains northeastward to the Roberts Mountains and northern Simpson Park Mountains. * Of importance environmentally, as well as with the identification and correlation of Great Basin Silurian, are the large dasycladacean algae associated with Rugosa. As the genus Verticillopora, these algae appear to have peaked in coral zone D. * Rugose corals of special importance in correlation with distant Silurian rocks are Palaeocyclus, Dalmanophyllum, Kodonophyllum, Mucophyllum, Arachnophyllum, Toquimaphyllum, and the Lykophyllids. The closest foreign correlations are with the Gotland section, a Silurian carbonate standard for western Europe. Fairly close similarities are recognized with Silurian of Czechoslovakia and Eastern Australia.^1";
- 1915 s[1912] = "MCLEAN R.A. (1977).- Early Silurian (Late Llandovery) rugose corals from western North Greenland.- Bulletin Groen. geol. Unders. 121: 1-46.- FC&P 8-2, p. 40, ID=5629^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Llan; Geography: Greenland N^Seventeen species of rugose corals are described from strata of Late Llandovery age in western North Greenland. Grewingkia cuneata sp.nov., Strombodes infractus sp.nov., Amplexoides poulsenii sp.nov., Palaeophyllum schuchertense sp.nov., and P. cf. hubeiense Ke & Yu 1974 are recorded from the early Late Llandovery Cape Schuchert Formation. The following species are described from the late Late Llandovery Offley Island Formation: Crassilasma offleyense? (Etheridge 1878), Pseudophaulactis plectilis sp.nov., Kenophyllum? congestum sp.nov., Craterophyllum vatium sp.nov., C. exprorectum sp.nov., C. prolatum sp.nov., Ptychophyllum tysonese sp.nov., Ptychophyllum sp. A., Ptychophyllum sp. B., Kodonophyllum? pusillum sp.nov., Amplexoides poulsenii sp.nov., Cystilasma? rarum sp.nov., and Hedstroemophyllum rhapsis sp.nov. [original summary]^1";
- 1916 s[1913] = "PEDDER A.E.H. (1976).- First records of five rugose coral genera from Upper Silurian rocks of the Canadian arctic islands.- Papers of geological Survey Canada 76-1B: 287-293.- FC&P 7-2, p. 20, ID=5634^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Canada, Arctic^[Mazaphyllum, Rhizophylloides, Stylopleura, Prohexagonaria and Stereoxylodes (Nanshanophyllum) are recorded]^1";
- 1917 s[1914] = "BOLTON T.E. (1981).- Early Silurian Anthozoa of Chaleurs Group, Port Daniel-Black Cape region, Gaspé Peninsula, Quebec.- Subcommittee on Silurian Stratigraphy, Ordovician-Silurian Boundary

Working Group. Field Meeting, Anticosti-Gaspe, Quebec 1981, vol. II: Stratigraphy and Paleontology [P.J. Lesperance (ed.)]: 299-314.- FC&P 10-2, p. 73, ID=6084Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Silurian L; Geography: Canada, OntarioFour early Silurian (Llandovery) coral assemblages are present in the type region of the Chaleurs Group. The assemblage Paleofavosites spp. - Acidolites clemvillensis (Parks) occurs in the Clemville Formation; it is overlain by the Favosites forbesi Milne-Edwards & Haime - Heliolites interstinctus (Linnaeus) - Alveolites sp. assemblage in the Anse Cascons Formation. The two upper assemblages are more closely related. The Syringopora compacta (Billings) - Heliolites subtubulatus (McCoy) - H. interstinctus - Phaulactis sp. - Palaeocyclus rotuloides (Hall) assemblage dominates the lower beds of the Anse a Pierre-Loiselle Formation, and is succeeded by S. compacta - Acanthohalysites encrustans (Buehler) - Subalveolites depressus (Parks) - Palaeocyclus porpita (Linnaeus) assemblage in the lower beds of the La Vieille Formation. The Wenlock coral Thecia swinderniana (Goldfuss) first appears some 100m above this upper assemblage. [original summary]^1";

1918 s[1915] = "FREITAS T.A.de (1987).- A Silurian sphinctozoan sponge from east-central Cornwallis Island, Canadian Arctic.- Canadian Journal of Earth Sciences 24: 840-844.- FC&P 19-1.1, p. 22, ID=2584Topic(s): ; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Silurian; Geography: Canada, Arctic^1";

1919 s[1916] = "LARSSON S.Y., STEARN C.W. (1986).- Silurian stratigraphy of the Hudson Bay Lowland in Quebec.- Canadian Journal of Earth Sciences 23: 288-299.- FC&P 15-1.2, p. 45, ID=0785Topic(s): stratigraphy; stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Llan wen; Geography: Canada, QuebecFour species of stromatoporoids are listed from these late Llandoveryan and wenlockian rocks.^1";

1920 s[1917] = "POPE C.S. (1984).- Stromatoporoid fauna of the West Point Formation (Upper Silurian) on the Gaspe Peninsula, Quebec, Canada.- Palaeontographica Americana 54: 413 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 57, ID=1054Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian U; Geography: Canada, Quebec^1";

1921 s[1918] = "LEBOLD J.G. (2000).- Quantitative analysis of epizoans on Silurian stromatoporoids within the Brassfield Formation.- Journal of Paleontology 74, 3: 394-403.- FC&P 30-1, p. 32, ID=1519Topic(s): epibionts of; Stroms, epizoans; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian L; Geography: USA, OhioStromatoporoids from the Brassfield Formation (Early Silurian, Llandovery) near Fairborn, Ohio, provide substrata for a diverse epizoic community. The stromatoporoids were colonized by at least 28 taxa including bryozoans, cnidarians, echinoderms, annelids, and endolithic organisms. Analysis of the occurrence, diversity, distribution and coverage of the epizoans recognized patterns of site-selective attachment. The upper surface of the stromatoporoids has a slightly higher epizoan coverage than the lower surface. Concentric zones outlined from the margin also had differences in area and percent coverage. On their upper and lower surfaces epizoan occurrence decreased from the margin to the interior. Epizoan coverage of the lower surface also decreased inward. On the upper surface the echinoderms were randomly distributed. Bryozoans, cnidarians and miscellaneous taxa including borers, cornulitids and spirorbids were distributed nonrandomly. Over 95 percent of the area analyzed is not covered by epizoans. However, epizoans are commonly clumped or in direct contact with one another. These physical

- interactions are the result of site-selective attachment by epizoans in close proximity rather than competition for available surface.¹";
- 1922 s[1919] = "SAVELLE J.M. (1979).- Upper Silurian Stromatoporoids from Somerset Island, Arctic Canada.- Canadian Journal of Earth Sciences 16: 364-374.- FC&P 8-2, p. 50, ID=5730Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian U; Geography: Canada, Arctic^[described are species of Plexodictyon (1 new), Diplostroma, Actinostroma (1 new) and Vicinostachyodes]^1";
- 1923 s[1920] = "YOUNG G.A., NOBLE J.P.A. (1989).- Variation and growth in a syringoporid symbiont species in stromatoporoids from the Silurian of eastern Canada.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 91-98.- FC&P 19-1.1, p. 13, ID=2526Topic(s): strom-syringoporid associations; stroms; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Silurian; Geography: Canada E^Symbionts started near the base of. stromatoporoid skeletons and maintained themselves above or at the growing surface and stopped growing with the death of the host; free-living syringoporids are different from symbionts; stromatoporoids with symbionts favour the open shelf facies and are absent from high-energy facies¹";
- 1924 s[1921] = "SIMMONDS J.T. (1990).- The paleoecology of stromatoporids and tabulate corals from La Vieille Formation, Silurian, southern Gaspé Peninsula, Quebec, Canada.- Keck Research Symposium in Geology 3: 73-76.- FC&P 20-1.1, p. 79, ID=2879Topic(s): ecology; stroms, Tabulata; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Silurian; Geography: Canada, Quebec^^1";
- 1925 s[1922] = "COPPER P. (1985).- Fossilized polyps in 430-Myr-old Favosites corals.- Nature 316: 142-144.- FC&P 14-2, p. 37, ID=0920Topic(s): soft body, mineralized; Tabulata, Favosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Canada^Tabulate fossils are among the more characteristic fossils of the Silurian period, but because only their skeletons have been preserved, their taxonomic position and mode of life have been uncertain. Although they are generally placed in the phylum Coelenterata (Cnidaria), the recent discovery of living sclerosponges that share architectural affinity with some tabulates, has renewed debate about the evolutionary relationships of the latter. In particular, the tabulates have been assigned to the sponges (phylum Porifera). I report here the discovery of fossilized polyps in a Favosites from the Silurian of Quebec. This incontrovertibly demonstrates that the tabulates belong to the phylum Cnidaria, and details of the soft-part morphology suggest that the Tabulata form a group distinct from other corals. (Original summary)¹";
- 1926 s[1923] = "LEE D.-J., NOBLE J.P.A. (1988).- Tabulate coral distribution - Upper Silurian West Point reef complex, Gaspé, Quebec.- 002 Bulletin of Canadian Petroleum Geology 36, 4: 379-387.- FC&P 18-1, p. 42, ID=2215Topic(s): distribution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian U; Geography: Canada, Quebec^The Upper Silurian West Point Reef Complex of Gaspé consists of a variety of mixed carbonate - siliciclastic lithofacies representing, in total, deeper-water basin, shallow shoal, barrier reef, fore reef, lagoon and intertidal environments of a shallow-water platform. Stromatoporoids, tabulate corals and algae dominate the fossil assemblage. Favositids, halysitids and heliolitids are the most important of the tabulate corals within the complex. Alveolitids and proporids are rare, and most syringoporids occur symbiotically with Stromatoporoids. Five species of Favosites, four of Paleofavosites, three of Heliolites, two of each of Alveolites and Caunopora, and one of each of Halysites, Syringopora, Cladopora, Striatopora, Thamnopora

and Propora have been identified. Favositids were generally more tolerant of a wide range of ecological conditions, and Favosites forbesi was the most varied, abundant and tolerant species. It has many of the characteristics of an opportunistic species. Heliolites decipiens had similar ecological distributions except that it is rare to absent in facies representing shallow water, high energy environments. Favosites hisingeri, Paleofavosites epinosus, Halysites nitida and most heliolitid species are commonly associated with deeper-water, mixed siliclastic - carbonate sediments of the open platform but are otherwise rare. Paleofavosites epinosus and Heliolites daintreei are especially characteristic of these deeper-water sediments. Paleofavosites asper is restricted to shallow water limestones and biohermal algal reefs. Cladopora sp. occurs in most facies, but is only common in the limestones of subtidal environments. Syringoporids occur almost entirely as the symbiotic Caunopora in a variety of stromatoporoid-dominated facies. Favosites niagarensis, Paleofavosites epinosus and Heliolites decipiens also occur as transported cobbles in basinal facies. Water energy evidently was important in controlling tabulate coral and stromatoporoid distribution, with tabulate coral preferring calm and stromatoporoids more turbulent conditions.^1";

1927 s[1924] = "CHATTERTON B.D.E., COPPER P., DIXON O.A., GIBB S. (2008).- Spicules in Silurian Tabulate corals from Canada, and implications for their affinities.- Palaeontology 51, 1: 173-198.- FC&P 35, p. 62, ID=2361^Topic(s): soft body; Tabulata, Polyps, Sclerites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Canada^Specimens of Favosites from upper Llandovery strata of Anticosti Island show three types of calcite structures, herein interpreted as spicules, preserved within their calices and on top of the last tabula. This is stratigraphically younger material, some 50m higher than fossils described two decades earlier, in which calcified polyps, each with 12 retracted tentacles, were noted. These more recently found structures show striking similarities in form and position to point, collaret and capstan spicules found in the soft tissues of modern pipe corals, i.e. the Octocorallia (Alcyonacea). Where preserved in a distinct pattern on top of the calcite tabulae, the spicular sclerites in Favosites occur in a particular sequence. Twelve individual, or sometimes six pairs of, triradiate point spicules have shrunk to a circllet near the middle of the calice (resting on the last, outermost, tabula). Surrounding the point spicules are 3-6 circllets of curved, usually perforated, lenticular collaret spicules; and surrounding these are scattered, much smaller, capstan spicules. The spicules display variability, probably ontogenetic, in their form and relative sizes; and they are more similar in form to calcareous spicules of alcyonacean corals than to those known from calcareous sponges. Structures with 12-fold radial symmetry in Heliolites, originally described by one of us as 'septal florets';, consist of elements that are considered comparable with the point spicules found in Favosites. They have been recognized in ten species of Heliolites from Silurian (Wenlock-Ludlow) strata in the Canadian Arctic islands. [original abstract]^1";

1928 s[1925] = "LEE D.-J., NOBLE J.P.A. (1990).- Reproduction and life strategies in the Paleozoic tabulate coral Paleofavosites capax.- Lethaia 23: pp ?.- FC&P 20-1.1, p. 59, ID=2795^Topic(s): colony growth; Tabulata, Palaeofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: Canada, Quebec^Asexual and sexual modes of colony formation in a tabulate coral Paleofavosites capax are recognized from the early Silurian Gun River Formation of Anticosti Island, Quebec. Colonies produced by asexual fragmentation comprise monospecific "clumped populations". They are characterized by circular and concave bases, and lack a protocorallite origin of colony growth. Sexually produced colonies, where in situ, are always dispersed and characterized by

conical bases with a definite protocorallite point origin of colony growth. Asexual colony formation by fragmentation in *P. capax* appears to have been an adaptation to a habitat of muddy substrates. Sexual reproduction in this species probably played a minor role but was necessary for the maintenance of gene diversity and long-distance dispersal. A comparison of corallite size distributions between populations demonstrates that intrapopulation variation in the dispersed population and the conical colonies in transported populations of *P. capax* is significantly larger than the variation in the clumped populations. It is suggested that this difference reflects the two modes of reproduction. The above observations are significant to systematic studies because they show that estimates of species morphologic parameters can be seriously biased even when based on a relatively large sample size from a well-defined population if that population is largely a result of asexual colony formation.¹¹;

1929 s[1926] = "YOUNG G.A., NOBLE J.P.A. (1990).- Silurian tabulate coral biostratigraphy and biofacies of northern New Brunswick and the southern Gaspé Peninsula.- Canadian Journal of Earth Sciences 27: 1143-1158.- FC&P 20-2, p. 64, ID=2797Topic(s):biostratigraphy; Tabulata zonation; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Canada, Baie des ChaleursDiverse Early and Late Silurian tabulate coral faunas occur in the Baie des Chaleurs region. Analysis of relative abundance data of tabulate corals from the Limestone Point and la Vieille formations of northern New Brunswick and the Anse a Pierre-Loiselle, La Vieille, and Gascons formations of the southern Gaspé Peninsula allowed the recognition of three recurrent large-scale biofacies: the Propora-Helioites, Cystihalysites, and Syringopora biofacies. The Syringopora Biofacies lacks the characteristics that would allow a zonation to be produced, but in each of the other biofacies, two zones are erected. These can be applied throughout the Baie des Chaleurs region and may be used for correlation with other areas having faunal affinities with this region.¹¹;

1930 s[1927] = "NOBLE J.P.A., LEE D.-J. (1991).- First report of allogeneic fusion and allorecognition in tabulate corals.- Journal of Paleontology 65: 65-74.- FC&P 20-1.1, p. 61, ID=2798Topic(s):allogeneic fusion; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Canada, QuebecAdult intercolony fusion occurs in Paleofavosites capax (Billings) and P. asper (d'Orbigny) in the Silurian of Anticosti Island. This represents the first documented example of allogeneic fusion seen in tabulate corals. The occurrence of allogeneic fusion and non-fusion and the documentation of antagonistic behaviour in the same species attest to the presence of some degree of allorecognition specificity, now well established for modern corals, already in these Silurian corals. The implication is that the evolution of allorecognition systems, probably by polymorphism at allorecognition loci, was already well established 400 million years ago in corals. Banding, probably seasonal, appears to be more likely environmentally than genetically controlled.¹¹;

1931 s[1928] = "SORAUF J.E. (1974).- Growth lines on Tabulae of Favosites (Silurian, Iowa).- Journal of Paleontology 48, 3: 553-555.- FC&P 4-1, p. 38, ID=5136Topic(s):tabulae, growth lines; Tabulata, Favosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: USA, IowaGrowth lines and a central junction line seen on the underside of tabulae in silicified Favosites (Silurian, Iowa) are apparently the same as those noted on scleractinian dissepiments. In living genera, these may be equated with the presence of symbiotic algae and life in sunlit water. It is suggested that favositid tabulate corals have analogous growth lines for the same reason.¹¹;

1932 s[1929] = "YOUNG G.A., NOBLE J.P.A. (1987).- The Llandoverly-wenlock Halysitidae from New Brunswick, Canada.- Journal of Paleontology 61, 6:

1125-1147.- FC&P 17-1, p. 28, ID=2142^Topic(s): taxonomy, new taxa; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Llan Wen; Geography: Canada, New Brunswick^A large collection of Silurian halysitids, mainly from the Limestone Point, La Vieille, and Petit Rocher Formations of northern New Brunswick, includes nine species distributed among Catenipora Lamarck, Halysites Fischer von Waldheim, and Cystihalysites Tchernyshev. One species, Cystihalysites belledunensis, is new, and, of the others, half are previously unknown in the Chaleur Bay region and half have been described before from this area. All species are defined using both qualitative and quantitative data. Statistical analysis of serial sections of a corallum of Cystihalysites belledunensis suggests that any random section of a halysitid will yield quantitative data representative of that colony. Preliminary analysis of the relationships between species distributions and stratigraphy and sedimentary associations suggests strong facies-control on the distribution of the four most abundant species. Both Catenipora simplex (Lambe) and Catenipora micropora (Whitfield) occur mostly in outer shelf facies. Cystihalysites belledunensis n.sp. and Cystihalysites encrustans (Buehler) never occur together, the former being found in predominantly high-energy inner shelf facies and the latter in the outer shelf facies.^1";

1933 s[1930] = "YOUNG G.A., LEE D.-J., NOBLE J.P.A. (1991).- Halysitid and Auloporid Tabulate Corals from the Gascons and West Point Formations (Silurian), Gaspé, Quebec, Canada.- Journal of Paleontology 65, 5: 715-726.- FC&P 20-2, p. 63, ID=2958^Topic(s): Tabulata, Halysitida, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Canada, Quebec^The uppermost Lower Silurian and Upper Silurian Gascons and West Point Formations of the Southern Gaspé Peninsula were deposited under a broad range of environmental conditions from deep offshore-shelf to reef facies. Halysitid and auloporid tabulate corals occur in a number of facies and show a high degree of endemism. Two species of Halysitidae and three species of Auloporidae are found in these formations. Both halysitids have been previously described from this region. The auloporids include the new species Syringopora minuta and an other species that may represent the first known Silurian occurrence of the fletcherillid genus Pseudofletcheria. A neotype for the halysitid Cystihalysites amplitibulatus (Lambe) is proposed.^1";

1934 s[1931] = "YOUNG G.A., NOBLE J.P.A. (1987).- The Llandoverly-wenlock Syringoporidae from New Brunswick, Canada.- Journal of Paleontology 61, 2: 268-283.- FC&P 17-1, p. 27, ID=2141^Topic(s): Tabulata, Syringoporidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Llan Wen; Geography: Canada, New Brunswick^A large collection of Silurian Syringoporidae, mainly from the Limestone Point and La Vieille formations of northern New Brunswick, includes one new species and three species previously described from this area. Syringopora lambei n.sp. is distinguished from the superficially similar S. bifurcata Lonsdale by its larger corallites with much broader axial tubes and less frequent corallite contacts. Similar problems which have existed in the past in the distinction of S. compacta Billings and S. retiformis Billings can be resolved, as shown in this study, on the basis of the larger, geniculate and densely-packed corallites of S. retiformis. All four species are defined using more quantitative data than has previously been applied to syringoporid taxonomy. A new lectotype for S. compacta is proposed. Recognition of epibionts on a corallum of S. bifurcata as virtually identical to the "epithecal scales" used to distinguish Syringoalcyon Termier et Termier from Syringopora Goldfuss argues strongly against the continued recognition of the former as a separate genus. Preliminary analysis of syringoporid distributions in relation to stratigraphy and sedimentary associations suggests strong facies and paleoenvironmental control on these distributions. For this

- reason and because of their long stratigraphic ranges, no well-defined biozonal scheme can be proposed at this time.¹";
- 1935 s[1932] = "LEE D.-J., NOBLE J.P.A. (1988).- Heliolitid corals of the Upper Silurian West Point Formation Gaspé, Quebec.- Journal of Paleontology 62, 6: 855-865.- FC&P 18-1, p. 43, ID=2214^Topic(s): taxonomy; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Silurian U; Geography: Canada, Quebec^The heliolitid fauna of the Upper Silurian West Point Formation of southern Gaspé, Quebec, Canada, consists of Propora tubulata (Lonsdale), Heliolites decipiens (McCoy), H. daintreei Nicholson and Etheridge, and Heliolites sp. cf. H. bohemicus Wentzel. All of these species are common in Europe, but are rare in North America. Heliolites sp. cf. H. bohemicus and H. daintreei are newly reported for North America. Very restricted facies occurrences, and presumed environmental preferences, of species such as P. tubulata and H. daintreei suggest that facies occurrences may be useful, along with conventional morphological criteria, in distinguishing species of heliolitid corals.¹";
- 1936 s[1933] = "NARBONNE G.M., DIXON O.A. (1988).- Sponge-dominated reef mounds in the Douro Formation (Upper Silurian) of Somerset Island, N.W.T.- Canadian Society of Petroleum Geologists, Memoir 13: 339-343.- FC&P 18-1, p. 19, ID=2211^Topic(s): reef mounds; reefs, Porifera; Systematics: Porifera; Stratigraphy: Silurian U; Geography: Canada, NW Territories^1";
- 1937 s[1934] = "MEHL D., REITNER J. (1996).- Observations on Astraeospongium meniscum (Roemer 1848) from the Silurian of western Tennessee: Constructional morphology and palaeobiology of the Astraeospongiidae (Calcarea, Heteractinellidae).- Berliner geowissenschaftliche Abhandlungen E18: 243-255.- FC&P 25-2, p. 39, ID=3124^Topic(s): structures; Porifera, Astraeospongium; Systematics: Porifera; Stratigraphy: Silurian; Geography: USA, Tennessee^Astraeospongium is found to form secondary calcareous basal skeletons and thus may be attributed to the morphological grouping &coralline sponges&. In A. meniscum, a bowl-shaped sponge with a massive skeleton of octactins, the ontogenetically youngest and still uncemented spicules are found at the upper, concave surface, particularly close to the edge. Towards the bottom, the spicules soon become altered through epitaxial cementation and recrystallization. From this skeletal architecture can be inferred that the soft tissues occupied only the uppermost portions of the basal skeleton. The skeletal structure is in many respects similar to that of the recent Petrobiona massiliana, although the ecological adaptations of the two species are fundamentally different. [original abstract]¹";
- 1938 s[1935] = "FREITAS T.A.de (1991).- Ludlow (Silurian) lithistid and hexactinellid sponges, Cape Phillips Formation, Canadian Arctic.- Canadian Journal of Earth Sciences 28, 12: 2042-2061.- FC&P 21-1.1, p. 16, ID=3200^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Silurian Ludl; Geography: Canada, Arctic^Abundant hexactinellid and lithistid sponges occur in Ludlow (Silurian) platform slope strata of the Cape Phillips Formation, Canadian Arctic Islands. The following are new: in the Anthaspidellidae Miller, 1889, Rhodesispongia simplex n.gen and sp., Climacospongia snowblindella n.sp., and Climacospongia undulata n.sp.; in the Sphaerocladina Schrammen, 1910, Caryospongia tuberosa n.sp.; in the Hexactinellida Schmidt, 1870 Malumispongium? cornwallisi n.sp., of the monospecific superfamily Malumispongium Rigby, 1967. Other previously described sponges recognized in the study assemblage include Hindia sphaeroidalis Duncan, 1879 and Caryospongia juglans Rauff, 1894. These occur in association with abundant Archaeoscyphia sp. in thin, laterally extensive lithistid sponge biostromes which thrive on platform slope sediments during the Late Silurian. Based on the dominant dendroclone forms in the skeletons of these and other genera, Anthaspidellidae can be divided informally into two groups: (i)

- the polyclonids, possessing complex skeletons built of variable dendroclones types, including I-, X-, and Y-shape dendroclones, and accessory spicules, including rhizoclonal, chiastoclonal, and monactinal; and (ii) the monoclonids, possessing simpler parenchymal canal systems and skeletons constructed mainly of I-shaped (amphiarborescent) dendroclones and lacking accessory spicules. The classification, based chiefly on skeletal architecture, suggests two main evolutionary trends in the family. The monoclonids generally maintained structural simplicity, inherited from the probable ancestral monactinellid, whereas the polyclonids evolved a varied and complex skeletal architecture that was more successful. [original abstract]^1";
- 1939 s[1936] = "Indiana University Paleontology Seminar (1980).- Stratigraphy, structure, and zonation of large Silurian reef at Delphi, Indiana.- American Association of Petroleum Geologists Bulletin 64: 115-131.- FC&P 9-2, p. 50, ID=0365^Topic(s):geology, ecology; reefs; Systematics: ; Stratigraphy: Silurian; Geography: USA, Indiana^The reefs have a core dominated by stromatoporoids and corals. The distribution of shapes and sizes of stromatoporoid coenostea are discussed. Stromatoporoid species are indeterminate.^1";
- 1940 s[1937] = "ARCHER A.W., FELDMAN H.R. (1986).- Microbioherms of the Waldron Shale (Silurian, Indiana); implications for organic framework in Silurian reefs of the Great Lakes Area.- Palaios 01: 133-140.- FC&P 15-2, p. 43, ID=0738^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: USA, Indiana^^1";
- 1941 s[1938] = "NOBLE J.P.A. (1985).- Occurrence and significance of late Silurian reefs in New Brunswick.- Canadian Journal of Earth Sciences 22: 1518-1529.- FC&P 15-1.2, p. 45, ID=0786^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: Canada, New Brunswick^[no species are identified but laminar and massive stromatoporoid reefal facies are distinguished and illustrated in thin section]^1";
- 1942 s[1939] = "SCHNEIDER K.A., AUSICH W.I. (2002).- Paleocology of framebuilders in early Silurian Reefs (Brassfield Formation, southwestern Ohio).- Palaios 17, 3: 237-248.- FC&P 32-1, p. 19, ID=1421^Topic(s): reef builders, ecology; reef builders; Systematics: ; Stratigraphy: Silurian L; Geography: USA, Ohio^The framebuilding fauna of an Early Silurian (Aeronian, Llandoveryan), Brassfield Formation reef from west-central Ohio is examined in detail. Brassfield reefs are among the very few Silurian reefs of the mid-continent United States that are not dolomitized. Species-level taxa identified in the framebuilding fauna include two favositid corals, two poropid corals, two halysitid corals, two colonial rugosan corals and at least four stromatoporoids. Favositids, crinoid holdfasts, and bryozoans are distributed fairly evenly across the reef; colonial rugosans and solitary rugosans are more abundant along the windward side of the reef; and stromatoporoids are more abundant on the leeward side. The Brassfield reef fauna resembles that from the Jupiter Formation (Aeronian), Anticosti Island, and the Manitoulin Formation (Aeronian), Manitoulin Island; however, there are differences in total diversity and composition. Paleogeographic positioning, local water depth, and access to open-ocean circulation are inferred as reasons for the differences among Aeronian reefs.^1";
- 1943 s[1940] = "COPPER P., FAY I. (1989).- An Early Silurian reef complex, Manitoulin Island, Ontario.- Canadian Society of Petroleum Geologists, Memoir 13: 277-282.- FC&P 18-1, p. 19, ID=2209^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian L; Geography: Canada, Ontario^^1";
- 1944 s[1941] = "BRUNTON F.R., COPPER P. (1989).- Late Llandovery reefs of the Chicotte Formation, Anticosti Island, Quebec.- Canadian Society of Petroleum Geologists, Memoir 13: pp?.- FC&P 18-1, p. 19, ID=2210^Topic(s): reefs; reefs; Systematics: ;

- 1945 Stratigraphy: Silurian Llan; Geography: Canada, Quebec^^1";
s[1942] = "GRAF G.C. (1988).- Carbonate mudmound complexes of the Upper Silurian Douro and Barlow Inlet formations at Gascoyne Inlet, Devon Island, Arctic Canada.- Ottawa University M. Sc. thesis, 152 pp.- FC&P 18-1, p. 19, ID=2212^Topic(s): mud mounds; reefs, mud mounds; Systematics: ; Stratigraphy: Silurian U; Geography: Canada, Arctic^^1";
- 1946 s[1943] = "WHITAKER S.T. (1988).- Silurian pinnacle reef distribution in Illinois: Model for hydrocarbon exploration.- Illinois Petroleum 130: 1-32.- FC&P 18-1, p. 50, ID=2292^Topic(s): reefs hydrocarbons; reefs, hydrocarbons; Systematics: ; Stratigraphy: Silurian; Geography: USA, Illinois^^1";
- 1947 s[1944] = "BRUNTON F.R. (1988).- Silurian (Llandovery-wenlock) patch reef complexes of the Chicotte Formation, Anticosti Island, Quebec.- Laurentian University, Sudbury, Ontario; unpublished M. Sc. Thesis, 190 pp.- FC&P 19-1.1, p. 22, ID=2581^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian Llan Wen; Geography: Canada, Quebec^^1";
- 1948 s[1945] = "NOBLE J.P.A. (1989).- The Late Silurian Laplante reefs of New Brunswick.- Canadian Society of Petroleum Geologists, Memoir 13: 344-349.- FC&P 19-1.1, p. 24, ID=2586^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian U; Geography: Canada, New Brunswick^^1";
- 1949 s[1946] = "CHOW A.M.C., STEARN C.W. (1988).- Attawapiskat patch reefs, Lower Silurian, Hudson Bay Lowlands, Ontario.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 263-270.- FC&P 19-2.1, p. 41, ID=2775^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian L; Geography: Canada, Ontario^^1";
- 1950 s[1947] = "SUCHY D.R., STEARN C.W. (1990).- Silurian sea level history of the Hudson Bay Platform.- 002 Bulletin of Canadian Petroleum Geology 38: 182.- FC&P 20-1.1, p. 18, ID=2799^Topic(s): eustacy; Systematics: ; Stratigraphy: Silurian; Geography: Canada, Hudson Bay^^1";
- 1951 s[1948] = "DIXON O.A., GRAF G.C. (1992).- Upper Silurian mound complexes on a shallowing carbonate ramp, Devon Island, Arctic Canada.- 002 Bulletin Canadian Petrol. Geol. 40: 1-23.- FC&P 21-1.1, p. 15, ID=3199^Topic(s): reefs, mud mounds; reefs; Systematics: ; Stratigraphy: Silurian U; Geography: Canada, Arctic^Near Gascoyne Inlet, the topmost Douro and lowermost Barlow Inlet Formations record overall upward shallowing from ramp to shallow shelf conditions. This transitional sequence contains bioherms of various sizes, from small isolated reef mounds 1 to 2m across to larger, compound reef mounds over 50m thick and 60m across, as well as distinctive inter- and pre-reef mound facies. The larger reef mounds show stages intermediate in character between those in sponge-dominated reef mounds of the Douro Formation and in larger stromatoporoid-crinoid-dominated reefs in the Barlow Inlet Formation. [first part of extensive abstract]^1";
- 1952 s[1949] = "WATKINS R. (1993).- The Silurian (wenlockian) reef fauna of southeastern wisconsin.- Palaios 8, 4: 325-338.http://www.jstor.org/pss/3515264.- FC&P 23-2.1, p. 69, ID=3548^Topic(s): reef fauna, taxonomy, guild structure; reef fauna; Systematics: ; Stratigraphy: Silurian Wen; Geography: USA, wisconsin^The Racine Formation of southeastern wisconsin contains a diverse reef fauna of Silurian (wenlockian) age. A collection of more than 10,000 specimens from this fauna includes 191 species and 38 guilds of reef constructors, binders, bafflers and dwellers. Constructors and binders include stromatoporoids, tabulates, rugosans and bryozoans; bafflers include branching tabulates and dendroid rugosans. Only locally do these groups form a skeletal framework, and for the most part, their remains are separated by reef

- matrix. Reef dwellers are represented by diverse guilds of brachiopods, gastropods, cephalopods, trilobites and echinoderms, and they also include receptaculitids, sponges, solitary rugosans, bryozoans and bivalves. Tiering within the fauna is well developed and probably extended to a height of 1m above reef surfaces. This reef fauna exhibits higher species diversity, greater numbers of guilds and more extensive tiering than Silurian level-bottom communities. Relatively few of its taxa, however, are restricted to Silurian reef environments. Constructors, binders and bafflers in the reef fauna have morphologic and taxonomic parallels in level-bottom communities, as do nearly all taxa of reef dwellers. Higher diversity in the reef fauna is not a function of specialized reef guilds and species, but results from packing of more species into the same guilds which are present in level-bottom communities. In this regard, the Silurian reef fauna differs fundamentally from that of today and reflects the generally low grade of ecologic complexity of the Paleozoic evolutionary fauna.^1";
- 1953 s[1950] = "SWEET N.L. (1995).- Paleoecology and sedimentology of late Silurian biogenic structures in the Douro and Devon Island formations of western Devon and SW Ellesmere Islands, arctic Canada.- University of Ottawa, unpublished M.Sc. thesis; 190 pp.- FC&P 26-1, p. 78, ID=3653^Topic(s): reefs, ecology, sedimentology; reefs; Systematics: ; Stratigraphy: Silurian U; Geography: Canada, Arctic^The paleoecology of coral / stromatoporoid mounds are described particularly that at Hell Gate on the SW tip of Ellesmere Island]^1";
- 1954 s[1951] = "FREITAS T.A.de, DIXON O.A. (1995).- Silurian microbial buildups of the Canadian Arctic.- International Association of Sedimentologists, Special Publication 23 [C.L.V. Monty, D.W.J. Bosence, P.H. Bridges & B.R. Pratt (eds): Carbonate mudmounds, their origin and evolution]: 151-169.- FC&P 26-2, p. 3, ID=3662^Topic(s): reefs, microbial buildups; reefs; Systematics: ; Stratigraphy: Silurian; Geography: Canada, Arctic^Four Silurian microbial buildups occur on Ellesmere Island in three main depositional settings: (i) on the edge of a drowned Ordovician platform margin; (ii) on the slope of a progradational platform; and (iii) on, and slightly basinward from, the slope of a backstepped Silurian platform. Buildups in the first setting are up to 1140m thick, 15km wide, and more than 25km in length. Some show a four-part facies succession, indicating upward shallowing through the first three parts, and then deepening in the last. These facies are, from base to top: (i) a sparsely fossiliferous, bioturbated lime mudstone; (ii) a microbial boundstone and microbialite lime mudstone; (iii) a stromatoporoid-rich floatstone and boundstone; and (iv) a microbial boundstone and microbialite-rich lime mudstone. [first part of an extensive summary]^1";
- 1955 s[1952] = "WATKINS R., KUGLITSCH J.J. (1997).- Lower Silurian (Aeronian) megafaunal and conodont biofacies of the northwestern Michigan Basin.- Canadian Journal of Earth Sciences 34: 753-764.- FC&P 28-1, p. 56, ID=3999^Topic(s): facies, biofacies; facies; Systematics: ; Stratigraphy: Silurian Aer; Geography: USA, Michigan Basin^Lower Silurian (Llandovery-Aeronian) carbonates of the Burnt Bluff Group, represent a transect along a southward dipping ramp that extends from tidal flat to basin environments. Benthic megafaunas include an ostracod biofacies (tidal flat), stromatoporoid-coral biofacies (very shallow, subtidal), pentamerid, crinozoan and crinozoan-stromatoporoid biofacies (deeper subtidal) and a crinozoan-sponge biofacies (distal ramp and basin). The crinozoan-sponge biofacies which includes diverse small crinoid ossicles, 19 types of siliceous sponge spicules, at least 65 other taxa, has a biota similar to those of Silurian continental margins. Megafaunal biofacies indicate an Early Silurian gradient going from the shoreline in the north to water depths of perhaps 60 m in the south. The Burnt Bluff Group contains conodonts of the *lcriodella discreta* -

- Icriodella deflecta zone as an onshore biofacies with Panderodus, Kockelella, Ozarkodina, Icriodella and Oulodus as an offshore biofacies with Panderodus, walliserodus and Aspelindia.¹";
- 1956 s[1953] = "FREITAS T.A.de, TRETTIN H.P., DIXON O.A., MALLAMO M. (1999).- Silurian System in the Canadian Arctic Archipelago.- 002 Bulletin of Canadian Petroleum Geology 47:136-193.- FC&P 28-2, p. 37, ID=4033Topic(s): geology, reefs; geology; Systematics: ; Stratigraphy: Silurian; Geography: Canada, Arctic^[In this major review paper the section on biofacies (168-175) discusses the contribution of stromatoporoids to the extensive reefs in the system; no taxonomy is included.]¹";
- 1957 s[1954] = "FRANK T.D., WILKINSON B.H., LOHMANN K.C. (1993).- Origin of submarine pisoliths and the sedimentology of midwestern Silurian Reefs.- Journal of Sedimentary Petrology 63: 1070-1077.- FC&P 23-1.1, p. 88, ID=4202Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: USA midwestern^Vertical tension fractures that crosscut proximal flank beds exposed in the Pipe Creek Junior Quarry in north-central Indiana formed during compaction of underlying interreefal carbonate mud, and are commonly filled with well-sorted pisolitic grainstone made up of coated grains ranging up to 1 cm in diameter. Pisolith cortices are petrologically indistinguishable from marine cement between pisoliths, from marine cement lining tension fractures, and from marine cement lining vugs in surrounding flank beds. Isotopic signatures for these components are also consistent (δ13C = -0.6 to 2.3% PDB; δ18O = -8.7 to -3.9% PDB). In addition, pisolites are present exclusively within tension fractures, and commonly show lateral size grading, with grain size increasing toward fracture interiors. These features show that pisoliths are in fact mobile marine cements that precipitated from Silurian seawater in syndimentary tension cracks that formed soon after deposition of flank beds. Requisite conditions for the formation of such large coated grains include high-energy, shallow-water settings, where sea level is generally coincident with the depositional surface of the reefal complex. This origin supports an interpretation that allochthonous material forming flank beds was predominantly generated immediately upslope on wave-swept platforms, that in situ accumulation of biotic debris was insignificant in the formation of Pipe Creek Junior complex, and that many of the larger Silurian "reefal" buildups like Pipe Creek Junior throughout the midwestern United States probably had a similar origin.¹";
- 1958 s[1955] = "FREITAS T.A.de, DIXON O.A., MAYR U. (1993).- Silurian pinnacle reefs of the Canadian Arctic.- Palaios 8: 172-182.- FC&P 23-2.1, p. 65, ID=4426Topic(s): reefs, pinnacle reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: Canada, Arctic^Silurian pinnacle reefs, the first described in the Canadian Arctic Archipelago, are exposed on Ellesmere and Devon islands. Two main reef trends occur, one of early middle Llandovery to middle Ludlow age and a second of middle Ludlow to Late Silurian or Early Devonian age. Reefs of both phases contain lime mudstone cores: some are stromatolite-rich, and others consist predominantly of microbialite-rich lime mudstone or microbial boundstone. Facies sequences of both reef phases show evidence of upward-shallowing overall, but in the older reefs, isochronous capping facies are dominated either by coral-microbial boundstone, an unusual reef facies for the Silurian, or by stromatoporoid boundstone and floatstone. This difference perhaps reflects variation in wave stress and the apparent ability of a few corals thickly encrusted by, or associated with, microbial boundstone and skeletal algae to withstand greater wave energy than a stromatoporoid-coral-rich reef community.¹";
- 1959 s[1956] = "BRUNTON F.R., COPPER P. (1994).- Paleoeologic, temporal, and spatial analysis of Early Silurian reefs of the Chicotte Formation, Anticosti Island, Quebec, Canada.- Facies 31: 57-80.- FC&P 24-1, p. 83, ID=4517Topic(s): reefs, ecology; reefs;

Systematics: ****

Stratigraphy: **Silurian L;**

Geography: **Canada, Quebec^Reefs of the Lower Silurian Chicotte Formation are the largest and most faunally diverse known on Anticosti Island, Quebec. They reach up to 25m in thickness and 250m in diameter and are present predominantly at two intervals, forming a lower and upper reef cluster. Remnants of bioherms are represented on the present-day wave-cut terrace as 60 to 100m diameter, subcircular erosional depressions known as Philip structures or as outcrop. The bioherms were relatively low structures, with approximately 3 to 5m maximum synoptic relief, some of which developed on hardgrounds and possible paleokarst surfaces of crinoidal wackestone and packstone. Dominant skeletal framework builders and sediment producers within all of the reefs are laminar to low domical stromatoporoids, colonial cerioid and fasciculate rugose corals, colonial tabulate corals, and cryptostome bryozoans. Vertical zonation of reef biota is evident within well-exposed reefs of the lower reef cluster. Three to four stages are recognizable: 1) a low-diversity tabulate dominated pioneering community including large tabulate coral colonies (halysitids and favositids), and few stromatoporoids (clathrodictyids, ecclimadictyids), fasciculate rugosans, large generally monotypic stalked crinoids, and shelly benthos (brachiopods, few ostracodes and trilobites); 2) an intermediate- to high-diversity, mixed tabulate coral-stromatoporoid-dominated reef-core community; 3) a slightly lower diversity stromatoporoid-tabulate coral-dominated climax community with laminar coenitids and alveolitids, and, 4) in a few localities, a capping, low-diversity tabulate coral-dominated (alveolitid and coenitid), and stromatoporoid-bearing community comprising laminar forms. Amelioration of Early Silurian climates, following Late Ordovician glaciation, allowed gradual reestablishment of extensive shallow-water reef growth, by mainly new and increasingly diverse genera and species of metazoans. Reef development within the Chicotte Formation coincided with global, widespread development of latest Llandovery and earliest Wenlock reefs in subtropical to tropical areas. Chicotte reefs have broad characteristics, in terms of overall biotic composition, vertical successions recognized, and paleogeographic setting, similar to those of equivalent and slightly younger age from intracratonic settings in Baltica (Gotland, Sweden and Estonia) and central and northern Laurentia (Midcontinent, U.S.A.; Hudson Bay, Canada; and North Greenland, Denmark).^1";**

1960 s[1957] = "KAHLE C.F. (1994).- Facies and evolution of a Silurian coral microbialite reef complex, Maumee, Ohio, USA.- J. sediment. Res. A, 64, 4: 711-725.- FC&P 24-1, p. 86, ID=4522^Topic(s):facies, history; reefs; **Systematics: ****Stratigraphy: ****Silurian; **Geography: ****USA, Ohio^Silurian dolomite that crops out in a quarry at Maumee, Ohio, USA, forms a thick reef complex roughly 600m in diameter and about 68m thick. It is composed, in ascending stratigraphic order, of the Lockport Dolomite and the Greenfield Dolomite. The Lockport Dolomite at Maumee contains multistory stromatolite, thrombolite, and coral-microbialite reefs. Such reefs have never been reported previously in this unit in Ohio and Indiana. Thrombolite and stromatolite reefs are interpreted to have formed in a subtidal setting, possibly within a hypersaline lagoon. Wave stress affected the coral-microbialite reefs by limiting the number of metazoans and promoting the formation of fibrous cement inferred to have been marine precipitates originally in the form of magnesian calcite. Thrombolites and stromatolites form 20-60% by volume of coral-microbialite reefs, and they contributed substantially to the syndepositional stabilization of these reefs by serving as binders and encrusters of metazoans, especially branching corals. Such stabilization sharply limited the amount of sediment available for the formation of flank beds next to coral-microbialite reefs. Evolution of the Maumee reef complex (MRC) involved two shallowing upward sequences, each of which was terminated by subaerial exposure. The older interval****

are most realistically regarded as microbial. The causes for the variations in morphology and characteristics of the constituent laminae are uncertain, although fluctuations in local microenvironmental conditions would have been important, set against a backdrop of an increasingly restricted overall setting. Caliche or travertine origins for these laminites are unlikely in general, except perhaps locally at the subaerial exposure surface at the tops of pinnacle reefs. [original abstract]^1";

- 1964 s[1961] = "JOHNSON J.G., OLIVER W.A.jr (1977).- Silurian and Devonian coral zones in the Great Basin, Nevada and California.- Bulletin geological Society of America 88: 1462-1468.- FC&P 7-2, p. 20, ID=5627^Topic(s): biostratigraphy; corals zonation; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Devonian; Geography: USA, Great Basin^[an appraisal of Merriam's Great Basin Silurian and Devonian coral zones]^1";
- 1965 s[1962] = "OLIVER W.A.jr, JOHNSON J.G. (1977).- Notes on Upper Silurian and Devonian coral zones in the Great Basin.- Contr. Riverside Campus Mus. Univ. California 4 [M.A. Murphy, W.B.N. Berry & C.A. Sandberg (eds): Western North America: Devonian]: 107-111.- FC&P 7-2, p. 20, ID=5631^Topic(s): biostratigraphy; corals zonation; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian U, Devonian; Geography: USA, Great Basin^[an updating of the biostratigraphic significance of Merriam's Great Basin coral zones]^1";
- 1966 s[1963] = "JACKSON D.E., LENZ A.C., PEDDER A.E.H. (1978).- Silurian and Early Devonian Graptolite, Brachiopod and Coral faunas from the Northwestern and Arctic Canada.- Geological Association of Canada, Special Paper 17: 1-71.- FC&P 8-1, p. 51, ID=0220^Topic(s): ; paleontology; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian L; Geography: Canada, Arctic^Emphasis of this paper is biostratigraphic, and illustrations (Pls. 1-4, graptolites; 5-14, brachiopods and two trilobites; 15-44, rugose corals) arranged by faunas and regions, not zoological affinities. Age estimations primarily are based on graptolites and conodonts in Pragian and earlier strata, and on conodonts and a goniatite occurrence in later strata. Ages are argued as much as possible in terms of the European Hercynian magnafacies stages. Twelve formally defined graptolite zones are recognized in shale facies: nilssoni, leintwardinensis primus Zones (Ludlovian), formosus, bugensius, chelmiensis, bouceki, transgrediens, angustidens Zones (Pridolian), uniformis uniformis, hercynicus Zones (Lochkovian), thomasi and yukonensis Zones (Pragian). The zone of Monograptus thomasi is new. Corals figured are referred to 11 units, which take their names either from associated conodonts, or from their stratigraphic occurrence between conodont or graptolite faunas. In ascending order with approximate stage assignments these are: index associates (early Pridolian), post bugensis and pre transgrediens praecipuus Fauna, and confluens δ associates (middle Pridolian), post index and pre hesperius Fauna (late Pridolian), hesperius associates (early Lochkovian), post hesperius and pre pesavis Fauna (middle Lochkovian), pesavis associates (late Lochkovian), late sulcatus associates (late Pragian), dehiscens associates (early Zlichovian), aff. perbonus associates (late Zlichovian) and serotinus associates (Dalejan). In Prongs and Royal Creeks areas, where the best dated coral faunas are mostly allochthonous in debris flows, migrations caused by minor transgressive / recessive cycles considerably affected the composition of the coral faunas. Several forms present have no known ancestors or descendants in other local faunas. Halysitids are not known in Pridolian or later faunas and Lower Devonian heliolitids are extremely rare in the region. Coral provinciality was most marked in Pridolian time, when Yukon faunas were still entirely silurian, while arctic faunas included obvious Devonian forerunners, and in late Pragian to early Zlichovian time, when the Yukon and arctic faunas

- continued to be of Old World Faunal Realm aspect, while contemporaneous faunas in Nevada appear to have included forms developed from Eastern North America Realm species. The following taxa are described: *Ogilvilasma discors* gen. & sp.n., *Werneckelasma multiseptata* gen. & sp. n., *Spongonaria guttata* sp.n., and *Windelasma werneckensis* gen. & sp. n. [extracted from original summary]^1";
- 1967 s[1964] = "PETRYK A.A. (1982).- Aulacerid ecostratigraphy of Anticosti Island, and its bearing on the Ordovician-Silurian boundary and the Upper Ordovician glacial episode.- Proc 3rd North American Paleont. Convention 2: 393-399.- FC&P 11-2, p. 36, ID=1859^Topic(s): ecostratigraphy; Stromatoporoidea; Systematics: Porifera; Stratigraphy: Silurian / Devonian; Geography: Canada, Anticosti Island^Aulacerids are common in the Vaureal and Ellis Bay formations, particularly in biohermal and biostromal build-ups. They disappeared abruptly at the end of the Ordovician (top of Ellis Bay). Most specimens lie flat on bedding planes but some are preserved in vertical position.^1";
- 1968 s[1965] = "WRIGHT A.J., BOURQUE P.-A. (1980).- Halysitid corals from Silurian and Devonian rocks of Quebec.- Canadian Journal of Earth Sciences 17, 6: 788-796.- FC&P 11-1, p. 51, ID=1778^Topic(s): Tabulata, Halysitida; Systematics: Cnidaria; Stratigraphy: Silurian Devonian; Geography: Canada, Quebec^Halysitid tabulate corals occur in the Silurian and Devonian rocks of northeastern Gaspé Peninsula, Quebec. Silurian specimens from the Dartmouth River and Madelaine River areas are referred to Cystihalysites. A specimen from a possibly Early Devonian level in the Gascons Formation in the Dartmouth River area is assigned to Cystihalysites. Two specimens from different levels in the Early Devonian part of the West Point Formation in the Madelaine River area are assigned questionably to Quepora. The latter occurrences in the West Point Formation demonstrate that this group of tabulate corals lingered into the Devonian.^1";
- 1969 s[1966] = "OLIVER W.A.jr (1992).- Corals from the Turkey Creek Limestone (Lower Devonian), Southern Oklahoma.- Oklahoma Geological Survey Bulletin 145: 137-159.- FC&P 22-2, p. 81, ID=3508^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: USA, Oklahoma^The Turkey Creek Limestone is known from one small outcrop in Marshall County, Oklahoma. This report describes the Turkey Creek corals and puts them into the stratigraphic, ecologic, and biogeographic context established by earlier studies of the brachiopod, trilobite, and conodont elements of the fauna. The corals are compatible with a middle Early Devonian, Pragian age suggested by the conodonts and trilobites, and give some support to a paleogeographic position within the Eastern America Realm (EAR) between the Appalachians and Great Basin provinces on the southern margin of the North American plate. The corals belong to "basinal" genera, but this term is inappropriate for several EAR assemblages of this kind; the term laccophyllid assemblage is recommended for use in discussing Silurian-Devonian faunas. *Neaxon amsdeni* n.sp., "*Stereolasma*" sp., and *Favosites* sp. 1 are described.^1";
- 1970 s[1967] = "KESLING R.V., SEGALL R.T., SORENSEN H.O. (1974).- Devonian Strata of Emmet and Charlevoix Counties, Michigan.- Museum of Paleontology, Papers on Paleontology 1974, 7: pp?.- FC&P 4-2, p. 58, ID=5276^Topic(s): geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: USA, Michigan^[discovery of Corals; figuration of a new species]^1";
- 1971 s[1968] = "JULL R.K. (1977).- The distribution of corals near the margin of an Upper Devonian carbonate complex in western Canada.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 160-166.- FC&P 6-1, p. 19, ID=5497^Topic(s):

- ; corals ecology; Systematics: Cnidaria; Anthozoa;
 Stratigraphy: Devonian U; Geography: Canada
 W^[environmental control of rugose and tabulate corals in the Ancient
 wall complex]^1";
- 1972 s[1969] = "PEDDER A.E.H. (1975).- Revised megafossil zonation of Middle
 and Lowest Upper Devonian strata, central Mackenzie valley.- Papers of
 geological Survey Canada 75-1A: 571-576.- FC&P 7-2, p. 20,
 ID=5632^Topic(s): biostratigraphy; corals zonation;
 Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian
 Eif - Fra; Geography: Canada, Mackenzie valley^^1";
- 1973 s[1970] = "PEDDER A.E.H. (1977).- Corals of the Lower / Middle and
 Middle / Upper Devonian boundary beds of northern and western
 Canada.- Contr. Riverside Campus Mus. Univ. California 4 [M.A. Murphy,
 W.B.N. Berry & C.A. Sandberg (eds): Western North America:
 Devonian]: 99-106.- FC&P 7-2, p. 21, ID=5636^Topic(s):
 biostratigraphy; corals, stratigraphy; Systematics:
 Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography:
 Canada^[a review of coral faunas dated in terms of conodont zones
 with references to possible positions for the Lower / Middle and
 Middle / Upper Devonian series boundaries]^1";
- 1974 s[1971] = "MCCRACKEN A.D., ARMSTRONG D.K., BOLTON T.E. (2000).-
 Conodonts and corals in kimberlite xenoliths confirm a Devonian seaway
 in central Ontario and Quebec.- Canadian Journal of Earth Sciences 37:
 1651-1663.- FC&P 30-1, p. 36, ID=1526^Topic(s): ;
 stroms, Anthozoa; Systematics: Chordata Cnidaria; Anthozoa;
 Stratigraphy: Devonian; Geography: Canada
 xenoliths^Eighteen samples containing sedimentary rock xenoliths were
 obtained from cores drilled into eight Mesozoic kimberlite pipes in
 the Kirkland Lake area, Ontario and in Ontario and Quebec near Lake
 Timiskaming. Nine samples from five pipes contained fossils that were
 used for age determinations. These fossils are Middle or Late
 Ordovician graptolites, inarticulate brachiopods and conodonts; Silurian
 and (or) Devonian conodonts; Early Devonian colonial corals; a Devonian
 stromatoporoid; Early and Middle Devonian conodonts. These fossils
 provide the first physical evidence for a connection between a Lake
 Temiskaming "basin" and other Ontario Basins during at least
 part of the Devonian. These strata persisted at least until the
 Mesozoic before they were removed by erosion. The stromatoporoid is
 illustrated in longitudinal section and described as "The Late
 Silurian or Devonian multilayered stromatoporoid Densastroma sp. This
 form has short, thick pillars that are highly replaced."^1";
- 1975 s[1972] = "CLOUGH J.G., BLODGETT R.B. (1988).- Coral-stromatoporoid
 reef complex of late early Devonian Ogilvie Formation of east-central
 Alaska and adjacent Yukon Territory.- Canadian Association of Petroleum
 Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E.
 (eds): Reefs: Canada and Adjacent Areas]: 408-413.- FC&P
 19-2.1, p. 40, ID=2767^Topic(s): reefs; coral-strom reefs;
 Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea;
 Stratigraphy: Devonian L; Geography: Canada N, USA
 Alaska^^1";
- 1976 s[1973] = "SMITH G.P., STEARN C.W. (1988).- Coral / stromatoporoid
 reef complex, Lower Devonian, SW Ellesmere I., NWT.- Canadian
 Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James
 N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]:
 520-527.- FC&P 19-2.1, p. 40, ID=2771^Topic(s): reef
 complexes; reef complexes; Systematics: Cnidaria Porifera;
 Anthozoa Stromatoporoidea; Stratigraphy: Devonian L;
 Geography: Canada, NW Territories^^1";
- 1977 s[1974] = "RIGBY J.K., CLEMENT C.R. (1995).- Demosponges and
 hexactinellid sponges from the Lower Devonian Ross Formation of
 west-central Tennessee.- Journal of Paleontology 69, 2: 211-232.-
 FC&P 24-2, p. 92, ID=4598^Topic(s): taxonomy;
 Porifera, Demospongiae, Hexactinellida; Systematics: Porifera;

Hexactinellida; Stratigraphy: Devonian L; Geography: USA, Tennessee^A fauna of eight taxa of demosponges and hexactinellid sponges has been collected from the Lower Devonian (Lochkovian) Ross Formation, largely out of the upper Birdsong Shale Member in Benton Decatur, and Perry Counties in west-central Tennessee. The Upper Birdsong Shale ("bryozoan zone") in which the sponges are most common appears to have been deposited below normal wave base in a quiet marine environment, and represents a terrigenous clastic sediment influx onto a carbonate shelf that had existed in the area from at least the middle Silurian. Benton Quarry in Benton County was the most productive locality for fossil sponges. The new demosponge genera and species Ginkgospongia foliata and Coniculospongia radiata occur with the new species Haplotion lobatum and skeletal mats of fine spicules, along with moderately rare specimens of Hindia sphaeroidalis Duncan. The new hexactinellid genus and species Stiodermiella amanita and Stiodermiella tetragona are characterized by peculiar ornamented papillose, swollen spicules that produce a massive, armored layer on the upper part of the sponge. The latter are associated with the new hexactinellid species Twenhofelella bulbulus, which has relatively normal-appearing hexactines, and with an indeterminate hexactinellid genus, which has spinose hexactines in irregular orientation in a small, platelike fragment. Root tufts of probable hexactine origin also occur. Swollen spicules in Stiodermiella are reminiscent of swollen spicules in the family Stiodermatidae Finks, largely from the Permian of western Texas, but elements of the family are also known from Lower Carboniferous to Permian rocks in Europe and North America.^1";

1978 s[1975] = "GUTSCHICK R.C., RODRIGUEZ J. (1990).- By-the-wind-sailors from a Late Devonian foreshore environment in western Montana.- Journal of Paleontology 64, 1: 31-39.- FC&P 19-1.1, p. 55, ID=2672^Topic(s): Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Devonian Fam; Geography: USA, Montana^Three remarkable fossil medusoid hydrozoans (Plectodiscus latinutilus n.sp.) with disc, topsail, and pendant tentacular appendages were recovered from the latest Late Devonian beds of the Sappington Member of the Three Forks Formation in the Gallatin Range, southwest Montana. This is the first velellid reported from a Paleozoic beach paleoenvironment. Top and underside patterns of these chondrophorine velellids display well-preserved casts and mold imprints in fine siltstone. Outlines of the circular disc and the profile of the wide sail and tentacular structures embedded in soft tissue can be recognized. These floating colonial animals were moved along the southeast shores of the Sappington Basin during a time of eustatic sea level lowering and regression in a tropical setting. Colonies were washed up on the upper beach where they were stranded in the bubbling swash left behind by the surf. The foreshore was constructed of tabular, planar cross-bedded, seaward-dipping, foreset accretionary beds which contain parallel laminations and lime-coated grains. Bedding is inclined 17 to 24 seaward.^1";

1979 s[1976] = "MCLEAN R.A., KLAPPER G. (1998).- Biostratigraphy of Frasnian (Upper Devonian) Strata in western Canada, based on conodonts and rugose corals.- 002 Bulletin of Canadian Petroleum Geology 46, 4: 515-563.georef/1999022410.- FC&P 28-1, p. 10, ID=3951^Topic(s): biostratigraphy; stratigraphy; Systematics: Chordata Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada W^A total of 13 conodont zones and 11 rugose coral faunal assemblages currently provides a subdivision of the Frasnian of the western Canada Sedimentary Basin. The conodont zonation adopted is that first developed in the Montagne Noire area of southern France and subsequently found to have widespread applicability, especially when supplemented through the use of graphic correlation. The rugose coral faunal scheme is based on the overlapping ranges of species with wide geographic distribution, but with relatively short stratigraphic duration. Integration of these faunal schemes allows for

more precise biostratigraphic control and provides a basis for refined correlation of the sequences of basin fill. * As all fossil groups have varying degrees of facies control on their distribution, we do not have conodont and coral biostratigraphic data for all units in the basin. Significant conodont data have been obtained mainly from the margins of the larger bank and reef complexes, rather than their relatively shallow water interiors, and from the basinal strata enclosing them. These data generally support a reciprocal process of reef and off-reef sedimentation throughout the Frasnian. Rugose corals are most commonly developed within the reef and bank complexes (especially the Winterburn Group and equivalents), and particularly near their margins. They are rarer and of less biostratigraphic value in basinal strata. * Some of the more significant formational time spans, expressed in terms of Montagne Noire (MN) Frasnian conodont zones, are summarized as follows. The Beaverhill Lake Group of Alberta ranges from the norrisi Zone of the latest Middle Devonian to lower Zone 5. The succeeding Cooking Lake-Majeau Lake interval is in Zone 5 to possibly lower Zone 6, and the overlying Duvernay Formation extends into Zone 10. The Perdrix Formation in outcrop of the Rockies is largely equivalent in age to the Cooking Lake-Majeau Lake-Duvernay, but locally at least ranges into lower Zone 11. The black/grey shale facies of District of Mackenzie and northeast British Columbia (Canol Formation, Horn River Group) ranges at least as high as Zone 6 and locally as high as Zone 10. The Ireton, Leduc, Peechee, lower Mount Hawk interval of Alberta extends through Zone 11, while most of the Nisku, Arcs/Grotto and upper Mount Hawk lie within Zone 12. The z-marker within the clastic basin fill of subsurface Alberta lies approximately at the boundary of Zones 11 and 12. In the southern District of Mackenzie and northeast British Columbia, the Jean-Marie Member and equivalents are in Zone 12. Finally, the Blue Ridge, Simla, Kakisa and equivalents lie primarily within Zone 13. [original abstract]^1";

- 1980 s[1977] = "OLIVER W.A.jr (1978).- Iowaphyllum (rugose coral) from the Upper Devonian of Arizona.- U.S. Geological Survey . 6, 6: 797-805.- FC#038;P 9-1, p. 32, ID=0251Topic(s): ; Rugosa, Iowaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian U; Geography: USA, Arizona^Comments on the relationships of Iowaphyllum and the first record of the genus from the western U.S.A.^1";
- 1981 s[1978] = "PEDDER A.E.H., SMITH G.P. (1983).- A new Zlichovian (Early Devonian) species of the rugose coral genus Zelolasma from the Eids Formation of Ellesmere Island, Northwest Territories.- Current Research B, Geological Survey of Canada 83-1B: 195-200.- FC#038;P 13-1, p. 34, ID=0445Topic(s): new taxa; Rugosa, Zelolasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Canada, Arctic^Zelolasma sensu stricto, is known from the Pragian of Tadzhikistan, late Pragian or early Zlichovian of New South Wales, early Zlichovian of Ellesmere Island, and Dalejan of Taymyr. Reported occurrences in the late Lochkovian of Salair and the Dalejan or Eifelian of Gansu have yet to be substantiated. Forms resembling Zelolasma, but differing from it by lacking discrete adaxial septal fragments, are known from the Ludlow Series of New South Wales and the Upper Silurian (Ludlow or Pridolian equivalent) of the southern Urals.Zelolasma apsidiferum sp.n. is described from high strata of the Eids Formation, 20.5 km west of the head of Sor Fiord, southwestern Ellesmere Island. The type horizon of the new coral is in the Polygnathus dehiscens Zone, which spans the Pragian/Zlichovian boundary. However, the age of the type stratum is judged to be early Zlichovian, rather than late Pragian, because it overlies probable Zlichovian brachiopods, as well as spores dated approximately as middle Emsian (equivalent to late Zlichovian).^1";
- 1982 s[1979] = "PEDDER A.E.H. (1983).- New Dalejan (Early Devonian) rugose corals from the Blue Fiord Formation of Southwestern Ellesmere Island, Northwest Territories.- Current Research B, Geological Survey of Canada

83-1B: 223-235.- **FC#038;P 13-1**, p. 34, ID=0446**Topic(s):**
new taxa; Rugosa; Systematics: Cnidaria; Rugosa;
Stratigraphy: Devonian L; **Geography:** Canada, Arctic^The family Columnariidae Nicholson 1879, is revised, so that it comprises the subfamilies Columnariidae Nicholson 1879, Hexagonariinae Bulvanker 1958, Paradisphyllinae Jell 1969, Utaratuiinae Spasskiy, Kravtsov and Tsyganko 1975, Spongonariinae Crickmay 1962, and Tropicophyllinae subfam.n. Stereophyllum Schlueter 1889, is likely to be a synonym of Digonophyllum wedekind 1923. However, Digonophyllum, which is a widely used generic name, is retained on the grounds that Stereophyllum appears to be a nomen oblitum. Aulacophyllum Milne-Edwards & Haime 1850, and its probable synonym Pinnatophyllum Grabau 1922, are discussed because of similarities between them and a new genus Thoulelasma. Digonophyllum primitivum confertum subsp.n. (Family Cystiphylliidae) and Thoulelasma loewei. gen. et sp.n. (Family Halliidae) are described from high in the inversus Zone in the Sor Fiord section. Paraspongonaria delicata gen. et sp.n. (Family Columnariidae) is described from the same horizon and locality, as well as from the overlying serotinus Zone near Vendom Fiord. Newly prepared type material of Paraspongonaria sverdrupi (Loewe 1913) is figured from the Zlichovian (Early Devonian) Db Series of Schei (1903; 1904) in the vicinity of Goose Fiord.¹;

1983 s[1980] = "PEDDER A.E.H. (1983).- New Devonian rugose corals of probable late Dalejan age from the Bird Fiord Formation of southwestern Ellesmere Island, Northwest Territories.- Current Research B, Geological Survey of Canada 83-1B: 335-352.- **FC#038;P 13-1**, p. 34, ID=0447**Topic(s):** **new taxa; Rugosa; Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian L; **Geography:** Canada, Arctic^The Bird Fiord Formation, between Blubber Point and the area north of Muscox Fiord, is divided into four lithological units, informally designated Units 1 to 4. Unit 3 contains a rich benthic, marine fauna, including the corals described in this paper. Its age is deduced to be probably late Dalejan (late Early Devonian), on the basis of conodonts, brachiopods and corals. The genera Spongophylloides, Actinocystis, Grypophyllum, Dubrovia, Salairophyllum, Tonkinaria and Neogrypophyllum are discussed in preparation for the proposal of a new ptenophyllid genus named Ellesmerelasma. Four new species and a new subspecies are introduced. They are Lekanophyllum foliatum, Ellesmerelasma pumile, Mansuyphyllum uyenoii, M. versicularium and M. comsolium.¹;

1984 s[1981] = "SCRUTTON C.T. (1983).- Astogeny in the Devonian rugose coral Phillipsastrea nevadensis from northern Canada.- Memoirs Association Australasian Palaeontologists 01 [J. Roberts & P.A. Jell (eds): Dorothy Hill Jubilee Memoir]: 237-259.- **FC#038;P 13-1**, p. 35, ID=0449**Topic(s):** **blastogeny; Rugosa, Phillipsastrea; Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian U; **Geography:** Canada N^Protocorallite ontogeny, corallite increase and colony development in Phillipsastrea nevadensis Stumm 1940 are described from serial section of four complete colonies from the Late Devonian of northern Canada. The protocorallite shows characteristic rugosan septal insertion, with serial insertion of minor septa. Increase is almost exclusively marginal, non-parricidal. Offset development displays subtle distinctions between peripherally and more centrally located offsets. In both, most septa are inherited from the parent and no regular pattern of insertion can be detected. All corallites have the potential to offset repeatedly. Increase shows a weak to strong periodicity, interpreted as seasonal, from which linear growth rates of 4-10 mm yr⁻¹ can be calculated. The balance between peripherally and centrally located offsets, and the pattern of distribution of corallites at the colony surface are the results of space competition and simple geometric constraints operating during growth. These factors, and different corallite growth rates are responsible for the range of colony form. The most important variable

- in the environment imposing space competition during growth is probably rate of soft sediment accumulation around the colonies, with the suspension and resedimentation of calcareous mud by seasonal storms causing corallite or colony mortality. (Original summary)¹";
- 1985 s[1982] = "OLIVER W.A. jr (1981).- The Middle Devonian rugose coral *Prismatophyllum conjunctum* (Davis) and the age of the ¹; Columbus; Limestone at Ingersoll, Ontario.- Bulletin geological Society of America 92: 873-877.- FC;P 13-1, p. 38, ID=0461Topic(s): biostratigraphy; Rugosa, Primitophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Canada, Ontario^^1";
- 1986 s[1983] = "MCLEAN R.A. (1986).- The rugose coral *Pachyphyllum Edwards and Haime* in the Frasnian (Upper Devonian) of western Canada.- Papers of geological Survey Canada 86-1B: 443-455.- FC;P 15-2, p. 27, ID=0644Topic(s): ; Rugosa, Pachyphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada w^^1";
- 1987 s[1984] = "PEDDER A.E.H. (1985).- Lochkovian (Early Devonian) rugose corals from Prince of Wales and Baillie Hamilton islands, Canadian Arctic archipelago.- Papers of geological Survey Canada 85-1B: 285-301.- FC;P 15-1.2, p. 25, ID=0872Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Lochk; Geography: Canada, Arctic^^1";
- 1988 s[1985] = "MCLEAN R.A. (1984).- Upper Devonian (Frasnian) rugose corals of the Hay River region.- *Palaeontographica Americana* 54: 470-474 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC;P 14-1, p. 46, ID=0973Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada, NW Territories^^1";
- 1989 s[1986] = "PEDDER A.E.H. (1982).- *Chostophyllum*, a new genus of charactophyllid corals from the Middle Devonian of western Canada.- *Journal of Paleontology* 56, 3: 559-582.- FC;P 11-2, p. 30, ID=1843Topic(s): new taxa; Rugosa, Chostophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Canada w^Six new and three previously established species (*Cyathophyllum waskasense* Whiteaves 1892, *C. petraioides*, Whiteaves 1892 and *Alaiophyllum goryanovi* Pedder 1973) are referred to a new genus, which, as presently known, is confined to Middle Devonian strata of western Canada. *Chostophyllum metula* n sp., from the Hare Indian Formation (late Givetian part), is the type species. Other new species are *C. coniculus*, *C. humense* and *C. n.sp. 2* from the upper Hume Formation (late Eifelian), *C. slavorum* from the Pine Point Formation (Givetian), and *C. n.sp. 1* from the Ramparts Formation (late Givetian).¹";
- 1990 s[1987] = "PEDDER A.E.H. (1982).- New Zlichovian (Early Devonian) rugose corals from the Blue Fiord Formation of Ellesmere Island.- *Curr. Res., C, Geol. Surv. Canada, Pap.* 82-1C: 71-82.- FC;P 12-1, p. 31, ID=1900Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Canada, Arctic^The genera *Taimyrophyllum*, *Cavanophyllum* and *Radiastrea* are reviewed. A lectotype is chosen for *Phillipsastrea scheii* Loewe, 1913, to make it a junior objective synonym of *Iowaphyllum alpenense* (Rominger, 1877). This allows *Taimyrophyllum nolani* Merriam, 1974, which would otherwise be a junior subjective synonym of *Phillipsastrea scheii*, to stand. *T. nolani beaumannense* subsp.n., *Cavanophyllum uyenoii* sp.n. and *Radiastrea pulchra* sp.n. are described from the early Zlichovian part of the dehiscens Zone, at localities close to the outcrop known as the Sor Fiord section, on southwest Ellesmere Island, arctic Canada. *Cavanophyllum uyenoii* sp.n. also occurs in the slightly younger Zlichovian *Polygnathus* aff. *perbonus* conodont unit in the Sor Fiord section.¹";

- 1991 s[1988] = "PEDDER A.E.H. (1986).- Species of the rugose coral genus *Minussella* from the Middle Devonian of western and Arctic Canada.- Papers of geological Survey Canada 86-1B: 471-488.- FC&P 16-1, p. 57, ID=1954Topic(s): ; Rugosa, Minussiella; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Canada, Arctic^1";
- 1992 s[1989] = "McLEAN R.A., PEDDER A.E.H. (1987).- Frasnian Rugose corals of western Canada, Part 2: the genus *Smithiphyllum*.- *Palaeontographica* A195, 4-6: 131-173.- FC&P 16-1, p. 61, ID=1965Topic(s): ; Rugosa, *Smithiphyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada w^The kyphophyllinid rugose coral *Smithiphyllum* is widely distributed in lower Upper Devonian strata of western Alberta, eastern British Columbia and southern and central District of Mackenzie. The composition and distribution of the genus are reviewed and the following species are described: *Smithiphyllum imperfectum* (Smith 1945), *S. meridianum* n.sp., *S. crassatum* n.sp., *S. adnatum* n.sp., *S. bufalense* n.sp., *S. belanski* Pedder 1965, *S. grandivesiculosum* (Soshkina 1952), *S. imbulliferum* n.sp., *S. cygnus* n.sp., *S. occidentale* (Sorauf 1972), *S. muratum* n.sp., *S. carlsonense* n.sp. large variety, *S. whittakeri* Pedder 1965, *S. martinense* (Stumm 1948), *S. amplum* n.sp., *S. aquilonium* n.sp., *S. frondosum* n.sp., *S. foliatum* n.sp. and *S. ventosum* n.sp.^1";
- 1993 s[1990] = "OLIVER W.A.jr (1987).- Middle Devonian Coral Faunules from Illinois and Their Bearing on Biogeography.- *Bulletin U.S. geol. Surv.* 1690: D1-D9.- FC&P 16-2, p. 19, ID=2044Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, Illinois^Two rugose coral faunules from a single well in Coles County, Ill., are of contrasting origins. A Lingle Limestone faunule is of Centerfield age (Givetian). It is dominated by characteristic Eastern Americas Realm corals, but includes three specimens of Old world ptenophyllids. An upper Grand Tower Limestone faunule is derived from the Michigan Basin Anderdon Limestone of late Onondaga age (Eifelian). This contains only two species of rugose corals, both having Old world Realm affinities. The Old world corals of both faunules are thought to have entered the Michigan Basin from the west and to have migrated from there into the Illinois Basin. An analogous superposition of Old world and Eastern Americas corals is known in the Logansport, Ind., area on the Kankakee Arch that separates the Michigan and Illinois basins.^1";
- 1994 s[1991] = "PEDDER A.E.H. (1989).- New genera of Middle Devonian rugose corals from the type Horn Plateau Reef, District of Mackenzie.- *Bulletin Geol. Surv. Can.* 396: 61-87.- FC&P 19-1.1, p. 40, ID=2620Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Canada, Horn Plateau Reef^1";
- 1995 s[1992] = "PEDDER A.E.H. (1989).- Variation and generic identity of *Heliophyllum boreale* McLaren 1964, a Middle Devonian rugose coral from western Canada.- *Bulletin Geol. Surv. Can.* 396: 89-115.- FC&P 19-1.1, p. 40, ID=2621Topic(s): variability; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Canada w^1";
- 1996 s[1993] = "SORAUF J.E. (1997).- Geochemical signature of incremental growth and diagenesis of skeletal structure in *Tabulophyllum traversensis* (Winchell 1866).- *Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica* 92, 1/4: 77-086.- FC&P 26-2, p. 24, ID=3704Topic(s): incremental growth; Rugosa, Tabulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: USA, Michigan^Understanding biogemic structures within fossil corals, and diagenetic changes in skeletal material is basic to taxonomy in the Rugosa and Tabulata. Incremental growth has long been known in living and fossil scleractinian corals, and likewise recognized in Paleozoic rugose and

tabulate corals. Study of very well-preserved rugose corals from Devonian rocks of Michigan reveals skeletal growth banding within fibrous septotheca, shown by variation in the trace element magnesium. Modern electron microprobes (superprobes) allow detailed mapping of minor element distribution on a less than 1µm scale, with material studied here of *Tabulophyllum traversensis* from Traverse Group strata (Givetian) of Michigan. Element mapping of magnesium distribution clearly shows incremental skeletal banding within fibrous walls that marks growth, with alternating bands of magnesium-rich (maximum concentrations of 0,5%) and magnesium-free carbonate. Such a geochemical marker of growth provides the opportunity to evaluate diagenesis of corals and possibly recognize precursors of secondary structures in skeletal carbonates of fossil corals.^1";

- 1997 s[1994] = "SORAUF J.E. (1998).- Frasnian (Upper Devonian) rugose corals from the Lime Creek and Shell Rock Formation of Iowa.- *Bulletins of American Paleontology* 113, 355: 1-159.- FC&P 27-2, p. 53, ID=3914^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: USA, Iowa^Rugose corals from Frasnian Lime Creek ("Hackberry") and Shell Rock strata are known largely from the works of Fenton and Fenton (1924) and Belanski (1927, 1928), each of which described outcrop stratigraphy and major parts of the fauna. The Shell Rock Formation includes three members, two of which contain rugosans, the basal Mason City and the uppermost, or Nora Member. The overlying Lime Creek Formation contains the Juniper Hill Member, lacking corals, overlain by the very fossiliferous Cerro Gordo Member, source of much of the famous "Hackberry" coral fauna described by Fenton and Fenton in 1924. The uppermost, Owen Member, also contains abundant Rugosa. […] Based on the brachiopod and conodont zonation, the Shell Rock and Lime Creek coral faunas are medial and late, but not latest Frasnian. [excerpts from extensive summary]^1";
- 1998 s[1995] = "EASTON W.H., OLIVER W.A.jr (1973).- The Devonian *Tetracoral Acinophyllum stokesi* (Milne Edwards and Haime), 1851.- *Journal of Paleontology* 47, 5: 915-918.- FC&P 2-2, p. 15, ID=4792^Topic(s): ; Rugosa, *Acinophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L?; Geography: Canada^Lithostrotion *stokesi* Milne Edwards and Haime, 1851, is assignable to *Acinophyllum* Mc Laren, 1959. The species originally was said to come from Carboniferous rocks at Lake Winnipeg, Manitoba, Canada, but the type specimen is probably from Lower Devonian strata and not from Lake Winnipeg unless it was collected from glacial drift. The name *L. stokesi* is a senior subjective synonym of *Acinophyllum davisii* Stumm, 1965.^1";
- 1999 s[1996] = "MERRIAM C.W. (1974).- Lower and Lower Middle Devonian rugose corals of the Central Great Basin.- U.S. Geological Survey Prof. Paper 805: 83 pp., 25 pls.- FC&P 4-1, p. 35, ID=5120^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L M; Geography: USA, Great Basin^Rugose corals of the Great Basin Devonian seaways underwent three major bursts of evolutionary activity: (1) in late Early to early Middle Devonian (early Eifelian) time; (2) in the medial Middle Devonian (late Eifelian); (3) in Late Devonian (Frasnian) time. No Rugosa are known in the highest Devonian (Famennian) of this province. The product of the first of these bursts of evolution is part of the subject of this paper. * Devonian rocks of the central Great Basin occur in three north-south facies belts of which the Antelope-Roberts Mountains belt is the more important in terms of Early and Middle Devonian coral distribution. No Rugosa were found in Early and early Middle Devonian rocks of this age of the Diamond Mountains facies belt on the east, where strata of this age are barren dolomite and siliceous sandstone. Within the Monitor-Simpson Park facies belt on the west, only the earliest Devonian Rabbit Hill Limestone coral fauna is known. * Nine successive coral zones are defined in the Nevada Formation and

overlying Devils Gate Limestone of the Antelope-Roberts Mountains belt. These zones have been designated A through I in ascending stratigraphic order. Described and illustrated herein are Rugosa and Early Devonian coral zones A, B, and C and those of coral zone D, which is Early and early Middle Devonian. Rugosa of coral zone A are best known in the westerly Monitor-Simpson Park belt, where they characterize the Syringaxon facies of the Helderbergian Rabbit Hill Limestone.[part of extensive summary]^1";

- 2000 s[1997] = "OLIVER W.A.jr (1975).- Unusual growth in a rugose coral.- Lethaia 8, 1: 85-88.- FC&P 4-1, p. 36, ID=5126^Topic(s): growth mode; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, Iowa^A small, solitary rugose coral, probably belonging to Aulacophyllum hemicrassatum Sloss, from the Middle Devonian of Iowa, USA, grew normally (conically) for three-fourths of its length, then, in an apparent reversal of pattern, decreased in diameter so that the uppermost part of the corallum is an inverted cone. The reversal of normal growth is attributed to polyp injury or disease that gradually, rather than suddenly, decreased the polyp's ability for normal growth and skeleton building.^1";
- 2001 s[1998] = "PEDDER A.E.H. (1973).- Description and biostratigraphical significance of the Devonian coral genera Alaiophyllum and Grypophyllum in Western Canada.- Geol. Surv. Canada Bull. 222: 93-127.- FC&P 4-1, p. 37, ID=5128^Topic(s): ; Rugosa, Alaiophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Canada W^Révision de la morphologie, classification, répartition et composition des genres Alaiophyllum et Grypophyllum. Description de A. goryanovi sp. n., G. subtile sp. n. du Givétien supérieur de la région centrale de la vallée du Mackenzie. Il démontre que A. mackenziense est une espèce de Grypophyllum et caractéristique de l'intervalle pauvre en fossiles (sauf Stromatoporoidés et Tabulata) au-dessus des couches à Stringocephalifères du Dévonien moyen et au-dessous de la formation de Waterways du Dévonien supérieur, ou ses équivalents.^1";
- 2002 s[1999] = "OLIVER W.A.jr (1977).- Devonian rugose coral assemblages in the United States.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 167-174.- FC&P 6-1, p. 20, ID=5502^Topic(s): biostratigraphy; Rugosa, zonation; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: USA^[comparison of assemblages in Eastern North America with those of Western and Arctic North America]^1";
- 2003 s[2000] = "MCLEAN R.A., PEDDER A.E.H. (1984).- Frasnian Rugose corals of western Canada, Part 1: Chonophyllidae and Kyphophyllidae.- Palaeontographica A185, 1-38.- FC&P 14-1, p. 46, ID=0974^Topic(s): ; Rugosa, Chonophyllidae Kyphophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada W^^1";
- 2004 s[2001] = "MCLEAN R.A. (1976).- Middle Devonian cystiphyllid corals from the Hume Formation, northwestern Canada.- Bulletin geological Survey of Canada 274: 1-80.- FC&P 6-2, p. 15, ID=0117^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Canada, NW Territories^Classification and systematic descriptions of Devonian cystimorphs including 8 new species and 1 new variety.^1";
- 2005 s[2002] = "PEDDER A.E.H. (1982).- Probable Dalejan (Early Devonian) cystiphyllid corals from Bird Fiord Formation of Ellesmere Island.- Curr. Res., C, Geol. Surv. Canada, Pap. 82-1C: 83-90.- FC&P 12-1, p. 32, ID=1901^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Canada, Arctic^Two new species, Lekanophyllum retiforme and L. rugulosum, are described from Blubber Point, southwest Ellesmere Island. L. vetiforme is the commonest coral in the Bird Fiord

- Formation of this area, but, because of its unusual morphology, invariably has been misidentified in previous literature.¹";
- 2006 s[2003] = "McLEAN R.A. (2010).- Frasnian (Upper Devonian) colonial disphyllid corals from western Canada.- NRC Research Press, Ottawa, Ontario; 189 pp. [monograph] - FC&P 36, p. 61, ID=6452Topic(s): ; Rugosa Disphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada w^Colonial rugose corals of the Family Disphyllidae occur abundantly in Frasnian (lower Upper Devonian) strata in western Canada. The branching genus Disphyllum is the most diverse, being represented by *D. fasciculum* (Meek), *D. rugosum* (Wedekind), *D. catenatum* Smith, *D. iowense* Sorauf, *D. fumosum* n.sp., and *D. sp. cf. D. major* Jia. The other branching genus recognized is *Pantophyllum*, and the species *P. camselli* (Smith) and *P. oliveri* n.sp. are described. The remainder of the described fauna are massive forms. *Argutastrea* is represented by a single species, *A. pompasi* (Smith). Four species of *Hexagonaria* are included: *H. davidsoni* (Edwards and Haime), *H. magna* (Webster and Fenton), *H. oweni* (Belanski), and *H. arietina* n.sp. The new genus *Whittakeria* comprises the type species, *W. schucherti* (Smith), together with *W. caurus* (Smith), while a single species of *Kuangxiastraea* is described, *K. mirabilis* n.sp. Biostratigraphic distribution of this assemblage is reviewed and related to the rugose coral faunal sequence and Montagne Noire conodont zonation previously applied in western Canada. Contrary to some earlier opinions, the Disphyllidae is shown to be unrelated to the Columnariidae, following new study of the holotype of the type species of *Columnaria*, *C. sulcata* Goldfuss. [original abstract]¹";
- 2007 s[2004] = "McLEAN R.A. (2007).- Kyphophyllid rugose corals from the Frasnian (Upper Devonian) of Canada and their biostratigraphic significance.- *Palaeontographica Canadiana* 26: 1-109. ISBN 978-1-897095-00-3.- FC&P 35, p. 55, ID=2341Topic(s): biostratigraphy; Rugosa, Kyphophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada^Representatives of the family Kyphophyllidae form a diverse and geographically widespread group in Frasnian (lower Upper Devonian) strata of Canada. From early to late Frasnian strata in western Canada the species *Tabulophyllum athabascense* (Whiteaves), *T. mcconnelli* (Whiteaves), *T. magnum* Fenton and Fenton, *T. mineatum* n.sp., *T. whiteavesi* n.sp., *T. asymmetricum* n.sp., and *T. vesiculosum* n.sp. are described, while a further species of *Tabulophyllum* is left in open nomenclature. *T. telfordi* n.sp. is described from the early Frasnian of eastern Canada. Other described species are from the late Frasnian of western Canada and comprise *Mictophyllum nobile* Lang and Smith, *M. nobile* large variety, *M. semidilatatum* Smith and *M. betulinum* n.sp., with the new genus *Plectophyllum* being represented by *P. kindlei* (Smith), *P. whittakeri* (Smith) and *P. pilatum* n.gen. et n.sp. Biostratigraphy of these taxa is discussed, together with that of previously described western Canadian representatives of the kyphophyllid genera *Smithiphyllum*, *Tarphyphyllum*, *Mikkwaphyllum*, *Parasmithiphyllum*, *Bouvieriphyllum*, *Wapitiphyllum* and *Kakisaphyllum*. The biostratigraphic distribution of these species is related to the Montagne Noire conodont zonation previously recognized in the Frasnian of western Canada, and modified western Canadian rugose coral faunal assemblage¹";
- 2008 s[2005] = "McLEAN R.A. (2005).- Phillipsastreid corals from the Frasnian (Upper Devonian) of western Canada: taxonomy and biostratigraphic significance.- National Research Council of Canada Monograph. NRC Research Press, Ottawa, 109 pp.- FC&P 33-2, p. 19, ID=1121Topic(s): biostratigraphy; Rugosa, Phillipsastreidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada w^Rugose corals of the Family Phillipsastreidae are abundant, diverse, and geographically widespread in the Frasnian (lower Upper Devonian) of western Canada. Species of the solitary genus *Macgeea* described here

- comprise *M. parva* Webster, 1889, *M. proteus* Smith, 1945, *M. telopea* Crickmay, 1962, *M. soraufi* n.sp., and *M. pustulosa* n.sp. *Thamnophyllum* and *Peneckiella* are branching forms, with *Thamnophyllum* represented by the species *T. colemanense* (Warren, 1928), *T. tructense* (McLaren, 1959), *T. pedderi* n.sp., *T. cordense* n.sp. and *T. julli* n.sp., while *Peneckiella* includes *P. floydensis* (Belanski, 1928), *P. metalinae* Sorauf, 1972, *P. gracilis* n.sp. and *P. haultainensis* n.sp. Biostratigraphic distribution of these species is reviewed, together with that of previously described Canadian massive phillipsastroid species belonging to the genera *Phillipsastrea*, *Chuanbeiphyllum*, *Pachyphyllum*, *Smithicyathus*, and *Frechastraea*. The coral biostratigraphy is expressed in terms of the Montagne Noire conodont zonation and modified western Canada rugose coral faunal assemblages.¹¹";
- 2009 s[2006] = "McLEAN R.A. (1989).- Phillipsastreidae (Rugosa) in the Frasnian of western Canada.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 239-249.- FC&P 19-1.1, p. 13, ID=2542Topic(s): distribution; Rugosa, Phillipsastreidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada W^11";
- 2010 s[2007] = "McLEAN R.A. (1994).- Frasnian Rugose Corals of Western Canada Part 3A: The Massive Phillipsastreidae - Phillipsastrea, Chuanbeiphyllum.- Palaeontographica A230: 39-76.- FC&P 23-1.1, p. 64, ID=4045Topic(s): ; Rugosa, Phillipsastreidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada W^Rugose corals of the family Phillipsastreidae with a primarily massive corallum are common in Lower Upper Devonian (Frasnian) strata of western Canada. In Part A of this work, the type genus *Phillipsastrea* is reviewed and the species *P. woodmani* (White 1870), *P. nevadensis* Stumm 1940, *P. irregularis* (Webster & Fenton 1924), *P. disrupta* n.sp. and *P. variabilis* (Sorauf 1988) are described. Also discussed in this part is the genus *Chuanbeiphyllum*, with species *C. mikkwaense* n.sp., *C. impensum* n.sp. and *C. vesiculosum* (Smith 1945). The following Part B deals with western Canadian representatives of *Pachyphyllum*, *Smithicyathus* and *Frechastraea*. Stratigraphic information for the full massive phillipsastroid fauna may be found in Part A, while the Locality Register and reference list of cited literature is in Part B.¹¹";
- 2011 s[2008] = "McLEAN R.A. (1994).- Frasnian Rugose Corals of Western Canada Part 3B: The Massive Phillipsastreidae - Pachyphyllum, Smithicyathus, Frechastraea.- Palaeontographica A230, 4-6: 77-96.- FC&P 23-1.1, p. 64, ID=4139Topic(s): ; Rugosa, Phillipsastreidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada W^In Part A of this work, western Canadian representatives of the massive phillipsastroid coral genera *Phillipsastrea* and *Chuanbeiphyllum* were reviewed. The present part B adds to this fauna with description and illustration of *Pachyphyllum mirusense* McLean 1986, *Smithicyathus cinctus* (Smith 1945), *Frechastraea pollicaris* n.sp., *F. scruttoni* n.sp., *F. borealis* n.sp. and *F. whittakeri* (Smith 1945). Stratigraphic information for the full massive phillipsastroid fauna is in Part A, with the Locality Register and full reference listing in Part B.¹¹";
- 2012 s[2009] = "STEARNS C.W., SMITH G.P. (1979).- Reef development in the Blue Fiord Formation (Devonian) of southwest Ellesmere Island, Arctic Canada.- Geological Society of America, Abstracts with Programs 11: 54.- FC&P 8-1, p. 50, ID=0213Topic(s): reefs; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Canada, Arctic^Stromatoporoids are important elements of the reef faunas¹¹";
- 2013 s[2010] = "BJERSTEDT T.W., FELDMANN R.M. (1983).- Paleoenvironmental controls on Stromatoporoid growth forms in the carbonate rocks on

- Kelleys Island Ohio.- Geological Society of America, Abstracts with Programs 15: 225.- FC&P 13-1, p. 47, ID=0514^Topic(s):growth forms; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian M; Geography:USA, Ohio^^1";
- 2014 s[2011] = "STEARN C.W. (1983).- Stromatoporoids from the Blue Fiord Formation (Lower Devonian) of Ellesmere Island, Arctic Canada.- Journal of Paleontology 57: 539-559.- FC&P 13-1, p. 49, ID=0526^Topic(s): stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian L; Geography:Canada, Arctic^Eleven taxa are described. Two new species are Clathrodictyon ellesmerensis and Ferestromatopora polaris. The new name Glyptostromoides is proposed for the genus Glyptostroma Yang and Dong and the type species is designated as G. simplex Yang and Dong. Early Devonian stromatoporoid faunas are reviewed.^1";
- 2015 s[2012] = "STOCK C.W. (1984).- Upper Devonian (Frasnian) Stromatoporoidea of north-central Iowa: redescription of the type specimens of Hall and Whitfield (1873).- Journal of Paleontology 58: 773-788.- FC&P 13-2, p. 48, ID=0571^Topic(s):revision, type material; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian Fra; Geography:USA, Iowa^Stromatopora expansa is a species of Actinostroma and Stromatopora solidula is a species of Clathrocoilon. Stromatopora incrustans is retained in Stromatopora and Caunopora planulata is a junior synonym of S. incrustans.^1";
- 2016 s[2013] = "St JEAN J. (1986).- Lower Middle Devonian Stromatoporoidea from Empire Beach, Southern Ontario, Canada.- Journal of Paleontology 60: 1029-1055.- FC&P 15-2, p. 45, ID=0754^Topic(s): stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian Eif; Geography:Canada, Ontario^Five species of Stromatoporella are described of which one (S. megastrorhizifera) is new. The new genus Syringodictyon with type species Stromatopora tuberculata Nicholson 1873 is established for stromatoporoids with ordinicellular laminae and columns of superposed upwardly inflected cones filled with skeletal material with a central lumen. Other pillars are rare but cyst plates are common. The new genus is close to Tubuliporella Khalфина but differs in not having ring pillars between the columns and the near absence of solid pillars.^1";
- 2017 s[2014] = "BIRKHEAD P.K. (1986).- Stromatoporoid biozonation of the Cedar City Formation, Middle Devonian of Missouri.- Journal of Paleontology 60: 268-272.- FC&P 15-1.2, p. 44, ID=0776^Topic(s):biozonation; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian M; Geography:USA, Missouri^Zones of Stromatopora astrorhizoides, Stromatoporella congregabilis, and Stachyodes crebrum are established in these rocks of late Emsian to Frasnian ages. Ranges of stromatoporoid species in the formation are plotted.^1";
- 2018 s[2015] = "STOCK C.W. (1984).- The distribution of stromatoporoids in the Upper Devonian of north-central Iowa.- General Geology of North-central Iowa [Anderson W. I. (ed); 48th Annual Tri-State Field Conference Guidebook 48: 125-129].- FC&P 14-2, p. 45, ID=0907^Topic(s):distribution; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian U; Geography:USA, Iowa^^1";
- 2019 s[2016] = "BJERSTEDT T.W., FELDMANN R.M. (1985).- Stromatoporoid paleosynecology in the Lucas Dolostone (Middle Devonian) on Kelleys Island, Ohio.- Journal of Paleontology 59: 1033-1061.- FC&P 14-2, p. 43, ID=0927^Topic(s):ecology; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Devonian M; Geography:USA, Ohio^The stratigraphy, sedimentary petrology and paleoecology of stromatoporoid-bearing dolostones of the Lake Erie area are examined. The stromatoporoid bioherm shows a vertical zonation of intraspecific and interspecific

- growth forms from laminar at the base to progressively more erect forms culminating in fasciculate forms at the top. Twelve species of stromatoporoid are illustrated and briefly described (Syringostroma, 4 species; Habrostroma, 3 species; Anostylostroma, 2 species; Pseudoactinodictyon, 2 species; Clathrodiction. 1 species. None are new). Environmental conditions affecting skeletal shape are fully discussed.^1";
- 2020 s[2017] = "NISHIDA D.K., MURRAY J.W., STEARN C.W. (1985).- Stromatoporoid-Algal facies hydrocarbon traps in Upper Devonian (Fammenian) Wabumum Group, north central Alberta, Canada.- American Association of Petroleum Geologists Bulletin 69: 293-.- FC&P 14-1, p. 56, ID=1052^Topic(s): strom banks, hydrocarbons; stroms-algal facies; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Canada, Alberta^^1";
- 2021 s[2018] = "SHAPO D.E. (2003).- Systematics and morphometric analysis of stromatoporoids from the Little Cedar Formation, Middle Devonian, east-central Iowa.- Geological Society of America, Abstracts with Programs 35, 2: 49. [abstract] - FC&P 33-2, p. 43, ID=1197^Topic(s): systematics, morphometry; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: USA, Iowa^^1";
- 2022 s[2019] = "STEARNS C.W. (2001).- Biostratigraphy of Devonian stromatoporoid faunas of Arctic and Western Canada.- Journal of Paleontology 75, 1: 9-23.- FC&P 30-1, p. 37, ID=1529^Topic(s): biostratigraphy; stroms, biostratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Canada^Through a review of older type collections and identifications of undescribed collections, using a broad species definition, the Devonian succession is divided into 10 assemblages. The names of many species are revised. With the exception of the Pragian, all stages of the system are represented by one or more assemblages. The ranges of important taxa are plotted and shown to be relatively short and diagnostic of the 10 intervals. In the absence of conodonts in the reef facies, stromatoporoids offer a supplementary method of correlation. Many species occurring in Canada can be recognized in the stromatoporoid faunas of the former Soviet Union, China, Europe and Australia.^1";
- 2023 s[2020] = "FAGERSTROM J.A. (1982).- Stromatoporoids of the Detroit River Group and adjacent rocks (Devonian) in the vicinity of the Michigan basin.- Geological Survey of Canada Bulletin 339: 1-81.- FC&P 11-2, p. 36, ID=1852^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: America N, Michigan Basin^This study is the result of many years of research on the Emsian and Eifelian stromatoporoids of Ontario, Michigan and Ohio. The new genus Habrostroma (type species H. formosensis) and three new species (H. formosensis, H. beachvillensis, Pseudoactinodictyon stearni) are proposed. In addition 23 other species are described belonging to 7 genera. The monograph includes extensive discussions of species groups, genus groups, Syringostroma and throughout emphasizes the use of statistics in establishing the limits of variation in species.^1";
- 2024 s[2021] = "KNOX D. (1979).- Devonian Paleogeology in central Arizona.- Northern Arizona University, Flagstaff; Master's Thesis; 1-138.- FC&P 11-2, p. 36, ID=1857^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: USA, Arizona^Paleogeology of stromatoporoids of these Frasnian rocks is discussed.^1";
- 2025 s[2022] = "MEYER F.O. (1981).- Stromatoporoid growth rhythms and rates.- Science 213, 4510: 894-895.- FC&P 11-2, p. 36, ID=1858^Topic(s): growth rates, growth rhythms; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: USA, Michigan^The interaction of favositids and the Stromatoporoid species Parallelostroma

- densilaminata, *P. winchelli*, and *Stictostroma* sp. from the middle Devonian patch reefs of Michigan allows growth rates to be calculated on the assumption that the growth banding in both types of organism is annual. Lateral extension rates in stromatoporoids of 10 to 23 mm/yr and vertical growth rates of 1.5 to 3.8 mm/yr are suggested by this study.¹¹";
- 2026 s[2023] = "STOCK C.W. (1982).- Upper Devonian (Frasnian) Stromatoporoidea of North-central Iowa: Mason City member of the Shell Rock Formation.- *Journal of Paleontology* 56: 654-679.- FC&P 11-2, p. 37, ID=1864Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: USA, IowaEleven species in ten genera are described. The new species are *Atelodictyon masoncityense* and *Clathrocoilon involuta*.¹¹";
- 2027 s[2024] = "STEARNS C.W. (1988).- Stromatoporoids from the Famennian (Devonian) Wabamun Formation, Normandville oilfield, north central Alberta.- *Journal of Paleontology* 62: 411-418.- FC&P 17-1, p. 42, ID=2166Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Canada, AlbertaOne species each of *Labechia*, *Stylostroma*, *Gerronostroma*, *Clathrostroma* and *Stromatopora* are described in terms of the various phases that make up their skeletons. No new species are described.¹¹";
- 2028 s[2025] = "STEARNS C.W., HALIM-DIHARDJA M.K., NISHIDA D.K. (1988).- An oil-producing stromatoporoid patch reef in the Famennian (Devonian) Wabamun Formation, Normandville Field, Alberta.- *Palaios* 1987, 2: 560-570.- FC&P 17-1, p. 42, ID=2167Topic(s): patch reefs, hydrocarbons; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Canada, AlbertaThe lithofacies and stratigraphic setting of the reef are described. The Famennian-Strunian stromatoporoid faunas of the world are reviewed and new generic assignments are suggested for species described in the literature. The world fauna is divided into four assemblages and the significance of the geographic distribution is discussed.¹¹";
- 2029 s[2026] = "PRATT B.R. (1988).- Lower Devonian stromatoporoid reefs, Formosa reef limestone (Detroit River Group) of SW Ontario.- *Canadian Association of Petroleum Geologists Memoir* 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): *Reefs: Canada and Adjacent Areas*]: 506-509.- FC&P 19-2.1, p. 40, ID=2770Topic(s): strom buildups; strom reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Canada, Ontario¹¹";
- 2030 s[2027] = "STEARNS C.W. (1990).- Stromatoporoids from the allochthonous reef facies of the Stuart Bay Formation (Lower Devonian), Bathurst Island, Arctic Canada.- *Journal of Paleontology* 64: 493-510.- FC&P 19-2.1, p. 42, ID=2779Topic(s): reef facies, allochthonous; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Canada, ArcticThe fauna is a mixture of genera that characterize Ludlovian-Gedinnian rocks (*Actinodictyon*, *Parallelostroma*, *Syringostromella*) and those that characterize Emsian-Eifelian rocks (*Atopostroma*, *Anostylostroma*, *Habrostroma*, *Syringostroma*). The new genus *Belemnostroma* (type species *B. hastatum*) is established for stromatoporoids with the basic structure of *Anostylostroma* but penetrated by large rodlike mega-pillars. New species of *Gerronostroma* (*G. franklinense*, *G. nivale*) *Actinodictyon* (*A. venustum*), and *Syringostroma* (*S. praecox*) are described. Species with long coenosteles are excluded from *Stromatopora* on the basis that they are not cogenetic with the type species and many species assigned to *Ferestromatopora* should be reassigned to *Stromatopora*.¹¹";
- 2031 s[2028] = "STEARNS C.W., SHAH D.H. (1990).- Devonian (Givetian-Frasnian) stromatoporoids from the subsurface of Saskatchewan, Canada.- *Canadian*

Journal of Earth Sciences 27: 1746-1756.- FC&P 20-1.1, p. 79, ID=2880^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv Fra; Geography: Canada, Saskatchewan^The lower Duperow beds (Frasnian) contain 11 species most of which occur in the upper Cairn and Peechee units of Alberta. The Souris River Formation contains 2 species and the underlying Dawson Bay Formation (Givetian) contains 7 species. No new species are named but the generic assignments of several species are changed and widening of species concepts places the following species in synonymy: Anostylostroma intermedium Klován, Hammatostroma nodosum Klován, Hermatostroma maillieuxi (Lecompte) of Fischbuch, Parallelopora cf. P. dartingtonensis (Carter) of Stearn, Trupetostroma cervimontanum Stearn, Clathrocoilona abeona Yavorsky of Fischbuch, Stromatopora mikkwaensis Stearn, Ferestromatopora dubia (Lecompte) of Klován, Arctostroma ignotum Yavorsky, These revisions greatly reduce the apparent endemism of western Canadian stromatoporoid faunas and indicate the wide distribution of species of the Cairn-Flume interval from the Northwest Territories to Iowa.^1";

2032 s[2029] = "KLAPPER G., OLIVER W.A.jr (1995).- The Detroit River Group is Middle Devonian: Discussion on &Early Devonian age of the Detroit River Group, inferred from Arctic stromatoporoids&.- Canadian Journal of Earth Sciences 32: 1070-1073.- FC&P 25-1, p. 30, ID=3004^Topic(s): stratigraphy; stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: USA^In their paper on the age of the Detroit River Group, the authors, Prosh E. G. and Stearn C. W., suggest that the occurrence of two to four species of stromatoporoids in the Detroit River, which are also known to occur in well-dated Lower Devonian Arctic formations, outweighs the evidence of conodonts and goniatites that is currently used to date the Detroit River as mostly, or entirely, Middle Devonian. The conodont and goniatite evidence is much stronger than indicated by the authors and too strong to be set aside in response to their new data. Correlation difficulties are attributable to the known endemism of the eastern North American Early and Middle Devonian faunas and to environmental differences.^1";

2033 s[2030] = "PROSH E.C., STEARN C.W. (1996).- Stromatoporoids from the Emsian (Lower Devonian) of Arctic Canada.- Bulletins of American Paleontology 109, 349: 66 pp.- FC&P 25-1, p. 48, ID=3058^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Ems; Geography: Canada, Arctic^Early Devonian limestones of Ellesmere, Bathurst and smaller islands between them in the Canadian Arctic Archipelago contain a diverse fauna of stromatoporoid sponges. This fauna provides the best evidence in North America of the early recovery phase of this reef-building group from a diversity low at the Silurian/Devonian boundary, a recovery that led to its diversity peak in Givetian time. Stromatoporoids from the lower member of the Blue Fiord Formation locally form large reefal masses. Well preserved stromatoporoids also occur less abundantly: 1. in the top of the underlying Bids Formation, 2. in the upper member of the Blue Fiord Formation, 3. in the Disappointment Bay Formation, which is correlative of the upper Blue Fiord, and 4. in the overlying Bird Fiord Formation and a correlative unnamed formation both of which span the Lower/Middle Devonian boundary. The stratigraphic distribution of these stromatoporoids can be accurately determined according to conodont biostratigraphy as spanning the dehiscens to partitus (Emsian to basal Eifelian) conodont zones. Common occurrences of Stromatoporella perannulata, Stictostroma gorriense, Habrostroma proxilaminatum, and Parallelopora campbelli in the arctic fauna and southern Ontario and the adjacent United States, indicate that the Detroit River Group is of similar Emsian age, and that the Eastern Americas realm was open to migration from the Arctic. Similarity of species with the Emsian faunas of Russia, Australia and China suggests the cosmopolitan and equatorial distribution of

stromatoporoids in Emsian time and opens possibilities for using the group in correlation. The fauna is therefore important in establishing both the evolution of the order and also its geographic distribution in Early Devonian time. Twenty-five species (assigned to 22 genera) are described. The species concept used is a broad one and the range of variations in each taxon is documented. New species described are: *Gerronostroma septentrionalis*, *Anostylostroma anfractum*, *Pseudoactinodictyon conglutinatum*, *Stictostroma? nunavutense*, *Clathrocoilona vexata*, *Stromatopora hensoni*. The morphologic limits of the following genera are considered in the description of species: *Plectostroma*, *Aculatostroma* and *Atelodictyon*, *Clathrocoilona*, *Salairella* and *Syringostromella*. The range of *Trupetostroma* is extended downward into Emsian strata.¹¹;

- 2034 s[2031] = "STEARN C.W. (1996).- Stromatoporoids from the Devonian (Eifelian to lowest Frasnian) of Manitoba, Canada.- *Journal of Paleontology* 70: 196-217.- FC&P 25-1, p. 49, ID=3059^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Eif - Fra; Geography: Canada, Manitoba^Twenty-two taxa of stromatoporoids are described from the outcrop belt of the Elm Point, Winnipegosis, Dawson Bay and Souris River formations in Manitoba. The Elm Point Formation contains a fauna of stromatoporellids of Eifelian age that is characterized by the new species, *Stromatoporella manitobaensis*. The Winnipegosis stromatoporoids are dolomitized but the widespread species *Actinostroma tyrrelli*, *Taleastroma logansportense* and the new species *Trupetostroma imbrex* can be recognized in this Givetian assemblage. The Dawson Bay fauna is characterized by the appearance of the dendroid forms, *Stachyodes* and *Dendrostroma* and species of *Hermatostroma*, *Trupetostroma* and *Parallelopora*. A species of *Actinostroma* comparable to *A. filitextum* is the most abundant stromatoporoid in the Dawson Bay Formation. The Souris River fauna, referred to as the *Arctostroma contextum* assemblage, is widespread at the Givetian-Frasnian boundary. Elements occur elsewhere in western Canada in the Beaverhill Lake, Waterways, lower Duperow and lower Fairholme units. Stromatoporoids in these four assemblages are relatively restricted in their stratigraphic occurrence and sufficiently widespread in their distribution to be useful in correlation.¹¹;
- 2035 s[2032] = "PROSH E.C. (1995).- Reply: Early Devonian age of the Detroit River Group, inferred from Arctic stromatoporoids.- *Canadian Journal of Earth Sciences* 32: 1073-1077.- FC&P 25-2, p. 42, ID=3127^Topic(s): biostratigraphy; stroms, stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: USA^The biostratigraphic review of G. Klapper and W. A. Oliver jr, discussers, will assist interested readers in weighing the evidence between their Eifelian date and the older Emsian age proposed for the Detroit River Group by C. W. Stearn and myself in our original paper. Two important points emerge from their review: Detroit River - Onondaga faunas are very endemic; the conodont data do not immediately relate to the standard zonation, so some interpretation is necessary. The Detroit River Group of Ontario is mostly Lower Devonian. The Edgecliff and Nedrow members of the Onondaga Limestone of New York are also Lower Devonian. Stromatoporoids in common between the lower Detroit River Group and the Arctic Blue Fiord Formation provide the Early Devonian date.¹¹;
- 2036 s[2033] = "STEARN C.W. (1997).- Biostratigraphy of the Devonian reef facies of western and arctic Canada based on stromatoporoids.- *Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica* 92, 1/4: 339-348.- FC&P 26-2, p. 33, ID=3725^Topic(s): biostratigraphy; stroms, reef facies; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Canada W, Arctic^Although stromatoporoids have been considered inadequate for biostratigraphy, in western and arctic Canada ten assemblages characterized by species with short ranges and wide

geographic distribution can be distinguished in the Devonian System. Carbonate facies in the Arctic Islands and mainland of the Northwest Territories contain stromatoporoids of Early Devonian and early Middle Devonian ages. The reef facies of the Western Canada Sedimentary Basin contains assemblages ranging from late Eifelian to middle Famennian in age. (1) The earliest Devonian rocks in the Arctic are characterized by species of *Parallelostroma*, (2) The lower Blue Fiord fauna of dehiscent to grombergi zone stromatoporoids is distinguished by new species of *Gerronostroma* and *Stictostroma*, and *Stromatoporella perannulata*. (3) The upper Blue Fiord assemblage of *inversus* to *partitus* age has *Plectostroma salairicum* and new species of *Stromatopora* and *Anostylostroma*. (4) the late Eifelian assemblage of the Elm Point Limestone in Manitoba is characterized by a new species of *Stromatoporella* and *Stictostroma* cf *S. foraminosum*. (5) The early Givetian (lower varcus Zone) assemblage is widespread in western Canada and easily recognized by the presence of *Neosyringostroma logansportense* and *Actinostroma tyrrelli*. (6) The middle Givetian assemblage is a transitional fauna present in the Dawson Bay Formation of: Manitoba. (7) Rocks of late Givetian and earliest Frasnian age contain the *Arctostroma contextum* assemblage, widespread in the Beaverhill Lake Group. (8) The mid-Frasnian fauna is characterized by *Ferestromatopora parksi*. (9) Late Frasnian faunas found in the Rocky Mountains and the Great Slave Lake areas can be characterized as the *Trupetostroma saintjeani* assemblage. (10) The youngest assemblage is found in mid-Famennian reefs and is identified by the presence of *Labechia palliseri* and *Stylodictyon sinense*. Nearly all these ten assemblages contain species that are valuable for correlation within North America and assemblages 1, 2, 3, 5, 7, and 10 have species that have potential for intercontinental correlation of the reefal facies across the equatorial belt of Devonian time inhabited by stromatoporoids.^1";

2037 s[2034] = "SMITH M.J. (1994).- Upper Devonian Stromatoporoids from the Idlewild Member of the Lithographic City Formation of North-central Iowa.- University of Alabama, Tuscaloosa, unpublished M.Sc. thesis of Department of Geology; 149 pp.- FC#038;P 27-1, p. 109, ID=3865^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian U; Geography: USA, Iowa^Sixty-five specimens belonging to 13 genera and 22 species were collected to determine if their shapes were the result of environmental or genetic factors. Many were collected from a single bedding plane and are assumed to have been exposed to the same environmental conditions. Domical and bulbous shapes predominate. Some species exhibit a wide range of shapes; others, a narrow range. Stromatoporoids from the same bedding plane did not grow to the same shape. The relative importance of genetic disposition and environmental factors in determining growth form cannot be determined from this study. [condensed from abstract by C. W. Stearn]^1";

2038 s[2035] = "STEARN C.W. (1998).- Devonian Stromatoporoid fauna of the Bent Horn oilfield, Cameron Island, Northwest Territories.- Canadian Journal of Earth Sciences 35: 16-22.- FC#038;P 27-1, p. 110, ID=3868^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Canada, NW Territories^The reservoir reef carbonates at the Bent Horn Field have been referred to as the Blue Fiord Formation but they are younger than the type Blue Fiord of Ellesmere Island. The top of these carbonates, from which the Stromatoporoid fauna is described, is dated by conodonts as of Eifelian age. They are the same unit that has also been called the Unnamed Formation. Fourteen taxa of stromatoporoids, none of them described as new, are identified from cores. Five species are common to the fauna of the Unnamed Formation of surface exposures on Bathurst and Truro islands. The ranges of the three species from the fauna of the typical Blue Fiord of Emsian age are extended into the Unnamed Formation. A synthesis of the

paleontological evidence suggests that the top of the reservoir is basal Eifelian age. The recognition of Pseudoactinodictyon, cf. P. stearni and Simplexodictyon vermiforme at Bent Horn suggests paleogeographic connections to the Great Lakes and Yukon stromatoporoid faunas of this age.^1";

- 2039 s[2036] = "PROSH E.C., STEARN C.W. (1993).- Early Devonian age of the Detroit River Group, inferred from Arctic stromatoporoids.- Canadian Journal of Earth Sciences 30: 2465-2474.- FC&P 23-1.1, p. 80, ID=4181^Topic(s): biostratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: USA^The group has traditionally been considered mostly or entirely of Middle Devonian age but much of the fauna is endemic. Four Detroit River Group stromatoporoid species are recognized in the fauna of the Emsian Blue Fiord Formation in Ellesmere Island and two other species show close relationships. The Emsian faunas of the Arctic are accurately dated by conodonts and indicate a serotinus age for the Amherstburg Formation and a serotinus to patulus age for the Lucas Formation. This is the first direct species-level correlation of a Detroit River Group "endemic" to a globally dateable level and the first regional application of stromatoporoid biostratigraphy in North America.^1";
- 2040 s[2037] = "STOCK C.W. (1994).- Stromatoporoid paleobiogeography of the Eastern Americas Realm during the Lochkovian Age (Early Devonian).- Sponges in Time and Space [R.W.M. van Soest, T.M.G. van Kempen, J.-C. Braekman (eds)]: 23-27; Balkema, Rotterdam.- FC&P 23-2.1, p. 55, ID=4403^Topic(s): biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Lochk; Geography: America, ENA^Lochovian-age stromatoporoids occur in the Manlius and Coeymans formations of New York, the Keyser Formation of Virginia, the Beck Pond Limestone of Maine and the Stuart Bay Formation of arctic Canada. These four areas in the Eastern Americas realm all share the genus Habrostroma and some also share Atopostroma, Coenostroma, and Syringostromella. During the Pragian age, the Eastern Americas stromatoporoids disappeared from North America finding refuge in western Europe only to return to North America in the Emsian age.^1";
- 2041 s[2038] = "BIRKHEAD P.K., FRAUNFELTER G.H. (1973).- Some Middle Devonian stromatoporoids from Southern Illinois and Southeastern Missouri.- Journal of Paleontology 47, 6: 1069-1076. [??48, 2: 414??].- FC&P 3-2, p. 47, ID=4982^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: USA, Illinois, Mississippi^Nine species of Stromatoporoids including 3 species of Anostylostroma, 2 species of Stictostroma, 1 species of Stromatoporella, 2 species of Syringostroma and 1 species of Stromatopora from the Grand Tower, St. Laurent and Lingle limestones are described. Nine of the species are new. * The 2 species collected from the Grand Tower Limestone are known from rocks of late Coblenzian age. The species from the St. Laurent and Lingle limestones range from late Coblenzian to early Frasnian in age. The predominant coenosteal form is massive with diverse shape. Ramose coenostea were not found.^1";
- 2042 s[2039] = "STOCK C.W. (2008).- Stromatoporoid biostratigraphy of the Iowa Frasnian.- Iowa Geological Survey Guidebook 28 [Carbonate Platform Facies and Faunas of the Middle and Upper Devonian Cedar Valley Group and Lime Creek Formation, Northern Iowa; J.R. Groves, J.C. Walters & J. Day (eds): 69th Annual Tri-State and Great Lakes Section-SEPM Fall Field Conference]: 41-48. [conference guidebook] - FC&P 36, p. 44, ID=6420^Topic(s): biostratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: USA, Iowa^Five lithostratigraphic units contain Frasnian stromatoporoids. Genera of stromatoporoids occurring in each unit are given in ascending stratigraphic order: * Idlewild Member of the Lithograph City Formation: Hammatostroma, Atelodictyon, Petridiostroma?, Pseudoactinodictyon, Bullulodictyon?,

- Actinostroma, Clathrocoilona, Stictostroma, Trupetostroma, Hermatostroma, Arctostroma, Parallelopora, Habrostroma, Stachyodes, and Amphipora; * Mason City Member of the Shell Rock Formation: Hammatostroma, Atelodictyon, Actinostroma, Clathrocoilona, Stictostroma, Trupetostroma, Hermatostroma, Hermatoporella, Stachyodes, and Amphipora; * Rock Grove Member of the Shell Rock Formation (known from one drill core): Actinostroma, Clathrocoilona, Hermatoporella, and Stachyodes; * Nora Member of the Shell Rock Formation: Anostylostroma?, Actinostroma, Clathrocoilona, Stictostroma, Trupetostroma, Hermatostroma, Hermatoporella, Arctostroma, Stachyodes?, and Amphipora; * Cerro Gordo Member of the Lime Creek Formation: Clathrocoilona, Habrostroma?; and * Owen Member of the Lime Creek Formation: Geronostroma, Clathrocoilona, Stictostroma, Hermatostroma, Hermatoporella, Arctostroma, Habrostroma?, new genus, and Amphipora.^1";
- 2043 s[2040] = "RESSETAR R., HERRING D.M. (2009).- Distribution of Devonian stromatoporoid buildups in the eastern Basin and Range.- Utah Geological Association Publication 38 [B. Tripp, K. Krahulec, & L. Jordan (eds.): Geology and Geologic Resources and Issues in Western Utah]: 43-53, 2 appendices, 8 plates.- FC&P 36, p. 120, ID=6563^Topic(s): strom buildups; strom buildups; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: USA, Great Basin^Devonian carbonates in the Basin and Range Province of western Utah and eastern Nevada form part of a large, carbonate-dominated depositional complex that occupied the western margin of the mid-Paleozoic North American craton. These Devonian carbonates are generally continuous with and coeval with hydrocarbon reservoirs in the Alberta foreland basin of Canada. This stratigraphic association and the production of modest amounts of oil from the Devonian in Nevada raise the possibility that the carbonate-reef play concepts that have been successful in Canada could be applied to the Devonian of the Basin and Range. For this review paper, we collected descriptions of more than 100 measured outcrop sections in the literature and oil-industry data from about 45 wells, and integrated the descriptions with published sequence stratigraphic frameworks for the Middle and Upper Devonian. We assigned the carbonates to eight depositional environments, ranging from supratidal to deep subtidal, and correlated the measured sections across four cross sections. Paleogeographic maps based on limited age control suggest that two populations of stromatoporoid buildups occur: a shelf-edge group that is probably not prospective for hydrocarbons, and a middle-shelf group that may be prospective. However, the Basin and Range buildups are smaller and less numerous than those in Canada, lack structural control and internal biofacies zonation, and are mud supported. From the hydrocarbon exploration perspective, carbonate buildup distribution is probably less important than timing and development of fracture porosity. [original abstract]^1";
- 2044 s[2041] = "KENT D.M. (1998).- Diagenetically altered stromatoporoid banks; Seals for dolomite reservoirs in Birdbear and Duperow rocks of southern Saskatchewan.- 8th International Williston Basin Symposium, Proceedings of Core Workshop 8: 105-142. [core workshop] - FC&P 29-1, p. 46, ID=7036^Topic(s): strom banks, hydrocarbons; stroms, petroleum; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Canada, Williston Basin^1";
- 2045 s[2042] = "PEMBERTON S.G., JONES B., EDGECOMBE G. (1988).- The influence of Trypanites in the diagenesis of Devonian stromatoporoids.- Journal of Paleontology 62: 22-31.- FC&P 17-1, p. 41, ID=2163^Topic(s): diagenesis; boring Trypanites; Systematics: Porifera problematica; Stromatoporoidea; Stratigraphy: Devonian; Geography: Canada, Alberta^[Boring into specimens containing species of both Trupetostroma and Clathrocoilona from Alberta is described. The specimens record repeated cycles of growth-boring-filling and reorientation.]^1";

- 2046 s[2043] = "LAFUSTE J., PLUSQUELLEC Y. (1987).- Structure et microstructure de Favosites cylindrica Michelin 1847, espece-type de Ohiopora n.gen. (Tabulata, Devonien).- Canadian Journal of Earth Sciences 24: 1465-1477.- FC&P 17-1, p. 25, ID=2135^Topic(s): microstructures; Tabulata, Ohiopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: USA, Ohio^The holotype of Favosites cylindrica Michelin 1847 is a fragment of a corallum completely silicified and poorly preserved. Some specimens, regarded as topotypic (Falls of the Ohio), allow a detailed study of internal characters, wall, pores, and tabulae. Development of horizontal ridges results from folding of the wall. The abundance of these ridges is generally associated with the final stage of growth of the corallum. In ultra-thin sections with polished faces (LFP thin sections), parts of the skeleton not affected by silicification show the microstructural features of the wall. The median "dark line" is composed of granules, sometimes elongated; the stereozone is made of lamellae approximately parallel to the intramural coenozone. A biometric study of the so-called "topotypic" specimens and of the holotype of F. cylindrica shows the conspecificity of all this material. A new genus, Ohiopora, is proposed for F. cylindrica. The new genus is very close to Michelinia sensu stricto, from which it probably derived but from which it may be distinguished by the presence of horizontal ridges, which form an original feature within the Tabulata. Several old species may be assigned to the new genus, and probably all are synonymous with O. cylindrica. Occurrence: Emsian?, lower and "middle" Eifelian. Ohiopora is endemic of eastern North American Province.^1";
- 2047 s[2044] = "TOURNEUR F., LAFUSTE J. (1993).- Revision de Bainbridgia typicalis Ball 1933 espece-type du genre Bainbridgia Ball 1933 (Tabulate, Auloporida; Devonien inferieur du Missouri, Etats-Unis).- Geologica et Palaeontologica 27: pp?.- FC&P 22-2, p. 25, ID=3479^Topic(s): revision, Bainbridgia; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: USA, Missouri^The auloporida genus Bainbridgia Ball 1933 is revised on the base of its type species B. typicalis Ball 1933. This species, until now supposed to be of Ludlovian age (Bainbridge Limestone), is probably coming from the Lower Devonian (Lochkovian) of Missouri in the United States. The genus is characterized by slender cylindrical corallites, disposed in two opposite and alternate rows. Scarce tabulae and rare mural pores are present. The microstructure of the walls shows a granular median lamina covered by two thin micro-lamellar layers, followed by two thick layers of grundulae. The morphological and microstructural characters show that the genus is close to the genus Cladochonus McCoy 1847 and to the family Pyrgiidae De Fromentel 1861.^1";
- 2048 s[2045] = "RIGBY J.K. (1991).- The new Devonian (Givetian) heteractinid sponge Gondekia from Ontario, Canada, and evolution of the astraeospongiids and eiffeliids.- Journal of Paleontology 65, 1: 38-44.- FC&P 20-1.1, p. 75, ID=2865^Topic(s): new taxa; Porifera Heteractinida; Systematics: Porifera; Stratigraphy: Devonian Giv; Geography: Canada, Ontario^The genus and species, Gondekia hastula, are described from the Middle Devonian (Givetian) Hungry Hollow Formation of southwestern Ontario. Astraeospongium lancifer Reimann 1945, is also included in the new species and A. acicularis is considered a synonym of that species. Gondekia has a flat saucer-like form and a felted, but thin, skeleton composed of at least three orders of regularly spaced and oriented simple sexiradiates. Gondekia is placed in the Eiffeliidae but is convergent toward the Astraeospongiidae in having a somewhat thickened wall.^1";
- 2049 s[2046] = "FAGERSTROM J.A. (1978).- Modes of evolution and their chronostratigraphic significance: evidence from Devonian invertebrates in the Michigan Basin.- Paleobiology 04: 381-393.- FC&P

- 8-1, p. 49, ID=0205^Topic(s): fossils, stratigraphy, evolution; stroms; Systematics: ; Stratigraphy: Devonian; Geography: USA, Michigan^Species of Syringostroma from the Detroit River Group are used to test evolutionary mechanisms^1";
- 2050 s[2047] = "MEYER F.O. (1978).- Middle Devonian Patch Reef Complex in Michigan: Stratigraphy and physical and biological determinants of reef structure.- Michigan University, Ann Arbor; unpublished thesis.- FC&P 8-1, p. 49, ID=0209^Topic(s): patch reefs; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: USA, Michigan^[unpublished thesis, University of Michigan, Ann Arbor; competition between corals and stromatoporoids for living space and changes in diversity in these reefs are discussed]^1";
- 2051 s[2048] = "MOUNTJOY E.W., JULL R.K. (1978).- Fore-reef carbonate mud bioherms and associated reef margin, Upper Devonian, Ancient wall reef complex, Alberta.- Canadian Journal of Earth Sciences .: 1504-1525.- FC&P 8-1, p. 58, ID=0242^Topic(s): reefs, mud mounds; reefs; Systematics: ; Stratigraphy: Devonian U; Geography: Canada, Alberta^The upper Peechee Member of the Ancient wall reef complex that is well exposed on the southeast margin of Mount Haultain represents the end of the first main depositional cycle of this complex. The uppermost part forms a 15-30m thick carbonate sequence that extends basin-ward over deeper water fore-reef detritus and is divisible into three distinct layers: the lower two consist mainly of stromatoropoid and coral bioherms and biostromes and associated calcarenites and calcilutites; the uppermost consists of five small micrite and wacke-stone bioherms 7,5 - 22 m long and 4 - 6 m high; three of these grew around and on top of a 30 m wide stromato-poroid-coral biostrome. Frame-building organisms include laminar and hemispherical colonies of Phillipsastrea, renalcid algae (often associated with small fenestral cavities), encrusting ooliteous algae (Sphaerocodium) and laminar stromatoporoids. Renalcid encrustations of micrites and wackestones on the vertical sides and undersides of bioherms indicate that early submarine cementation was also significant in forming these rigid structures. The bioherms formed during deepening water conditions with agitation and bioerosion too gentle to apron them with detritus but sufficient to fragment and disorient fragile skeletal elements. The sharp contacts and the lack of inter-fingering with basin strata indicate that the bioherms were drowned before burial by basin calcareous shales. (Original summary)^1";
- 2052 s[2049] = "FAGERSTROM J.A. (1983).- Petrology and regional significance of a Devonian Carbonate / Evaporite complex, Eastern Michigan Basin.- Journal of Sedimentary Petrology 53: 295-317.- FC&P 13-1, p. 48, ID=0520^Topic(s): carbonates; carbonates evaporites; Systematics: ; Stratigraphy: Devonian; Geography: USA, Michigan Basin^1";
- 2053 s[2050] = "POLAN K.P., STEARN C.W. (1984).- The allochthonous origin of the reefal facies of the Stuart Bay Formation, Early Devonian, Bathurst Island, arctic Canada.- Canadian Journal of Earth Sciences 21, 6: 657-668.- FC&P 13-2, p. 56, ID=0597^Topic(s): reefs, in allochthonous blocks; reefs; Systematics: ; Stratigraphy: Devonian Prag, Ems; Geography: Canada, Arctic^Blocks of limestone and dolomite up to tens of metres across occur near the base of the Lower Devonian (Siegenian-Emsian) Stuart Bay Formation at six sites on eastern Bathurst Island. These blocks occur up to 30. At the two localities with the greatest number of blocks they are disposed in two or three roughly linear groups reflecting their occurrence on bedding planes. The blocks are mostly wacke- and floatstones and they contain abundant fossils of the reefal biofacies of which stromatoporoids and corals are most prominent. The blocks have weathered from a matrix of finely laminated deep-water siltstone. Most of the blocks are unbedded but where bedding attitudes can be measured they are discordant with that of the siltstone and those of neighbouring blocks. Although they have been described as bioherms that grew in

place, the evidence indicates that they are allochthonous blocks derived when several catastrophic events such as earthquakes disturbed a Devonian reef tract developed on the western flank of the Cornwallis Fold Belt.¹";

- 2054 s[2051] = "WHALEN M.T., DAY J., EBERLI G.P., HOMEWOOD P.W. (2002).- Microbial carbonate as indicator of environmental change and biotic crises in carbonate systems: examples from the Late Devonian, Alberta Basin, Canada.- Palaeogeography, Palaeoclimatology, Palaeoecology 181, 1-3: 127-151.- FC&P 32-1, p. 37, ID=1742Topic(s): carbonates; carbonates ecology; Systematics: ; Stratigraphy: Devonian U; Geography: Canada, AlbertaMicrobial precipitation of calcium carbonate has played a vital role in the development of carbonate platforms since their initiation in the Proterozoic. We report here the varied roles that microbial carbonates played in Late Devonian carbonate platforms in the Alberta basin, Canada. We recognize microbial carbonates as important contributors within the carbonate system during times of major environmental change including transgressive events in platform environments and the recovery interval following the Frasnian-Famennian mass extinction. Detailed sequence stratigraphic analysis of two isolated platforms in the Canadian Rockies was used to document their evolution from a regional ramp to isolated platforms with phases of progradation, aggradation and backstepping, and renewed progradation related to rates of second-order and third-order sea-level change and basin infill. The carbonate system was reorganized following annihilation of many carbonate-producing biota during the Frasnian-Famennian mass extinction. Microbial carbonates figure prominently in both Frasnian platform development and the Famennian recovery of the carbonate system following the Frasnian-Famennian mass extinction. [...] Microbial carbonates occur at important sequence stratigraphic and paleoecologic horizons indicating changes in sea level, nutrient supply, and biotic assemblages. These examples indicate that microbial carbonates can be important indicators of environmental and ecological change within carbonate systems. [first and last part of extensive abstract]¹"
- 2055 s[2052] = "BOUCOT A.J., BRETT C.E., OLIVER W.A.jr, BLODGETT R.B. (1986).- Devonian faunas of the Sainte-Helene Island breccia, Montreal, Quebec, Canada.- Canadian Journal of Earth Sciences 23: 2047-2056.- FC&P 16-2, p. 16, ID=2035Topic(s): stratigraphy; geology fossils; Systematics: ; Stratigraphy: Devonian L M; Geography: Canada, QuebecEarly and Middle Devonian fossils from the Sainte-Helene Island diatrema breccias are critically reviewed and analyzed stratigraphically. They include marine benthic faunas of Helderberg, Oriskany, Schoharie, Onondaga, and Hamilton ages. Brachiopods are the most abundant fossils; significant corals are also present and are discussed for the first time. These diatrema faunas from the Montreal region significantly augment the lithofacies - paleogeographic data known for the first part of North America. For the first time, attention is paid to the lithologies in which the Sainte-Helene Island faunas are embedded, as clues to the regional relations of these rock types. The absence of Silurian specimens is ascribed to nondeposition similar to that known in the Albany, New York, region to the south. The presence of marine, Hamilton age rocks and fossils at Montreal shows that the Acadian Orogeny and uplift into the nonmarine environment did not affect the area until at least some time in the Hamilton.¹"
- 2056 s[2053] = "MUIR I.D. (1988).- Devonian Hare, Indian and Ramparts formations, Mackenzie Mountains, N.W.T.: basin-fill, platform and reef development.- Ottawa University Ph. D. dissertation, 593 pp.- FC&P 18-1, p. 19, ID=2213Topic(s): geology, reefs; geology; Systematics: ; Stratigraphy: Devonian; Geography: Canada, NW Territories[unpublished ?]¹"
- 2057 s[2054] = "PETERHAENSEL A., PRATT B.R. (2008).- The Famennian (Upper

- Devonian) Palliser platform of western Canada - architecture and depositional dynamics of a post-extinction epeiric giant.- Geological Association of Canada, Special Paper 48 [Pratt B. R. et Holmden C. (eds): The Dynamics of Epeiric Seas]: 247-281. ISBN 978-1-89709-534-8.- FC&P 35, p. 100, ID=2426^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Devonian Fam; Geography: Canada W^^1";
- 2058 s[2055] = "GOSSELIN E.G., SMITH L., MUNDAY J.C. (1988).- The Golden and Evi Reef complexes, Middle Devonian, Slave Point Formation, NW Alberta.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 440-447.- FC&P 19-2.1, p. 40, ID=2769^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: Canada, Alberta^^1";
- 2059 s[2056] = "MEYER F.O. (1988).- Stromatoporoid / coral patch reefs of Givetian age, Michigan.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 492-496.- FC&P 19-2.1, p. 40, ID=2772^Topic(s): patch reefs; reefs; strom / coral; Systematics: ; Stratigraphy: Devonian Giv; Geography: USA, Michigan^^1";
- 2060 s[2057] = "EMBRY A.F., KLOVAN J.E. (1988).- Mercy Bay Patch reefs, Frasnian, Banks I., Canadian Arctic Archipelago.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 429-430.- FC&P 19-2.1, p. 40, ID=2773^Topic(s): reefs, patch reefs; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Canada, Arctic^^1";
- 2061 s[2058] = "MACHEL H.G., MOUNTJOY E.W., AMTHOR I.E. (1994).- Dolomitisierung von devonischen Riff- und Plattformkarbonaten in West-Kanada.- Zentralblatt für Geologie und Paläontologie Teil 1,1993, 7/8: 941-957. [in German, with English summary].- FC&P 23-2.1, p. 72, ID=4442^Topic(s): reefs, dolomitization; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Canada W^Most Devonian reef and platform carbonates in the Western Canada Sedimentary Basin (WCSB) are pervasively replaced by grey matrix dolomite. The following parameters of these dolomites have been investigated: textures, spatial relationships to facies and structure, relationships to limestone diagenesis and stylolitization, stable isotopes, trace elements, 87Sr/86Sr-ratios, associated sulfates, recrystallization, fluid inclusions. The data presently available suggest that most grey matrix dolomites in the WCSB are "burial dolomites"; that formed during burial at depths of about 300 to 1500m. Pervasive matrix dolomitization appears to have been a basin-wide phenomenon, and the dolomitizing solutions probably were diagenetically altered Devonian seawater. The "mechanisms"; and directions of dolomitizing fluid flows are presently unknown and under further investigation. ^1";
- 2062 s[2059] = "WENDTE J.C. (1994).- Cooking Lake platform evolution and its control on Late Devonian Leduc reef inception and localization, Redwater, Alberta.- 002 Bulletin Canadian Petroleum Geology 42: 499-528.- FC&P 24-1, p. 81, ID=4513^Topic(s): reef complexes, facies; reef complexes; Systematics: ; Stratigraphy: Devonian U; Geography: Canada, Alberta^[among others, four facies based on Stromatoporoids (Amphipora, massive, tabular, and cylindrical) are defined and their distribution in the platform is shown in a cross section; the environments of deposition of these facies are discussed]^1";
- 2063 s[2060] = "MCLEAN R.A., MARCHANT T.R., BELLOW J.M. (1995).- The Upper Devonian of the Hay River region, southern District of Mackenzie, N.W.T.- First Joint Symposium, Canadian Society of Petroleum Geologists and Canadian Well Logging Society, Calgary, Guidebook, Post-Meeting Field Trip 3: 67 pp., 12 pls.- FC&P 24-2, p. 35,

- 2064 ID=4531^Topic(s): geology; geology; Systematics: ; Stratigraphy: Devonian U; Geography: Canada NW^^1"; s[2061] = "ERLICK M. (1995).- Cyclostratigraphy of Middle Devonian carbonates of the eastern Great Basin.- Journal of Sedimentary Research B65, 1: 61-79.- FC&P 24-2, p. 77, ID=4554^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Devonian M; Geography: USA, Great Basin^Middle Devonian carbonates (250-430m thick) of the eastern Great Basin were deposited along a low energy, westward-thickening, distally steepened ramp. Four third-order sequences can be correlated across the ramp-to-basin transition and are composed of meter-scale, upward-shallowing carbonate cycles (or parasequences). Peritidal cycles (shallow subtidal facies capped by tidal-flat laminites) constitute 90% of all measured cycles and are present across the entire ramp. The peritidal cycles are regressive- and transgressive-prone (upward-deepening followed by upward-shallowing facies trends). Approximately 80% of the peritidal cycle caps show evidence of prolonged subaerial exposure including sediment-filled dissolution cavities, horizontal to vertical desiccation cracks, rubble and karst breccias, and pedogenic alteration; locally these features are present down to 2 m below the cycle caps. Subtidal cycles (capped by shallow subtidal facies) are present along the middle-outer ramp and ramp margin and indicate incomplete shallowing. Submerged subtidal cycles (64% of all subtidal cycles) are composed of deeper subtidal facies overlain by shallow subtidal facies. Exposed subtidal cycles are composed of deeper subtidal facies overlain by shallow subtidal facies that are capped by features indicative of prolonged subaerial exposure (dissolution cavities and brecciation). Average peritidal and subtidal cycle durations are between approximately 50 and 130 k.y. (fourth- to fifth-order). [part of extensive summary]^1";
- 2065 s[2062] = "KLOVAN J.E. (1974).- Development of western Canadian Devonian reefs and comparison with Holocene Analogues.- Bulletin of the American Association of Petroleum Geologists 58, 5: 787-799.- FC&P 3-2, p. 39, ID=4956^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Canada w^The complex interplay of basin geometry and tectonic history, subsidence rate, weather conditions, and postdepositional history is the factor determining the ultimate morphology of a reef tract, individual reefs comprising the tract, and the lithologic variations within the reefs. Although the effects of these influences usually can be documented in studies of recent reefs, their determination in fossil settings is commonly obscure. This may preclude the use of recent reefs as explicit analogues of ancient ones. The applicability and limitations of such comparisons with references to some Devonian reefs of western Canada and various Holocene structures indicate that the variety of reef tracts available for study allows the various causal influences to be isolated to a first order of approximation.^1";
- 2066 s[2063] = "HRISKEVICH M.E. (1967).- Middle Devonian reefs of the Rainbow Region of northwestern Canada exploration and exploitation.- Proceedings of the VIIth World Petroleum Congress: 733-763.- FC&P 4-1, p. 32, ID=5102^Topic(s): reefs, exploration & exploitation; reefs; Systematics: ; Stratigraphy: Devonian M; Geography: Canada NW^At least three separate pulses of reef growth occurred in northwestern Canada during Middle Devonian time. These are, in order of decreasing age, Keg River (Rainbow Member), Sulphur Point and Slave Point reefs. Isopachous and facies maps illustrate that in the western part of the region, in northeastern British Columbia, the distribution of Keg River (Rainbow Member) reefs determined to a considerable degree, the extent and configuration of younger (Sulphur Point and Slave Point) reefs. In the eastern part, no direct relationship is apparent. Examples illustrate that seismic exploration for reefs must be adapted to specific geologic

conditions obtaining in the particular part of the basin being explored. * During the two years ending March 31, 1967, exploratory and development drilling has confirmed recoverable reserves of more than a billion barrels of oil in Rainbow reefs of northwestern Alberta. Substantial reserves of gas have been discovered in Middle Devonian reefs in British Columbia. The new system of proration to market demand adopted by Alberta has allowed this substantial reserve to be developed with only those wells needed to broadly define the reserves in each pool. Continuous year-round exploitation has been carried out in a remote environment by employing extensive stock-piling during winter months and by placing heavy reliance on air support. Rainbow crude started to market on March 18, 1966, approximately one year after discovery. Mathematical model studies of the discovery reservoir confirm that primary recovery will be 57 per cent of the oil-in-place. Maximum recovery of 96 per cent should be achieved by using a downward-moving miscible blanket. A processing plant is under construction to recover L.P.G., sweetened solution gas and compress these fluids for injection for pressure maintenance.^1";

- 2067 s[2064] = "MACKENZIE W.S., PEDDER A.E.H., UYENO T.T. (1975).- A Middle Devonian sandstone unit, Grandview Hills area, District of Mackenzie.- Papers of geological Survey Canada 75-1A: 547-552.- FC&P 7-2, p. 20, ID=5630^Topic(s): geology, fossils; geology, paleontology; Systematics: ; Stratigraphy: Devonian M; Geography: Canada, Mackenzie Distr^[fauna includes some rugose corals]^1";
- 2068 s[2065] = "COPPER P., EDINGER E. (2009).- Distribution, geometry and palaeogeography of the Frasnian (Late Devonian) reef complexes of Banks Island, NWT, western arctic Canada.- The Geological Society, London, Special Publications 314 [P. Konigshof (ed.): Devonian Change: Case Studies in Palaeogeography and Palaeoecology]: 107-122.- FC&P 36, p. 113, ID=6550^Topic(s): reef complexes, distribution, geography; reef complexes; Systematics: ; Stratigraphy: Devonian Fra; Geography: Canada, NW Territories^Following the collapse of the >2000km long Givetian (Middle Devonian) Inuitian/Ellesmere carbonate platform factory in arctic Canada, within the 0° to 10° equatorial palaeolatitudes north, the only Frasnian reefs in high arctic Canada retreated westwards, confined to northeastern Banks Island. These reefs, numbering well over 130, and dominated by corals and stromatoporoid sponges, were spread over c. 5000 km², within the 220m thick Mercy Bay Formation. Reefs were developed at four different stratigraphic levels (termed the A, B, C and D levels) during early and middle Frasnian time, periodically smothered by intervening siliciclastics during sea-level lowstands, and were finally buried by thick siliciclastic sands, silts and muds derived from the east during the late Frasnian. [first part of extensive abstract]^1";
- 2069 s[2066] = "BRATTON J.F., BERRY W.B.N., MORROW J.R. (1999).- Anoxia pre-dates Frasnian- Famennian boundary mass extinction horizon in the Great Basin, USA.- Palaeogeography, Palaeoclimatology, Palaeoecology 154, 3: 275-292.- FC&P 29-1, p. 45, ID=7034^Topic(s): extinctions, anoxia; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: USA, Great Basin^Major and trace metal results from three Great Basin stratigraphic sections with strong conodont biostratigraphy identify a distinct anoxic interval that precedes, but ends approximately 100 kyr before, the Frasnian-Famennian (F-F, mid-Late Devonian) boundary mass extinction horizon. This horizon corresponds to the final and most severe step of a more protracted extinction period. These results are inconsistent with data reported by others from the upper Kellwasser horizon in Europe, which show anoxia persisting up to the F-F boundary in most sections. Conditions returned to fully oxygenated prior to the F-F boundary in the study area. These data indicate that the worst part of the F-F extinction was not related directly to oceanic anoxia in this region and potentially globally. [original abstract]^1";

- 2070 s[2067] = "MINTO J.W. (1996).- A study of Winnipegosis reefs in the Devonian outcrop belt, Manitoba.- University of Regina, unpublished M. Sc. Thesis; 66 pp.- FC&P 29-1, p. 46, ID=7037^Topic(s):reefs; reefs; Systematics: Stratigraphy: Devonian; Geography: Canada, Manitoba^^1";
- 2071 s[2068] = "COCKE J.M., STRIMPLE H.L. (1974).- Distribution of algae and corals in Upper Pennsylvanian Missourian rocks in northeastern Oklahoma.- Geol. Soc. America South-central Section Field Trip Guidebook; 41 pp.- FC&P 5-1, p. 28, ID=5347^Topic(s):distribution; Algae, Anthozoa; Systematics: algae Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: USA, Oklahoma^[stratigraphic, geographic, and écologic distribution of coral species]^1";
- 2072 s[2069] = "SANDO W.J. (1984).- Corals as guides to divisions of the Pennsylvanian System in the western interior region.- U.S. Geological Survey Open-file Report 84-79: 19.- FC&P 13-1, p. 40, ID=0480^Topic(s):biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: USA interior W^^1";
- 2073 s[2070] = "SANDO W.J. (1985).- Biostratigraphy of Pennsylvanian (Upper Carboniferous) corals, Western Interior Region, conterminous USA.- Tenth International Congress of Carboniferous Stratigraphy and Geology, Comptes Rendus 2: 335-350.- FC&P 15-2, p. 32, ID=0695^Topic(s):biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: USA interior W^^1";
- 2074 s[2071] = "SANDO W.J., BAMBER E.W. (1985).- Coral zonation of the Mississippian system in the Western Interior Province of North America.- U.S. Geological Survey Professional Paper 1334: 1-61.- FC&P 14-2, p. 35, ID=0916^Topic(s):biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: USA interior W^Analysis of the distribution of coral taxa, principally genera and subgenera, in the Mississippian of the Western Interior Province of Canada and the conterminous United States permits recognition of a system of coral zones and subzones useful for correlating stratigraphic units throughout an area extending from the southwestern District of Mackenzie in the Northwest Territories of Canada to southern California in the United States. The zonation comprises six Oppel Zones, four of which are divided into locally useful subzones. Coral Zone I corresponds approximately to the Kinderhookian Provincial Series and is divided into Subzones A, B, and C. Coral Zone II corresponds approximately to the Osagean Provincial Series and is divided into Subzones A and B. The Tournaisian Stage of western Europe is represented by Coral Zones I and II. Coral Zone III corresponds approximately to the lower and middle parts of the Meramecian Provincial Series and is divided into Subzones A, B, C, and D. Coral Zone IV corresponds approximately to the upper part of the Meramecian and is not divided. Coral Zone V corresponds approximately to the lower and middle parts of the Chesterian Provincial Series and is divided into Subzones A and B. Coral Zone VI corresponds approximately to the upper part of the Chesterian and is not divided. The Visean Stage of western Europe is represented by Coral Zones III and IV and Subzone VA. The lower part of the Namurian Stage of western Europe is represented by Coral Subzone VB and Zone VI. Deep-water and shallow-water coral biofacies are discussed and integrated into the zonation system.^1";
- 2075 s[2072] = "SANDO W.J., BAMBER E.W. (1984).- Coral zonation of the Mississippian system of western North America.- 9th International Congress on Carboniferous Stratigraphy and Geology; Comptes Rendus .: 289-300. vol ????. [paper] - FC&P 14-1, p. 50, ID=1006^Topic(s):biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: USA interior W^^1";

- 2076 s[2073] = "SANDO W.J. (1989).- Dynamics of Carboniferous coral distribution, western interior USA.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 251-265.- FC&P 19-1.1, p. 13, ID=2543^Topic(s): distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: USA interior W^1";
- 2077 s[2074] = "WEBB G.E., SUTHERLAND P.K. (1993).- Coral fauna of the Imo Formation, uppermost Chesterian, North-Central Arkansas.- Journal of Paleontology 67, 2: 179-193.- FC&P 22-1, p. 33, ID=3395^Topic(s): biostratigraphy, new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: USA, Arkansas^The Chesterian Imo Formation of northern Arkansas represents the highest Mississippian strata present on the Ozark platform and contains a unique, although sparse, coral fauna that is transitional between Mississippian and Pennsylvanian assemblages. Of four most abundant genera represented, Lophophyllidium, Bradyphyllum, and Tectamichelinia are characteristic of Pennsylvanian assemblages and only Amplexizaphrentis is a typical Mississippian form. The fauna is interpreted as part of a shallow-water, muddy bottom community. Of the 11 rugosans and single tabulate coral described, the following are new: Bradyphyllum leslieense n.sp., Amplexizaphrentis maneri n.sp., Lophophyllidium imoense n.sp., and Tectamichelinia mangeri n.gen. et n.sp.^1";
- 2078 s[2075] = "WEBB G.E., SANDO W.J., RAYMOND A. (1997).- Mississippian coral latitudinal diversity gradients (western interior United States): Testing the limits of high resolution diversity data.- Journal of Paleontology 71, 5: 780-791.- FC&P 27-2, p. 48, ID=3904^Topic(s): paleolatitudes; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: USA interior W^Analysis of high resolution diversity data for Mississippian corals in the eastern interior United States yielded mild latitudinal diversity gradients despite the small geographic area covered by samples and a large influence on diversity patterns by geographic sampling intensity (sample bias). Three competing plate tectonic reconstructions were tested using the diversity patterns. Although none could be forcefully rejected, one reconstruction proved less consistent with diversity patterns than the other two and additional coral diversity data from farther north in Canada would better discriminate the two equivalent reconstructions. Despite the relatively high sampling intensity represented by the analyzed database, diversity patterns were greatly affected by sample abundance and distribution. Hence, some effort at recognizing and accounting for sample bias should be undertaken in any study of latitudinal diversity gradients. Small-scale geographic lumping of sample localities had only small effects on geographic diversity patterns. However, large-scale (e.g., regional) geographic lumping of diversity data may not yield latitudinally sensitive diversity patterns. Temporal changes in coral diversity in this region reflect changes in eustasy, local tectonism, and terrigenous sediment flux, far more than they do shifting latitude. Highest regional diversity occurred during the interval when the studied region occupied the highest latitude. Therefore, diversity data from different regions may not be comparable, in terms of latitudinal inference. Small-scale stratigraphic lumping of the data caused a nearly complete loss of the latitudinal diversity patterns apparent prior to lumping. Hence, the narrowest possible stratigraphic resolution should be maintained in analyzing latitudinal diversity gradients.^1";
- 2079 s[2076] = "COCKE J.M., MUSSLER J. (1974).- Upper Pennsylvanian Missourian Coral of Iowa.- Proceed. Iowa Acad. Sci. 81, 2: 43-50. [key words: Pennsylvanian Corals, Missourian Corals, Fossil Corals].- FC&P 4-2, p. 56, ID=5259^Topic(s): ; Anthozoa;

- Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: USA, Iowa^As in Kansas, where distinct zonation of corals has been recognized, the dissepimental Rugosa Dibunophyllum, Neokoninckophyllum and Geyerophyllum are invariably associated with limestones and thin calcareous shale interbeds within limestone units. In both states, the nondissepimental rugose genera Lophamphlexus and Stereostylus have been collected from both limestones and thick intervening shale units. The tabulate genera Syringopora and Cladochonus are restricted to limestones in both areas. Although the vertical distribution of Iowa and Kansas dissepimental corals is similar, Iowa rocks contain fewer and generally smaller corals than correlative Kansas units. Elements of the informal dissepimental coral zones 1, 5 and 4 established by Cocke (1970, 1972) in Kansas are presently known in Iowa.^1";
- 2080 s[2077] = "SUCHY D.R., WEST R.R. (2001).- Chaetetid buildups in a Westphalian (Desmoinesian) cyclothem in southeastern Kansas.- Palaios 16, 5: 425-443.- FC&P 31-1, p. 74, ID=1655^Topic(s): ecology, growth rates; chaetetid reefs; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: USA, Kansas^[Chaetetids in the Higginsville Limestone member of the Fort Scott Formation are described in detail; their growth forms, attachments, growth interruptions, overturning, relief, and associated organisms all are interpreted in terms of a shallow water environment of deposition; estimates of their rates of growth are derived from the growth of modern calcified sponges at about 125µm/year]^1";
- 2081 s[2078] = "MILLER K.B., WEST R.R. (1997).- Growth interruption surfaces within chaetetid skeletons: records of physical disturbance and depositional dynamics.- Lethaia 29, 3: 289-299.- FC&P 26-1, p. 76, ID=3651^Topic(s): growth interruptions, ecology; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: USA, Kansas^The use of growth interruption surfaces for inferring the frequency of physical disturbance and relative rate of sediment accumulation is illustrated from several Middle Pennsylvanian sequences of SE Kansas. Five different types of surface show: 1. apparent continuity of tubules, 2. rejuvenation or recolonization with reorientation of tubules, 3. sediment-filled tubules or partings, 4. encrusting organisms, 5. bioerosion or corrosion. The type and spacing vary with growth form.^1";
- 2082 s[2079] = "SANDO W.J. (1975).- Coelenterata of the Amsden Formation (Mississippian and Pennsylvanian) of Wyoming.- US Geol. Survey Prof. Paper 848-C: C1-C31.- FC&P 4-2, p. 61, ID=5291^Topic(s): taxonomy, stratigraphy; Chaetetida Tabulata, Rugosa; Systematics: Porifera Cnidaria; Chaetetida Anthozoa; Stratigraphy: Carboniferous; Geography: USA, Wyoming^The coelenterate faunas of the Amsden Formation of Wyoming consist of 14 species that represent 11 genera distributed among the chaetetid hydrozoans and the rugose and tabulate corals. Five new species and one new genus are described in this paper. Coelenterates are rare or absent in the Darwin Sandstone, Horseshoe Shale, and Ranchester Limestone Members of the Amsden, but they form a significant part of the invertebrate fauna of the Moffat Trail Limestone Member. Although both Mississippian and Pennsylvanian forms are present in the Amsden, the Moffat Trail fauna, which is of Late Mississippian (Chesterian) age, is the only coelenterate assemblage that is significant for correlation with other strata of similar age.^1";
- 2083 s[2080] = "RIGBY J.K., KEYES R.jr (1990).- First report of hexactinellid dictyosponges and other sponges from the Upper Mississippian Bangor Limestone, northwestern Alabama.- Journal of Paleontology 64, 6: 886-897.- FC&P 20-1.1, p. 75, ID=2866^Topic(s): Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Carboniferous Vise; Geography: USA, Alabama^1";

- 2084 s[2081] = "NITECKI M.H., RICHARDSON E.S.jr (1972).- A new Hydrozoan from the Pennsylvanian of Illinois.- *Fieldiana Geology* 30, 1: 1-7.- FC&P 4-1, p. 46, ID=5186^Topic(s): ; Hydrozoa, Prevothella; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Carboniferous U; Geography: USA, Illinois^[description of Prevothella proteana n.g., n.sp.]^1";
- 2085 s[2082] = "SCHRAM F.R., NITECKI M.H. (1975).- Hydra from the Illinois Pennsylvanian.- *Journal of Paleontology* 49, 3: 549-551.- FC&P 4-2, p. 65, ID=5309^Topic(s): ; Hydrozoa, Mazohydra; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Carboniferous; Geography: USA, Illinois^A solitary, athecate, hydra-like fossil, Mazohydra megabertha, is described from the Middle Pennsylvanian Francis Creek Shale of the Mazon Creek area of northeastern Illinois. Mazohydra is represented by a single specimen, a polyp with a cirlet of 8 or 9 tentacles, an elongate stalk and a pedal disk. This represents the only occurrence of a hydroid form in the fossil record.^1";
- 2086 s[2083] = "RIGBY J.K., MANGER W.L. (1994).- Morrowan lithistid demosponges and hexactinellids from the Ozark Mountains of northwestern Arkansas.- *Journal of Paleontology* 68, 4: 734-746.- FC&P 23-2.1, p. 61, ID=4420^Topic(s): taxonomy; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: Carboniferous Morr; Geography: USA, Arkansas^Silicified and well-preserved specimens of the new orchocladine anthaspidellid genus and species, Virgaspongia ichnata, the rhizomarine haplistiid, Haplistion sphaericum Finks 1960, and various root tufts, and the new hexactinellid species Steioderma hadra are reported from the Brentwood Member of the Morrowan Bloyd Formation from the Sulphur City quadrangle, in the Ozark Mountains of northwestern Arkansas. Virgaspongia is a subcylindrical branched or unbranched sponge that lacks a spongocoel and has a dendroclone-based skeleton in which trabes diverge upward and outward from an axial region. It is abundant here but is one of only a few anthaspidellid genera known from the Pennsylvanian. This is the first record of Haplistion from Pennsylvanian rocks of Arkansas, although the genus is widespread in upper Paleozoic rocks. The new hexactinellid species, Steioderma hadra, also documents the first occurrence of that genus from Arkansas and in Morrowan rocks. Only fragments were recovered but the swollen grotesque spicules, of several sizes, that make the fused dermal layer and outer sponge wall are distinctive, particularly where combined with an inner layer(?) or root tuft of monaxons of various sizes. Two different root tufts and one demosponge wall fragment(?) also occur in the collection.^1";
- 2087 s[2084] = "SORAUF J.E. (1977).- Microstructure and Magnesium content in Lophophyllidium from the Lower Pennsylvanian of Kentucky.- *Journal of Paleontology* 51, 1: 150-160.- FC&P 6-1, p. 27, ID=0068^Topic(s): microstructure, Mg content; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: USA, Kentucky^Presents evidence of magnesian calcite skeletal composition for Paleozoic corals.^1";
- 2088 s[2085] = "WEBB G.E. (1984).- Columella development in Lophophyllidium n.sp., and its taxonomic implications, Imo Formation, latest Mississippian, northern Arkansas.- *Palaeontographica Americana* 54: 509-514 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 51, ID=1014^Topic(s): structures, columella; Rugosa, structures; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: USA, Arkansas^^1";
- 2089 s[2086] = "WEBB G.E. (1987).- The coral fauna of the Pitkin Formation (Chesterian), northeastern Oklahoma and northwestern Arkansas.- *Journal of Paleontology* 61, 3: 462-493.- FC&P 16-2, p. 22, ID=2048^Topic(s): ; Rugosa; Systematics: Cnidaria;

- Rugosa; Stratigraphy: Carboniferous L; Geography: USA, Oklahoma, Arkansas^The Upper Chesterian Pitkin Formation of the Ozark Dome region contains a large and diverse, yet highly endemic, coral fauna consisting of 10 genera of rugose corals and three of tabulate corals. Coral distribution within the formation is affected by stratigraphic, paleoecologic, and possibly paleogeographic controls. Although it is impossible at this time to fully evaluate the importance of stratigraphic controls on the coral distribution, the occurrence of two types of carbonate bioherms within the formation provides substantial paleoecologic control on the distribution of certain corals. Despite the high endemism and facies restriction, the coral fauna has proven to be biostratigraphically sensitive, correlating with middle and upper Chesterian coral zones in the western Interior Province of North America. Among the Pitkin corals herein described are the new genera: Lesliella n.gen. (L. amplexa n.sp., type species) and Parvaxon n.gen. (P. minutum n.sp., type species). Other newly described species are: Amplexizaphrentis browni n.sp., Barytichisma clubinei n.sp., B. ozarkana n.sp., and Leonardophyllum arkansanum n.sp., which represents the first reported occurrence of the genus in strata below the Pennsylvanian boundary.^1";
- 2090 s[2087] = "SANDO W.J., BAMBER E.W., RICHARDS B.C. (1991).- The rugose coral Ankelasma - Index to Visean (Lower Carboniferous) shelf margin in the Western Interior of North America.- US Geological Survey Bulletin 1895-B: 29 pp.- FC&P 21-1.1, p. 48, ID=3238^Topic(s): biostratigraphy; Rugosa, Ankelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: America N, interior W^^1";
- 2091 s[2088] = "SUTHERLAND P.K. (1997).- Intraspecific variation in a species of the colonial rugose coral Petalaxis, Middle Carboniferous, Oklahoma, USA.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 117-126.- FC&P 26-2, p. 12, ID=3678^Topic(s): variability; Rugosa, Petalaxis; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: USA, Oklahoma^A new species of the genus Petalaxis occurs in strata of early Pennsylvanian Morrowan age in northeastern Oklahoma, in the Branneroceras branneri ammonoid zone, which correlate with the lower G2 interval in western Europe. It occurs in a quiet, offshore carbonate mudstone environment in which the colonies are all in growth positions. Large colonies are grouped into widely separated clusters in and on the top surface of a widely distributed carbonate mudstone interval. With the slow influx of mud new spats of Petalaxis settled immediately on muddy surfaces partly covering the large Petalaxis n.sp. A colonies. In this adverse environment the new colonies survived for varying spans of time. They range in size from less than 2cm up to 16cm. Those over 5cm in diameter can be identified with certainly as being the same species as the large underlying colonies. Even those less than 2cm in diameter must be the same species in that no corals are found in the extensive barren spaces separating the underlying clusters of Petalaxis colonies. If a shale containing tiny Petalaxis colonies occurred at the same horizon in a locality separated even a short distance from a limestone containing large colonies of Petalaxis then the two groups of specimens would almost certainly be classified as different species. Such a conclusion would not necessarily be justified.^1";
- 2092 s[2089] = "BAMBER E.W., FEDOROWSKI J. (1997).- Biostratigraphy and systematics of Upper Carboniferous cerioid rugose corals, Ellesmere Island, Arctic Canada.- Geol. Survey Canada, Bull 511: 1-127.- FC&P 27-2, p. 15, ID=3893^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Canada, Arctic^^1";
- 2093 s[2090] = "COCKE J.M., HAYNES L.D. (1973).- Dibunophyllum and Neokoninckophyllum from the Upper Pennsylvanian Lost City Limestone in Oklahoma.- Journal of Paleontology 47: 244-250.- FC&P 2-1,

- p. 15, ID=4714^Topic(s): ; Rugosa, Dibunophyllum;
Systematics: Cnidaria; Rugosa; Stratigraphy:
Carboniferous U; Geography: USA, Oklahoma^Dibunophyllum
hansonii C. & H. n.sp. and Neokoninckophyllum tushanense (Chi 1931)
occur throughout the Pennsylvanian (Missourian) Lost City Limestone
Member of the Hogshooter Formation in northeastern Oklahoma. The former
most closely resembles dibunophyllid species from the Upper
Pennsylvanian Hertha, Swope and Dennis Limestones of Kansas. The latter
is common in those limestones and also in Upper Carboniferous rocks of
China. Neokoninckophyllum acolumnatum Cocke 1970 has been collected
from one Lost City locality as well as in the Lower and Upper
Missourian rocks of Kansas.^1";
- 2094 s[2091] = "COCKE J.M., MOLINARY J. (1973).- Dibunophyllum and
Neokoninckophyllum from the Wann Formation (Missourian) in Northeastern
Oklahoma.- Journal of Paleontology 47, 4: 657-662.- FC&P
2-2, p. 14, ID=4784^Topic(s): ; Rugosa, Dibunophyllum;
Systematics: Cnidaria; Rugosa; Stratigraphy:
Carboniferous U; Geography: USA, Oklahoma^Three species of
dissepimental corals are described from a single limestone lenticle in
the upper Wann Formation, of northeastern Oklahoma. One species,
Neokoninckophyllum strimplei Cocke & Molinary n.sp. is similar to
N. variabile of the Kansas Wyandotte and Plattsburg Limestones and to
N. heckeli of the Kansas Stanton Formation. Another dissepimental
coral, Dibunophyllum dibolium represents the higher part of the Kansas
D. parvum - D. dibolium lineage and suggests correlation of the upper
Wann with the Stanton Limestone of Kansas. The third wann species, D.
valeriae Newell (1935) is widespread in the Wyandotte, Plattsburg and
Stanton Limestones of Kansas. Caninia torquia and D. parvum occur in
other wann limestone lentils but are not described here.^1";
- 2095 s[2092] = "MAERZ R.H.jr (1978).- Paleoautecology of Caninia torquia
(Owen) from the Bell Limestone Member (Pennsylvanian, Virgilian),
Kansas.- Kansas Univ. Paleont. Contrib. 92; 22 pp.- FC&P
7-2, p. 22, ID=5645^Topic(s): ; Rugosa, Caninia;
Systematics: Cnidaria; Rugosa; Stratigraphy:
Carboniferous U; Geography: USA, Kansas^^1";
- 2096 s[2093] = "WEBB G.E., YANCEY T.E. (2010).- Skeletal repair of extreme
damage in rugose corals, Pella Formation (Mississippian, Iowa, USA).-
Palaeoworld 19, 3-4: 325-332.- FC&P 36, p. 69,
ID=6468^Topic(s): skeletal repair; Rugosa; Systematics:
Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography:
USA, Iowa^Little is known about predation on rugose corals or the
repair of damage to rugose coral skeletons. Here we describe a
population of the solitary rugose coral Amplexizaphrentis spinulosa
(Milne-Edwards and Haime, 1851) from the Late Mississippian Pella
Formation in Keokuk County, Iowa, USA wherein ~30% of 135 specimens
experienced sublethal damage resulting from compression apparently
inflicted by fish or other large predators. Many corals were able to
repair severe damage and re-establish a relatively normal morphology
despite the loss of parts of the wall. Healed damage includes: (1)
chips to the edge of the calice, (2) punctures in the wall, (3) lost
sections of wall, (4) re-cemented sections of wall, some at odd angles,
(5) changes in growth direction, and (6) rejuvenescence. Multiple
episodes of damage and repair occurred in 5% of samples. More severe
damage on the cardinal side in almost one-half of damaged samples may
reflect structural weakness at the cardinal fossula relative to the
counter side, but septa were broken in all positions in many samples.
The pattern of alignment and preservation of broken plates in the
calice suggests that soft tissues were better attached to the skeleton
in a band relatively far above the calice floor. Better musculature
also may have occurred in the same band. Where parts of the wall were
broken free from septa that remained fixed at their axial ends, new
wall was deposited as stereoplasm against and enveloping the adaxial
ends of the original septa. Lost lengths of septa were replaced by

adaxial growth. New septa were commonly contorted, presumably owing to deformation of surviving soft tissues that had lost structural support. Broken septa were generally healed, commonly with poor alignment. The high survival rate, even following multiple attacks, suggests that the soft tissues of the coral polyps were robust. The rarity of changes in growth direction following attacks suggests that the corals may have been more capable of righting themselves and re-establishing an optimum growth orientation than has commonly been suggested for solitary Rugosa. [original abstract]^1";

- 2097 s[2094] = "WEBB G.E., SORAUF J.E. (2001).- Diagenesis and microstructure of a rugose coral (Lophophyllidium sp.) from the Buckhorn Asphalt (Upper Carboniferous), south-central Oklahoma.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 236-244.- FC&P 30-1, p. 20, ID=7072^Topic(s): diagenesis, microstructures; Rugosa Lophophyllidium; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: USA, Oklahoma^A rugose coral (Lophophyllidium sp.) from the Buckhorn Asphalt of Oklahoma provides new information on the mineralogy and microstructure of rugose corals. The Buckhorn Asphalt is an asphalt impregnated interval of mixed marine carbonate and siliciclastic sediments in the Deese Group (Upper Carboniferous) of central Oklahoma, USA. Buckhorn strata are renowned for their well preserved aragonite molluscan fauna. The Lophophyllidium specimen is slightly compressed and interseptal spaces contain little cement. X ray diffraction indicates that the coral is calcite. Septa contain medial "dark lines" flanked by stereoplasm that contains prominent laminae, possibly growth laminae, that have been diagenetically enhanced and form part of the chevron structure of secondary zigzag microstructure. Dissolution zones occur along septal margins. Microprobe minor element maps (Mg, Sr, Fe, and S) demonstrate highly variable Mg values in the dissolution zones, as much as 2-3 times Mg enriched, as compared to the rest of the coral, which has a relatively uniform, lower Mg content. Magnesium is mostly present in secondary microdolomite crystals, which disrupt the primary fibrous microstructure, but which are aligned along lineations defined by zigzag alteration. Strontium levels are low and uniform; Fe and S are largely confined to asphalt. Partial dissolution and occurrence of microdolomite crystals suggests that the skeleton was originally metastable low intermediate Mg calcite. Magnesium in the microdolomite was apparently derived from the coral itself by a process of microdissolution reprecipitation in a relatively closed system. Zigzag microstructure presumably formed during this very early neomorphism and may be directly related to the mobilization of Mg from the unstable precursor Mg calcite. [original abstract]^1";
- 2098 s[2095] = "SUTHERLAND P.K. (1975).- Solitary rugose corals and algae in the Upper Carboniferous of Oklahoma, USA.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 36.- FC&P 5-1, p. 30, ID=5371^Topic(s): ; Rugosa, algae; Systematics: Cnidaria algae; Rugosa; Stratigraphy: Carboniferous U; Geography: USA, Oklahoma^[paleoecology of solitary corals in relation to Lithostrotionella colonies and algae in Lower Pennsylvanian of Oklahoma]^1";
- 2099 s[2096] = "OSSIAN C.R. (1973).- New Pennsylvanian scyphomedusan from western Iowa.- Journal of Paleontology 47, 5: 990-995.- FC&P 3-2, p. 40, ID=4962^Topic(s): ; Scyphozoa; Systematics: Cnidaria; Scyphozoa; Stratigraphy: Carboniferous U; Geography: USA, Iowa^Description of Prothysanostoma eleanovae n.g., n.sp.^1";
- 2100 s[2097] = "WEBB G.E. (1990).- A New Tabulate Coral Species from the Pitkin Formation (Chesterian) of North-Central Arkansas.- Journal of Paleontology 64, 4: 664-666.- FC&P 20-1.1, p. 62, ID=2830^Topic(s): new taxa; Tabulata, Michelinia; Systematics: Cnidaria; Tabulata; Stratigraphy:

- Carboniferous L; Geography: USA, Arkansas^A new species, *Michelinia macerimurus* n.sp., from the Upper Mississippian (Chesterian) is described.^1";
- 2101 s[2098] = "LAFUSTE J., TOURNEUR F. (1991).- Microstructure du genre *Acaciapora* Moore & Jeffords 1945 (Tabulata; Pennsylvanien de l'Oklahoma, USA).- *Geologica et Palaeontologica* 25: 99-109. [in French, with English summary].- FC&P 20-2, p. 62, ID=2955^Topic(s): microstructures; Tabulata, Acaciopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U; Geography: USA, Oklahoma^Type material of *Michelinia subcylindrica* Mather 1915, the type species of *Acaciapora* Moore & Jeffords 1945, is here firstly described in detail with particular record of the microstructure. ^1";
- 2102 s[2099] = "WEBB G.E. (1993).- Skeletal microstructure and the mode of attachment in *Palaeacis* species (Anthozoa: Tabulata) from the Mississippian and Pennsylvanian of northeastern Oklahoma and northwestern Arkansas.- *Journal of Paleontology* 67, 2: 167-178.- FC&P 22-1, p. 37, ID=3394^Topic(s): microstructures, attachment mode; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: USA, Oklahoma, Arkansas^Three species of Paleozoic coral *Palaeacis* are described from northeastern Oklahoma and northwestern Arkansas. Included are the Chesterian species *P. carinata* Girty and *P. snideri* nom. nov., a replacement name for the junior homonym *P. cuneata* Snider, and the Desmoinesian? species *P. erecta* n.sp. Coralla of each species exhibit two types of microstructure that characterize two skeletal zones. The outer skeletal zone is composed of numerous parallel trabeculae, mostly between 0,2 and 0,3mm in diameter, that lie perpendicular to, and have their accretionary surfaces on, the exterior surface of the corallum. Trabeculae are closely spaced laterally and are not organized into rows except uncommonly on the distal portion of some coralla. Where trabeculae coalesce into parallel rows, ornamentation on the corallum exterior consists of parallel ridges or rows of small nodes. Where trabeculae are irregularly arranged, external ornamentation consists of irregularly disposed nodes. The inner skeletal zone consists of radially fibrous stereoplasm arranged into discrete septal spines that coalesce into irregularly developed septal ridges in each calice. In *P. erecta*, septal spines merge into continuous [zone] of fibro-normal stereoplasm in some places. On the basis of microstructure, corallum morphology, and external ornamentation *P. carinata* and *P. snideri* can be allied with *P. axinoides* Smyth and *P. robusta* Webb. *P. erecta* falls within the same group on the basis of microstructure and ornament, but has a unique corallum morphology. Two distinct types of skeletal attachment occur in these *Palaeacis* species. *Palaeacis carinata* and *P. snideri* exhibit an encrusting attachment surface that results in a prostrate growth habit wherein smaller substrates were entirely engulfed, producing free-living coralla. *Palaeacis erecta* exhibits a small, circular attachment surface and an erect growth habit wherein most skeletal accretion occurs perpendicular to, and away from, the substrate. The substrate is not engulfed and the corallum remains attached and sessile throughout astogeny. *Palaeacis erecta*, to date, the only *Palaeacis* species known to possess this erects, sessile growth form.^1";
- 2103 s[2100] = "WEBB G.E. (1993).- A Lower Pennsylvanian encrusting tabulate coral from a rocky shore environment developed on the Mississippian-Pennsylvanian unconformity surface in northwestern Arkansas.- *Journal of Paleontology* 67, 6: 1064-1068.- FC&P 23-2.1, p. 43, ID=4239^Topic(s): rocky shore dwellers; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U?; Geography: USA, Arkansas^Paleozoic corals are very rare in rocky shore settings. The only Paleozoic encrusting coral so far reported from this environment is *Favosites* sp. from Ordovician rocky shore deposits in Manitoba, Canada (Johnson and Baarli

1987). Reading and Poole (1961) reported corals and brachiopods that occur between, and coating, boulders from a Silurian rocky shore in England, but it appears that the corals and brachiopods only occur in the sediment enveloping the boulders, not as encrusters on the surfaces of the boulders. One reason for the sparse record of Paleozoic corals in rocky shore settings is the scarcity of described Paleozoic rocky shore deposits themselves. Johnson (1988) found only 20 examples of Paleozoic rocky shores in a compilation of references on ancient rocky shores from the literature. The paucity of described ancient rocky shores has been attributed to the prevalence in the past of epicontinental seas with little relict upon which to develop rocky shores and with higher wave attenuation farther from shore (Boucot 1981; Harland and Pickerill 1984). Johnson (1988) concluded that the major reason for the rarity of ancient rocky shores in the literature is the difficulty with which they are recognized and studied, owing to the relatively poor exposure of most unconformity surfaces. The rocky shore environment was also probably hostile to many Paleozoic coral genera. Recent scleractinian corals may serve as analogues because they are also not very abundant in rocky shore settings despite their great abundance in similar shallow-water, high-wave-energy reefal environments. Turbidity and relative substrate stability may be important limiting factors for corals in rocky shore environments. Many corals are known to be highly sensitive to sediment in the water column. Substrate stability (Wilson 1987) and the scouring effects of sand in high-energy environments (Palmer and Palmer 1977) also have been shown to affect the abundance and diversity of organisms encrusting cobbles and boulders. The purpose of this note is to describe a Lower Pennsylvanian encrusting coral, possibly *Michelinia scopulosa* Moore and Jeffords 1945, from transgressive rocky shore deposits at the base of the Cane Hill Member of the Morrowan Hale Formation in northwestern Arkansas. Illustrated specimens are deposited in the Oklahoma Museum of Natural History (OU).¹;

2104 s[2101] = "WEBB G.E. (1994).- Benthic auto-mobility in discoid Palaeacis from the Pennsylvanian of the Ardmore Basin, Oklahoma? .- Journal of Paleontology 68, 2: 223-233.- FC#038;P 23-2.1, p. 43, ID=4240^Topic(s): benthic auto-mobility; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U; Geography: USA, Oklahoma^The enigmatic tabulate genus Palaeacis is composed primarily of species with wedge-shaped coralla. Palaeacis walcotti Moore and Jeffords 1945, P. kingi Jeffords 1955, and P. cf. P. walcotti, described below from the Morrowan (Pennsylvanian) Golf Course Formation of the Ardmore Basin, south-central Oklahoma, represent a distinctive morphogroup characterized by a discoid corallum. Discoid Palaeacis ranges from the Morrowan to the Missourian and, so far, is known only from the mid-continent region of North America. The discoid shape, combined with concentric skeletal accretion, large corallite diameters, complex calice floors, and porous skeleton suggest, based on comparisons with the functional morphology of recent scleractinians, that these corals were well suited to an auto-mobile (vagile) life strategy, much as are many Recent fungiid corals. Discoid Palaeacis inhabited environments with muddy or sandy, unconsolidated substrates and was associated with low-diversity, non-encrusting faunas. This association is consistent with an auto-mobile life strategy. Auto-mobility in Palaeacis would represent the first such reported occurrence in the Tabulata, and the first in Paleozoic colonial corals of all types.¹;

2105 s[2102] = "MCGUGAN A. (1983).- First record and a new species of Palaeacis Haime 1857, from the Mississippian of western Canada.- Journal of Paleontology 57, 1: 42-47.- FC#038;P 12-2, p. 34, ID=6214^Topic(s): ; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous L; Geography: Canada w^A single elongate and structurally advanced specimen of the rare and problematical supposedly tabulate coral genus

Palaeacis Haime 1857, in Milne-Edwards 1860, emended Conkin, Bratcher and Conkin 1976, was collected in 1980 by Mr. H. J. Negrich (submitted by Dr. M. Wilson) from the Kananaskis Valley, Alberta, in beds high in the Mississippian Rundle Group. The specimen is referred to Palaeacis elongata n.sp. The taxonomic status of Palaeacis is problematical, as it lacks septa and tabulae, and has a porous sponge-like wall rarely found in coelenterates, although the alternating biserial arrangement of eighteen calyces appears coral-like. The origin of interwoven submicroscopic fibers lining the calyces is unknown. The recorded species. P. bifida (Kinderhookian and Osage), P. cavernosa. P. obi usa (Osage), P. cuneiformis (Meramecian) P. carinata (Chesterian), P. walcotti P. testate, P. kingi (Pennsylvanian), may demonstrate restricted stratigraphic ranges, although symbiotic and sedimentological controls may also be involved. Palaeacis has been recorded from the Carboniferous of the British Isles, Morocco, the Soviet Union, the United States, Australia, and from the Permian of Timor. [original abstract]^1";

- 2106 s[2103] = "STRIMPLE H.L., COCKE J.M. (1973).- Tabulate Corals and Echinoderms from the Pennsylvanian Winterset limestone, Hogshooter formation, Northeastern Oklahoma.- Bulletins of American Paleontology 64, 279: pp??.- FC&P 3-1, p. 29, ID=4894^Topic(s): ; Tabulata; Systematics: Cnidaria Echinodermata; Tabulata; Stratigraphy: Carboniferous U; Geography: USA, Oklahoma^The Pennsylvanian Missourian Hogshooter formation of Northeastern Oklahoma locally contains abundant Tabulate Corals, Crinoids, and rare Blastoids in calcarenites and calcareous shales. These organisms are most abundant in reef associated beds at a single locality. None were collected from the phylloid algal mound complex which comprises most of the Hogshooter outcrop belt in Oklahoma. Species of four Tabulate coral genera are described from reef flank beds. They are Sutherlandia cf. S. irregularis Cocke and Bowsher, 1968, Striatopora kolmani n.sp., Michelinia adibilus n.sp., Cladochonus conus n.sp.^1";
- 2107 s[2104] = "RIGBY J.K., CHURCH S.B. (1993).- wewokella and other sponges from the Pennsylvanian Mintum Formation of north-central Colorado.- Journal of Paleontology 67, 6: 909-916.http://www.jstor.org/pss/1306104.- FC&P 23-2.1, p. 57, ID=4406^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Carboniferous U; Geography: USA, Colorado^The calcareous heteractinid sponge wewokella solida Girty, 1911, is reported from Colorado for the first time. Triactine-based skeletons are well preserved and dermal and gastral layers are composed of smaller spicules than those in the main wall of the many specimens. A fragment of an unnamed demosponge, possibly related to Heliospongia Girty, 1908, and fragments of root tufts occur with wewokella in the Middle Pennsylvanian Minturn Formation near McCoy, in Eagle County, Colorado. [original abstract]^1";
- 2108 s[2105] = "KAMMER T.W. (1985).- Basinal and prodeltaic communities of the Early Carboniferous Borden Formation in northern Kentucky and southern Indiana (USA).- Palaeogeography, Palaeoclimatology, Palaeoecology 049: 79-121.- FC&P 15-2, p. 30, ID=0666^Topic(s): biocoenoses, basinal, prodeltaic; biocoenoses; Systematics: ; Stratigraphy: Carboniferous L; Geography: USA, Kentucky, Indiana^^1";
- 2109 s[2106] = "KAMMER T.W., COX K.D. (1985).- Paleoecology of a delta slope community from the Lower Mississippian Borden Formation in central Kentucky.- Southeastern Geology 26, 1: 39-46.- FC&P 15-2, p. 30, ID=0667^Topic(s): ecology, delta slope; ecology; Systematics: ; Stratigraphy: Carboniferous L; Geography: USA, Kentucky^^1";
- 2110 s[2107] = "WATERS J.A. (1980).- Paleontology and biostratigraphy of the Upper Bangor Limestone (Mississippian) around Lookout Mountain, Georgia-Tennessee.- Georgia Department of Natural Resources, Geological

- Survey Open-File Report 90-9: 45 pp.- **FC#038**;P 11-1, p. 54, ID=1797^Topic(s): geology, stratigraphy; geology; Systematics: ; Stratigraphy: Carboniferous L; Geography: USA, Georgia, Tennessee^^1";
- 2111 s[2108] = "FELDMAN H.R. (1987).- Facies faunas of the Salem Limestone (Mississippian) in southern Indiana and central Kentucky.- Southeastern Geology 27, 3: 171-183.- **FC#038**;P 19-1.1, p. 41, ID=2630^Topic(s): paleontology, facies; Systematics: ; Stratigraphy: Carboniferous L; Geography: USA, Indiana, Kentucky^^1";
- 2112 s[2109] = "SANDO W.J. (1984).- Syringoporoid corals: Guides to the stratigraphy of upper Paleozoic rocks in the western interior region.- U.S. Geological Survey Open-file Report 84-80: 29.- **FC#038**;P 13-1, p. 40, ID=0479^Topic(s): stratigraphy; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous, Permian; Geography: USA interior W^^1";
- 2113 s[2110] = "SANDO W.J. (1984).- Biostratigraphic utility of upper Paleozoic syringoporoid corals, Western Interior region, conterminous USA.- Palaeontographica Americana 54: 453-457 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- **FC#038**;P 14-1, p. 50, ID=1005^Topic(s): stratigraphy; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous, Permian; Geography: USA interior W^^1";
- 2114 s[2111] = "BAMBER E.W., HENDERSON C.M., JERZYKIEWICZ J., MAMET B.L., UTTING J. (1989).- A summary of Carboniferous and Permian biostratigraphy, northern Yukon Territory and northwest District of Mackenzie.- Current Research G, Geological Survey of Canada Paper 89-1G: 13-21.- **FC#038**;P 21-1.1, p. 45, ID=3222^Topic(s): biostratigraphy; Systematics: ; Stratigraphy: Carboniferous, Permian; Geography: Canada NW^^1";
- 2115 s[2112] = "STEMMERIK L., ELVEBAKK G. (1994).- A newly discovered mid-Carboniferous - ?early Permian reef complex in the Wandel Sea basin, eastern North Greenland.- Ra pp. Groenlands geol. Unders. 161: 39-44.- **FC#038**;P 24-1, p. 92, ID=4528^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Carboniferous Mos - ? Permian Ass; Geography: Greenland N^Three types of carbonate-buildups occur in the mid-Carboniferous - ?early Permian (Moscovian-?Asselian) succession at Kap Jungersen, southern Arndrup Land, North Greenland: (1) Palaeoaplysina-dominated build-ups; (2) Algae-dominated build-ups; and (3) Bryozoan-dominated build-ups. The build-ups are less than 15m thick and up to a few hundred metres wide. They often coalesce to form laterally widespread, build-up dominated units and are locally stacked to form up to 100m thick build-up dominated sections along platform margins.^1";
- 2116 s[2113] = "FEDOROWSKI J., BAMBER E.W. (2001).- Guadalupian (Middle Permian) solitary rugose corals from the Degerbøls and Trolld Fiord formations, Ellesmere and Melville Islands, Canadian Arctic Archipelago.- Acta Geologica Polonica 51, 1: 31-79.- **FC#038**;P 30-2, p. 23, ID=1726^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: Canada, Arctic^The sparse, Wordian rugose coral fauna of the Degerbøls and Trolld Fiord formations consists exclusively of nondissepimental, solitary taxa and includes the youngest Permian corals in the Sverdrup Basin. Similar, approximately coeval, Guadalupian coral assemblages are widespread in the youngest coral-bearing deposits of the Calophyllum Province in the northern Cordilleran-Arctic-Uralian Realm. The described Sverdrup Basin fauna includes eight species (four new) belonging in the genera Allotropiochisma, Calophyllum, Euryphyllum, Lytvolasma, Soshkineophyllum and Ufimia. Revision of several previously described corals from East Greenland clarifies their taxonomy and emphasizes the

similarity between that fauna and others in the Calophyllum Province. The distribution and relative abundance of solitary species in Svalbard, East Greenland and the Sverdrup Basin confirms the geographic proximity of those areas and open marine communication between them during Guadalupian time. Contrasting, low diversity in the Central European Basin and East European Platform indicates scarcity of favourable marine habitats and a low level of faunal exchange with the remainder of the Calophyllum Province.¹;

2117 s[2114] = "FEDOROWSKI J., BAMBER E.W. (2002).- Paleogeographic and stratigraphic significance of Guadalupian (middle Permian) solitary corals, Sverdrup Basin, Arctic Canada.- Canadian Society of Petroleum Geologists, Memoir 19: 427-436.- FC&P 32-1, p. 25, ID=1727^Topic(s): biogeography, biostratigraphy; Rugosa, biogeography; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: Canada, Arctic^The sparse rugose coral fauna of the Degerbøls and Trold Fiord formations consists exclusively of nondissepimental, solitary taxa and includes the youngest Permian corals in the Sverdrup Basin. Similar faunas occur in the youngest coral-bearing deposits elsewhere in the northern parts of the Cordilleran-Arctic-Uralian (CAU) Realm - in Alaska, East Greenland, the Svalbard Archipelago, the Central European Basin and the East European Platform. These assemblages occupy a separate biogeographic province, here named the Calophyllum Province. In comparison to the CAU faunas, Guadalupian faunas in the Tethys Realm are much richer and contain abundant, diversified colonial taxa as well. The solitary, nondissepimental corals of the Tethys Realm show much greater diversity than those in the CAU Realm and survived almost until the end of the Permian. On the family and genus level, there is a fairly close relationship between the nondissepimental solitary corals of the two realms. This did not result, however, from direct faunal exchange during the Permian, but reflects common roots for these corals and widespread faunal dispersion prior to Permian establishment of the realms.¹";

2118 s[2115] = "BEAUCHAMP B., OLCHOWY B. (2003).- Early Permian buildups (Tolkien reefs) associated with subaqueous evaporites, Canadian Arctic: a record of syn-tectonic to post-tectonic reciprocal uplift and subsidence.- SEPM Special Publication 78 (Permo-Carboniferous carbonate platforms and reefs): 133-153.- FC&P 33-1, p. 81, ID=7229^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian Ass; Geography: Canada, Arctic^Twenty-six reef-mounds of Early Permian (Middle or Late Asselian) age crop out along the north shore of Greely Fiord on west-central Ellesmere Island, Canadian Arctic Archipelago. Each reef was attributed the name of a character from J.R.R. Tolkien's "The Lord of the Rings". The reefs interfinger with evaporites in the upper part of the Mount Bayley Formation, immediately below the Tanquary Formation. The reefs grew at the northern margin of a large depression of the Sverdrup Basin referred to as the Fosheim-Hamilton sub-basin, which is separated from the main Sverdrup Basin by the Elmerston high, an elongated structure of probable compressional origin. The Tolkien reefs range from 50m to over 130m in thickness and between 50m and 500m in width and length. The buildups have a massive core around which are wrapped a series of well-defined, variably steep beds (flanks), many of which display a sharp erosional base. Facies of the core and inner flank comprise: bryozoan-Tubiphytes-stromatactoid (sponge) boundstone; bryozoan cementstone; bryozoan mudstone-wackestone; and bryozoan (fusulinacean) packstone-grainstone. Facies of the outer flank include: algal boundstone; and fusulinid-algal grainstone-rudstone. Facies that occur both in the inner and outer flanks include carbonate breccia and moldic dolomicrite. The Tolkien Reefs of west-central Ellesmere Island recorded the transition from an evaporite-dominated succession (Mount Bayley Formation) to an evaporite-free succession (Tanquary Formation).

The reefs grew south of a major structural element - the Elmerston high - through the complex interplay between high-order to low-order relative sea-level fluctuations driven by tectonics, glacio-eustasy, and evaporative drawdown. The Tolkien Reefs recorded the rapid transition between a long episode of differential, and in part fault-controlled, syntectonic subsidence and a long period of slower, regional post-tectonic passive subsidence. While the former can be associated with a pulse of compressional tectonics that affected many areas of the Sverdrup Basin, the latter represents a phase of tectonic quiescence. [original abstract]^1";

- 2119 s[2116] = "YAMAGIWA N. (1981).- Some Interesting Corals from the Middle Jurassic Kambe Limestone in Mombasa-Kwale Area, Kenya. Part 2. Two coral species found from the Kambe Limestone at west of Mwachi.- Sixth Preliminary Rep. African Studies, Nagoya Univ., p. 159-161.- FC&P 11-2, p. 20, ID=1812^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Kenya^^1";
- 2120 s[2117] = "YAMAGIWA N. (1979).- Some Interesting Corals from the Middle Jurassic Kambe Limestone in Mombasa-Kwale Area, Kenya. Part 1. A new coral species, Thamasteria (Thamnasteria) mombasensis found from the Kambe Limestone at southwest of Tsulujimba.- Fourth Prelim. Rept Afr. Studies, Nagoya Univ.: 83-85, pl. 1.- FC&P 10-1, p. 32, ID=5947^Topic(s): ; Scleractinia, Thamnasteria; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Kenya^^1";
- 2121 s[2118] = "WILSON M.A. (1998).- Succession in a Jurassic marine cavity community and the evolution of cryptic marine faunas.- Geology 26, 4: 379-380.- FC&P 27-2, p. 80, ID=3949^Topic(s): marine caves, ecological succession; cavity dwellers; Systematics: ; Stratigraphy: Jurassic M; Geography: USA interior w^A cavity-dwelling fauna from the Middle Jurassic of the western Interior shows a succession controlled by increasing restriction of the cavities, most likely by sediment infilling. The succession proceeds from large and ubiquitous bivalves to smaller serpulids, cyclostome bryozoans, and thecideidine brachiopods; there is a concurrent decrease in biomass and percent cover. This Jurassic fauna demonstrates that marine cavity-dwelling faunas were specifically adapted to their environments at least 160 m.y. ago.^1";
- 2122 s[2119] = "BARIA L.R., STOUUDT D.L., HARRIS P.M., CREVELLO P.D. (1982).- Upper Jurassic reefs of Smackover Formation, United States, Gulf Coast.- American Association of Petroleum Geologists Bulletin 66, 10: 1449-1482.- FC&P 12-1, p. 45, ID=6189^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: USA, Gulf Coast^^1";
- 2123 s[2120] = "RIGBY J.K., CHIN K., BLOCH J.D., TWEET J.S. (2007).- A new hexactinellid sponge from the Cretaceous of Devon Island, Canadian High Arctic.- Canadian Journal of Earth Sciences 44: 1235-1242.- FC&P 35, p. 45, ID=2326^Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cretaceous; Geography: Canada, Arctic^Over 20 specimens of the new genus and species Nunavutospongia irregulara, an irregular stump-like to columnar, or fan- to blade-shaped, hexactinosid hexactinellid sponge, have been recovered from exposures of the Upper Cretaceous upper Kanguk Formation on Devon Island, Nunavut Territory, in the Canadian High Arctic. The species and genus are characterized by dermal surfaces with prominent radial, irregularly vertical, rib-like flanges that have a single linear series of separated oscula perforating their rounded crests. The thin, but persistent dermal layer of fused hexactine-based spicules has rays thicker than those of the similarly fused endosomal, quadrangularly arranged, hexactines of the principal skeleton. Ostia of coarse exhalant canals, and finer inhalant canals, are extensively and uniformly developed, but irregularly placed, in the dermal layer. A

thin, less prominent, gastral layer of thickened spicules lines the short, internally tapered spongocoel openings. The skeleton exposed in the commonly upward-arcuate base of each sponge has a radiate structure that does not have significant ostia. The new genus is tentatively included in the Family Cribrospongiidae Roemer, 1864, within the Order Hexactinosa Schrammen, 1903. The specimens were found in unconsolidated fine-grained glauconitic sediments along with other fossils such as fish teeth, bird bones, lingulids, coprolites, and wood. The sedimentology, stratigraphic context, and co-occurrence with fossil wood suggest that these sponges inhabited the neritic zone. As such, they would have been subject to polar light regimes, because paleogeographic reconstructions indicate that Devon Island was above the Arctic Circle during the Late Cretaceous. The distribution of the specimens suggests that they were solitary sponges that used their arcuate bases to colonize sandy substrates or biotic debris. ^1";

- 2124 s [2121] = "WAGGONER B.M., LANGER M.R. (1993).- A new hydroid from the Upper Cretaceous of Mississippi.- Paläontologische Zeitschrift 67, 3-4: 253-259.- FC&P 23-1.1, p. 78, ID=4175^Topic(s): new taxa; Hydrozoa, Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous U; Geography: USA, Mississippi^A new fossil hydroid is reported as an organic impression on a calcareous gastropod steinkern from the Prairie Bluff Chalk (Maastrichtian), Oktibbeha County, Mississippi. This is the first such hydroid reported from the Upper Cretaceous of the Atlantic Coastal Plain. The fossil organism consists of anastomosing hydrorhizae forming a holdfast, a fascicled hydrocaulus, and elongated, crenulated and ribbed hydrothecae. The fossil is unlike other Mesozoic hydroids that have been reported from Europe and North America; it is described as Mesodendrium oktibbehaensis gen. et sp.nov. and tentatively referred to an extant family, the Campanulariidae (Calyptoblastina). The complete preservation of the holdfast, hydrocaulus and hydrothecae suggests that this hydroid lived inside gastropod shells. In analogy with Recent symbiotic hydroids inhabiting mollusc shells, the new specimen described here possibly represents the oldest known example of a symbiotic relationship between hydroids and hermit crabs.^1";
- 2125 s [2122] = "SCOTT R.W. (1980).- Early Cretaceous Reef Communities in Gulf Coast.- American Association of Petroleum Geologists Bulletin 64: 782-.- FC&P 9-2, p. 51, ID=0376^Topic(s): reef biocoenoses; reef biocoenoses; Systematics: ; Stratigraphy: Cretaceous L; Geography: America N, Gulf Coast^^1";
- 2126 s [2123] = "FLORIS S. (1972).- Scleractinian Corals from the Upper Cretaceous and Lower Tertiary of Nugssuaq, West Greenland.- Meddr. Groenland. 196, 1; 132 pp.- FC&P 1-2, p. 21, ID=4678^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U, Paleogene; Geography: Greenland W^Localities and deposits in north-west Nugssuaq yielding fossil corals of the order Scleractinia are described. The age of the corals is Campanian?, Maastrichtian and Lower Paleocene (Danian), on the basis of other marine fossils. 22 species are considered; 7 are described as new and are indigenous, 2 are possibly North American forms, 3 are known from Europe, and 10 are identifiable only to generic level. The following genera and subgenera are represented: Haimesiastrea (Haimesiastrea), H. (Peruviastrea)?, Astrangia (Coenangia)?, Oculina, Caryophyllia, Trochocyathus, Paracyathus, Stephanocyathus (Stephanocyathus), Desmophyllum?, Lophelia?, Parasmilia, Flabellum, Balanophyllia, and Dendrophyllia. In addition, two new genera are described: Kangiliacyathus and Faksephyllia. Certain Danian corals from Scandinavia are also revised. In a survey of habitats, the lithology of the coral localities is considered together with bathymetric and thermal ranges known for scleractinian genera and species from other parts of the world. Depth and temperature of the Campanian and Maastrichtian seas in Greenland cannot be estimated with any accuracy. The Lower and UpperDanian seas

were generally rather shallow. There is little evidence on which to judge the Danian climate. Two species were perhaps hermatypic (no reef structures have been found). The remaining scleractinians are presumed to have been ahermatypic. A non-reef coral association has been found. Lower Danian rather sparsely populated polytypic coral thickets show signs of continual disturbance from water turbulence. The approximate depth of formation of these thickets appears to have been 80m. or shallower, which appears to be less than is usual for coral structures of this type. Some Lower Paleocene species provide conclusive evidence of a direct connection between the Danian seas of West Greenland and of Scandinavia.^1";

- 2127 s[2124] = "KOCURKO M.J., KOCURKO D.J. (1992).- Fossil Octocorals of the Red Bluff Formation, Lower Oligocene, Mississippi.- Journal of Paleontology 66, 4: 594-602.- FC#038;P 21-2, p. 40, ID=3331^Topic(s): taxonomy; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Oligocene; Geography: USA, Mississippi^An assemblage of well-preserved octocoral holdfasts and sclerites has been collected from the Red Bluff Formation at the Chickasawhay River, Wayne County, Mississippi. Seven families were identified, utilizing a collection of approximately 1.000 sclerites. Families represented are Telestidae, Nephtheidae, Anthothelidae, Paramuriceidae, Plexauridae, Virgulariidae, and Gorgoniidae. These families, with exception of the Gorgoniidae, are here reported for the first time as fossils from the Gulf Coast region. The collection represents one of the most diverse fossil octocoral assemblages known from a single location.^1";
- 2128 s[2125] = "WEISBORD N.E. (1971).- A new Coral from the Bucatunna Clay (Middle Oligocene) of Alabama.- Tulane Studies in Geol. & Paleont. 8, 4: 216-219.- FC#038;P 1-2, p. 24, ID=4693^Topic(s): new taxa; Scleractinia, Paracyathus; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: USA, Alabama^A new ahermatypic coral, Paracyathus macneili is described, illustrated, and compared. The species occurs in the Bucatunna Clay Member of the Byram Formation, and is considered a guide fossil of that member. A condensed stratigraphic account of the Byram Formation is also presented.^1";
- 2129 s[2126] = "SZABO B.J. (1985).- Uranium-series dating of fossil corals from marine sediments of southeastern United States Atlantic Coastal Plains.- Bulletin geological Society of America 96: 398-406.- FC#038;P 14-2, p. 48, ID=0904^Topic(s): geochronometry; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: USA E coast^Extensive low-lying marine deposits border the southeastern United States Atlantic Coastal Plain. Some units are fossiliferous and contain corals as isolated fragments in sediments of a detrital character. These corals are subject to alteration processes such that suites of related samples must be examined to determine the suitability of these coral samples for reliable uranium-series dating. With the exception of those from one location, most samples appear to have remained closed systems with respect to the isotopes of uranium and thorium throughout their geologic history. Extraneous ²³⁰Th has been detected in some of the corals due to incorporation of some detrital materials into their skeletons. For these samples, different methods are applied to correct for the initial ²³⁰Th contamination. Continued sampling and analyses have resulted in 55 individual uranium-thorium determinations. ^1";
- 2130 s[2127] = "CAIRNS S.D. (1978).- Types and figured specimens of Stylasterina and Scleractinia at the NMNH, Smithsonian. Part1. Recent and Cenozoic.- FC&P 7, 2: 9-14.- FC#038;P 7-2, p. 9, ID=5603^Topic(s): collections of fossils; coral collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: USA^National Museum of Natural History (Smithsonian Institution)^1";
- 2131 s[2128] = "CRAME J.A. (1980).- Succession and diversity in the

- Pleistocene coral reefs of the Kenya coast.- *Palaeontology* 23, 1: 1-37.- FC&P 8-2, p. 35, ID=5709^Topic(s): reefs, succession diversity; coral reefs, succession diversity; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: Kenya^^1";
- 2132 s[2129] = "CRAME J.A. (1981).- Ecological stratification in the Pleistocene coral reefs of the Kenya coast.- *Palaeontology* 24, 3: 609-646.- FC&P 10-2, p. 78, ID=6107^Topic(s): reefs, ecological zonation; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Kenya^Ecological succession on small patch reef structures can be studied by employing the concept of ecological stratification. The component coral of a patch are divided into two basic categories, the B or C horizons (or strata). The former category represents the initial colonizers (or pioneers) on a soft substrate, and the latter the subsequent colonizers. The potential exists for studying the later stages of successions by finely subdividing the C horizon. Detailed mapping of vertical sections through patch reefs in the Pleistocene reef limestones of the Kenya coast provided stratification analyses in a variety of back-reef environments. Massive Porites proved to be the commonest B horizon coral throughout the region studied, and clearly was of fundamental importance in patch reef formation. Massive faviids and mussids were less frequent early colonizers. The most important C horizon corals were encrusting Montipora (in more open water areas), encrusting Cyphastrea (in quieter, deeper water areas), and tiny domes and patches of massive Favia. Many coral may be much more specialized in their habitat requirements than has previously been recognized. The principal coral type within the back-reef patches of the Kenya Pleistocene reef consistently adopt distinctive three-dimensional growth forms within either B or C horizons, and it is argued that they must have partitioned at least part of the available habitat space. Ecological stratification is a useful tool for determining the nature and extent of habitat resource partitioning by scleractinian corals. [original summary]^1";
- 2133 s[2130] = "COLBY A.C.C., FROST T.M., FISCHER J.M. (1999).- Sponge distribution and lake chemistry in northern Wisconsin lakes: Minna Jewell's survey revisited.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 93-101.- FC&P 28-2, p. 8, ID=6941^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: USA, Wisconsin^^1";
- 2134 s[2131] = "RICCARDI A., REISWIG H.M. (1993).- Freshwater sponges (Porifera, Spongillidae) of eastern Canada: taxonomy, distribution, and ecology.- *Canadian Journal of Zoology* 71: 665-682.- FC&P 22-2, p. 92, ID=3543^Topic(s): taxonomy; Porifera, Spongillidae; Systematics: Porifera; Stratigraphy: Recent; Geography: Canada E^During a recent survey of the freshwater sponges of eastern Canada (from Ontario to Newfoundland). 15 species were recorded, representing approximately 50% of the total number of species known from North America. Radiospongilla crateriformis, Spongilla aspinosa, and Trochospongilla horrida are reported from Canada for the first time. Two problematic species, Corvospongilla novaeterrae and Spongilla johanseni, are reviewed and their status is revised. Detailed notes on taxonomy, morphology, distribution, and ecology are given. New limits of tolerance with respect to pH, water temperature, and calcium and magnesium concentrations are established for several species. A taxonomic key to the freshwater sponges of eastern Canada is presented.^1";
- 2135 s[2132] = "WATERS D.L., SANDO W.J. (1987).- Corals from the Madison Group, williston basin, North Dakota.- *Fifth International williston Basin Symposium*: 83-96.- FC&P 18-1, p. 39, ID=2267^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: USA, Dakota,

- Williston Basin^^1";
- 2136 s[2133] = "WATERS D.L., SANDO W.J. (1987).- Coral zonules: new tools for petroleum exploration in the Mission Canyon Limestone and Charles Formation, Williston basin, North Dakota.- Williston basin: Anatomy of a cratonic oil province [Longman M. W. (ed.)]; Rocky Mountain Association of Geologists: 193-207.- FC&P 18-1, p. 39, ID=2268^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: USA, Dakota, Williston Basin^^1";
- 2137 s[2134] = "SCHIENER E.J., FLORIS S. (1977).- Coral-bearing material associated with a Tholeiitic dyke in the Sordlut Valley, Nugssuaq.- Ra pp. Gronlands geol. Unders. 79: 27-33.- FC&P 10-1, p. 57, ID=6301^Topic(s): xenoliths; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Greenland^^1";
- 2138 s[2135] = "FAGERSTROM J.A. (1977).- The Stromatoporoid genus Stictostroma Parks 1936: its type species, type specimens and type locality.- Journal of Paleontology 51: 416-419.- FC&P 6-1, p. 30, ID=01111^Topic(s): ; stroms, Stictostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: Canada, Ontario^Because the syntypes of Stromatopora mamillata Nicholson, the species of Stictostroma, are so poorly preserved, the most important materials on which the concept of the genus is based are described by Parks and later workers from 1 1/2 miles E of Gorrie, Ontario.^1";
- 2139 s[2136] = "St JEAN J. (1977).- Stromatoporella Nicholson, 1866 (fossil order Stromatoporoidea): problem of the type-specimen of the type species, Stromatoporella granulata (Nicholson) 1873.- Bulletin Zoological Nomenclature . 233-240.- FC&P 6-2, p. 17, ID=0147^Topic(s): nomenclature; stroms, Stromatoporella; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: Canada, Ontario^The original syntype specimens from Port Calborne, Ontario, should be suppressed in favor of a specimen used by Nicholson from the Hamilton Formation at Arkona, Ontario.^1";
- 2140 s[2137] = "BAYLISS B.G., CARNEY C.K. (2004).- Mapping geologically significant features in the Brassfield Quarry Park, Fairborn, Ohio.- Geological Society of America, Abstracts with Programs 36, 3: 10.- FC&P 33-2, p. 41, ID=1188^Topic(s): geology; stroms; Systematics: ; Stratigraphy: ???; Geography: USA, Ohio^A stromatoporoid reef, part of the exhibits in the park, is being mapped^1";
- 2141 s[2138] = "HARRISON W.B. (1985).- Lithofacies and depositional environments of the Burnt Bluff Group in the Michigan basin.- Michigan Basin Geological Society, Special paper 4 [Ordovician and Silurian rocks of the Michigan Basin and its Margins; K.R. Cercone & J.M. Budai (eds)]: 95-108.- FC&P 16-1, p. 76, ID=6767^Topic(s): carbonates; carbonates, reefs, stroms; Systematics: ; Stratigraphy: ???; Geography: USA, Michigan Basin^[stroms and strom-related facies are also included]^1";
- 2142 s[2139] = "BOURQUE P.A., BOULVAIN F. (1993).- A model for the origin and petrogenesis of the red stromatactis limestone of Paleozoic carbonate mounds.- Journal of Sedimentary Petrology 63, 4: 607-619.- FC&P 23-1.1, p. 3, ID=4043^Topic(s): recifs rouges; Porifera; Systematics: problematica; Stratigraphy: Silurian Devonian; Geography: Canada, Ardennes^From study of the Devonian "recifs rouges" of Belgium and the Silurian mounds of the Quebec Appalachians, we propose that deposition of the red stromatactis limestone facies of Cambrian-Devonian carbonate mounds was controlled by sponges and that the red color and stromatactis result from early diagenesis within a few meters below the substrate-water interface in the deep-marine environment. The common presence of sponge body fossils, as well as various stages of sponge preservation, ranging from easily delineated to indiscernible bodies, in the Belgian

"récifs rouges" support the conclusion that a large part of the red finely crystalline limestone originated from early cementation of sponge communities or spicule-rich organic mats derived from degradation of sponge communities. The role of bacteria and other microbes, although widely advocated as the main primary builders of carbonate mounds, is difficult to assess. Microbial communities may have contributed to mound accretion as primary builders and/or mud producers, but their presence cannot be documented. We suggest that they may have acted as agents for concurrent sponge petrefaction and early cementation (biodiagenesis) during the sulfate-reduction phase under alkaline pH and anoxic conditions. We interpret stromatactis as a spar body that resulted from early marine cementation of a cavity network created by excavation of uncemented material in partly indurated, decaying sponges and spicule-rich organic mats derived from degradation of sponge communities through circulation of interstitial water in the uppermost few meters of the sediments. This cavity network was connected to sea floor and flushed by oxic waters that changed the diagenetic environment from anoxic to oxic, converting amorphous iron sulfide to hematite and giving the facies its red color. Recognition of the dominant role of sponge communities in the construction of red stromatactis limestone mounds of the Cambrian-Devonian time interval has important implications for the geological record. This community was the main deep-water mound-building community during this time, but it is difficult to recognize because of its variable but often poor preservation.^1";

2143 s[2140] = "OEKENTORP K. (1997).- Die tabulate KoraIlen-**"Gattung"**; Emmonsia Milne-Edwards **&**; Haime 1851 - ein Verwirr-Beispiel**"**; palaeontologischer Systematik.- Sonderveroeffentlichungen, Geologisches Institut der Universitaet zu Koeln 114 (Festschrift Eugen K. Kempf): 325-357.- **FC&**;P 27-1****, p. 84, ID=3827**Topic(s): nomenclature; Tabulata, Emmonsia; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: America, Europe^Emmonsia Milne-Edwards **&**; Haime 1851 is a characteristic **"genus"** of the American Middle Devonian, but also occurs in Europe. During the last 140 years Emmonsia became a perfect example for the difficulties and problems of taxonomic work. This concerns the **"genus"** and ist typology as well. In the dawn of systematic work the history of the **"genus"** Emmonsia began with the groping for detailed description. In the following interpretation, new naming and the **"mihism"** of scientists took care for the rest. The uncertainty concerning the functional significance and taxonomic value of the squamulae - here tabulae, there septa - confused even more. This paper tries to answer this palaeontological law case (International Code for Zoological Nomenclature) by circumstantial evidence and witness.^1";**

2144 s[2141] = "KAPP U.S., STEARN C.W. (1975).- Stromatoporoids of the Chazy Group (Middle Ordovician), Lake Champlain, Vermont and New York.- Journal of Paleontology 49, 1: 163-186.- **FC&**;P 4-1****, p. 33, ID=5111**Topic(s): **; stroms; **Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician M; Geography: USA, New York, Vermont^The limestones of the Chazy Group contain a record of the spread of the mid-Paleozoic reef community dominated by the stromatoporoids. The oldest stromatoporoid in this community, Pseudostyloclyon lamottense (Seely), occurs in the Day Point Formation, the lowest in the group. Just above the base of the succeeding Crown Point Formation three species of Labechia [L. eatoni (Seely), L. cf. L. pustulosa (Safford) and L. prima n.sp.] and one species of Pachystylostroma (P. goodsellense n.sp.) appear. By late Crown Point time the fauna has attained a diversity of nine species including a new species of Labechia (L. valcourensis) and three new species of Pachystylostroma (P. vallum, P. pollicellum, and P. champlainensis). * The first stromatoporoids had denticled laminae and large irregular cysts. This genus (Pseudostyloclyon) appears to have**

- given rise to forms with clearly differentiated laminae and cysts and superposed denticles (Pachystylostroma) and to forms which combine cysts and round pillars (Labechia). Solid pillars were formed by the superposition of denticles and hollow pillars through the superposition of erupted denticles. However the state of preservation may also determine whether pillars are expressed as solid rods, hollow tubes or columns of spar without walls.^1";
- 2145 s[2142] = "LAUB R.S. (1983).- An annotated list of New York Silurian corals.- FC&P 12, 1: 4-11.- FC&P 12-1, p. 4, ID=6171^Topic(s): taxonomy, annotated list of taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: USA, New York^Following is a list of the coral species known or supposed to occur in the Silurian rocks of New York. It represents part of a paper discussing the status of New York Silurian coral biostratigraphy, to be included in the field guides for the Fourth International Symposium on Fossil Cnidaria. The full paper will include the stratigraphic distributions of each species. This list is offered here in the hope that it may prove useful to specialists who do not obtain the field guide. * The name next to each marginal number is that which seems most correct or useful in light of our current knowledge of the available specimens. Indented beneath each name are citations of references to New York Silurian material believed to pertain to that species. For brevity, only the first page of each reference, and no indication of illustrations, is given. As indicated, many of the reports are tentative identifications kindly provided by William A. Oliver, Jr. (U.S. Geological Survey, Washington, D.C.), based upon his own as-yet unpublished work. * Where known, the catalogue numbers of the specimens on which each reference was based are given following each citation. The prefixes attached to these catalogue numbers indicate the following repository institutions: * AMNH American Museum of Natural History, New York, New York; * NYSM New York State Museum, Albany, New York; * USNM United States National Museum of Natural History, Washington, D.C.; * YPM Peabody Museum of Natural History, Yale University, New Haven, Connecticut. [introductory part of a paper]^1";
- 2146 s[2143] = "AGOSTARO R., WAINES R.H. (1987).- Atypical growth form in laminar stromatoporoid coenostea, Glasco Member, Rondout Formation (latest Silurian), Kingston, southeastern New York.- Geological Society of America Abstracts with Programs 19: 1.- FC&P 16-2, p. 33, ID=2080^Topic(s): growth forms; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian U; Geography: USA, New York^^1";
- 2147 s[2144] = "STOCK C.W. (1979).- Upper Silurian (Pridoli) Stromatoporoidea of New York.- Bulletins of American Paleontology 76, 308: 289-389.- FC&P 9-1, p. 53, ID=5838^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Prid; Geography: USA, New York^[includes extensive review of environments of the Rondout Formation; morphology and ecology of stroms is also reviewed; 11 species are described within the genera: Stictostroma (1 new species: S. pseudoconvictum), Plectostroma, Stromatopora (1 new: S. eoconcentrica), Parallelostroma (1 new: P. rondoutense) and Densastroma]^1";
- 2148 s[2145] = "STOCK C.W. (1983).- The Distribution of Stromatoporoids in the Silurian and Devonian of New York State.- [journal?] 4th International Symposium Fossil Cnidaria / / Silurian and Devonian Corals and Stromatoporoids of New York, J.E. Sorauf and W.A. Oliver 109-114.- FC&P 13-1, p. 49, ID=0528^Topic(s): distribution; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian; Geography: USA, New York^^1";
- 2149 s[2146] = "STOCK C.W. (1983).- Fieldguide to North American Stromatoporoid Collecting Localities Part I: Silurian and Devonian of

New York.- Department of Geology, University of Nebraska-Lincoln.- **FC#038;P 13-1**, p. 49, ID=0529**Topic(s):** **sampling sites, field guide; stroms, sampling locations; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian; Geography: USA, New York**^1";

2150 **s[2147]** = "SASS D.B., ROCK B.N. (1975).- The genus Plumalina Hall 1858 (Coelenterata) re-examined.- **Bulletins of American Paleontology** 67, 287: 407-422.- **FC#038;P 4-2**, p. 61, ID=5292**Topic(s):** **revision; Octocorallia, Plumalina; Systematics: Cnidaria; Octocorallia; Stratigraphy: Devonian U; Geography: USA, New York**^Upper Devonian strata in western Steuben County, New York State, have yielded new fossil material of the genus Plumalina provisionally assigned herein to the species P. densa Hall 1878. The specimen occurs with the sponge Clathrosporgia? sp. in a thin sandstone bed virtually devoid of other fauna. The occurrence of macroscopic surface features, referred to as papillae, are reported from specimens of P. plumaria Hall and P. densa Hall. The papillae are suggested to be poorly preserved polyp bases. The history of Plumalina (Octocorallia) is reviewed and its possible affinities explored.^1";

2151 **s[2148]** = "OLIVER W.A.jr, SORAUF J.E. (1981).- Rugose coral biostratigraphy of the Devonian of New York and adjacent areas.- Devonian biostratigraphy of New York [Oliver W. A. Jr. & Klapper G. (eds); Subcommission on Devonian stratigraphy; Washington, D.C.]: 97-105.- **FC#038;P 13-1**, p. 38, ID=0462**Topic(s):** **biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: USA, New York**^Rugose corals are of little value for intercontinental correlations but are useful for correlation within basins or biogeographic provinces. In Devonian rocks of the northern Appalachian Basin (New York and adjacent areas), 12 stratigraphically useful rugose coral assemblages are recognized. These assemblages vary in the degree to which they are controlled by facies and in the amount of time that they represent (resolving power), but some are widespread and are more useful stratigraphically than other fossils for correlations within the basin or province.^1";

2152 **s[2149]** = "SORAUF J.E. (2001).- External morphology and paleobiology of Heliophyllum halli (Zoantharia, Rugosa), from the Middle Devonian Hamilton Group of New York State.- **Journal of Paleontology** 75, 1: 24-33.- **FC#038;P 30-2**, p. 19, ID=1539**Topic(s):** **morphology, biology; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, New York**^Heliophyllum halli contains variable, mostly solitary rugose corals. Specimens reported here come from shaly beds of the Middle Devonian Hamilton Group in New York State. Early recognition of morphotype variation led James Hall to establish numerous species in the H. halli group that were later interpreted by John Wells in terms of varying life history. Life on unstable and/or soft substrates was facilitated for these corals by talons, root-like structures that allowed larval settling and post-larval development on hard particles such as echinoderm or shell debris. Variation in subsequent growth history is reflected in corallum shape and change in diameter. Straight growth axes reflect partial burial accompanied by vertical growth, while growth axis curvature resulted from unequal settling into substrate or alternatively, life at the surface of substrate, with sharp bends (geniculations) reflecting major changes in growth orientation. Decrease in diameter resulted from environmental stress, with greatest effects on the peripheral portion of the calice. Other major reactions to increased burial rate (through sinking or increased sedimentation) are epithelial secretion to form an outer wall for isolation of itself from surrounding sediment or decrease in polyp size as shown by terminal shrinking of the corallum diameter, at times nearly to zero. Yonge's (1940) summary of observations on living coral polyps suggests that the living H. halli was nonzoanthellate,

with an efficient system of feeding that utilized its multitude of tentacles without the help of cilia, which thus were able to generate currents to promote efficient sediment cleansing. Sediment shedding would also have been aided by polypal distension (swelling) above a reflexed calical margin.^1";

- 2153 s[2150] = "OLIVER W.A.jr (2001).- Anomalous occurrence of a colonial rugose coral (Cnidaria; Anthozoa; Rugosa), in the Devonian Black Shale, Central New York.- Bulletin Biological Society of Washington 10: 233-241.- FC&P 30-2, p. 17, ID=1561^Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, New York^A hand sized specimen of a colonial rugose coral, Prismaticophyllum foetidum, new species, was collected from black shale of the Middle Devonian Union Springs Formation in Onandagan County, New York. The coral could not have grown in the black, fetid, mud environment indicated by the shale and it most likely originated in the Seneca Member of the Onandaga Limestone that uncomformably underlies the Union Springs. If so, it is only the second specimen of colonial rugosan known from the Seneca. The new specimen is congeneric, but clearly not conspecific with the previously known specimen.^1";
- 2154 s[2151] = "OLIVER W.A.jr, SORAUF J.E. (2002).- The genus Heliophyllum (Anthozoa, Rugosa) in the Upper Middle Devonian (Givetian) of New York.- Bulletins of American Paleontology 362: 1-72.- FC&P 31-2, p. 40, ID=1678^Topic(s): ; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: USA, New York^Specimens of the genus Heliophyllum are among the most common components of the upper Middle Devonian coral fauna (Givetian; Hamilton Group and Tully Limestone) in New York State. Although these corals are abundant and widespread, examination of large numbers of specimens indicate that most of them belong in a single, variable species, H. halli Milne-Edwards and Haime, including both solitary and colonial forms. This study has resulted in the recognition of four subspecies of H. halli, the solitary H. halli halli, and three colonial subspecies, H. halli confluens (Hall), H. halli bellonense n. subsp., and H. halli joshuense n. subsp. The three colonial subspecies occur in restricted stratigraphic positions, each in a coral bed in which it is associated and intergrades with solitary H. halli halli. Two additional species of Heliophyllum are recognized in the Hamilton, the small solitary H. cribellum n.sp. and the dendroid branching H. delicatum Oliver and Sorauf. The former has been found only in the Centerfield Limestone, lower Ludlowville Formation; the latter is limited to the lower Deep Run Shale, Moscow Formation. Heliophyllum halli flourished in muddy but well-oxygenated parts of the Hamilton sea floor because basal, rootlike structures (talons) and shape adaptations helped keep the living polyp from being overwhelmed by the mud. Septal carinae are thought to have helped anchor the polyps in their calices, perhaps making it easier for them to remove any sediments that accumulated on the oral surface. Heliophyllum cribellum is common in the Centerfield Limestone, which represents a more calcareous, relatively stable sea floor, while H. delicatum seems to have adapted to a more muddy, subsiding sea floor by fast upward growth. However, both species were associated with solitary H. halli halli, a further indication of the great adaptability of the species. ^1";
- 2155 s[2152] = "SORAUF J.E., OLIVER W.A.jr (2002).- Heliophyllum, New York's classic Devonian coral.- American Paleontologist 10, 4: 3-7.- FC&P 32-1, p. 23, ID=1721^Topic(s): ; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: USA, New York^^1";
- 2156 s[2153] = "SORAUF J.E. (1987).- Upper Devonian (Frasnian) Rugose Corals from New York State.- Journal of Paleontology 61, 4: 676-689.- FC&P 16-2, p. 20, ID=2045^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian

- Fra; Geography: USA, New York^West Falls Group strata (Chemung facies) of Upper Devonian (Frasnian) age in New York State reflect sedimentation on a storm dominated sandy shelf. Rugose corals occur in storm deposited coquinites rich in bioclastic debris and are abundant locally, although representing only three species, Tabulophyllum orientale (Stumm), Macgeea ponderosa Stumm, and Disphyllum caespitosum (Goldfuss). The Tabulophyllum and Macgeea species are both characterized by large amounts of stereome (biogenic calcite) in the apical part of the corallite, perhaps useful in stabilizing corallites in the sediment.^1";
- 2157 s[2154] = "COEN-AUBERT M. (1987).- Revision d'Heliophyllum halli Milne-Edwards et Haime, espece-type du genre Heliophyllum Hall in Dana (Tetracoralliaire devonien).- Bulletin du Museum national d'histoire naturelle Paris, 4 ser., 9C: 151-80.- FC&P 17-1, p. 21, ID=2120^Topic(s): nomenclature; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, New York^^1";
- 2158 s[2155] = "OLIVER W.A.jr (1989).- Bowenelasma (Rugose Coral) from the Emsian and Early Eifelian(?) (Devonian) of New York.- Bulletin U.S. Geol. Surv., 1860: D1-D6.- FC&P 19-1.1, p. 47, ID=2655^Topic(s): ; Rugosa, Bowenelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif?; Geography: USA, New York^The rugose coral Bowenelasma Scrutton was originally described from early Eifelian (?) specimens in northwestern Venezuela. It is here described from New York on the basis of specimens from the Bois Blanc Formation (early? Emsian) and the Edgecliff Member of the Onondaga Limestone (early Eifelian(?). The Bois Blanc Bowenelasma are beautifully silicified, so that morphologic details of both exterior and interior can be described. Bowenelasma is limited to the Eastern Americas Realm and to rocks of late Early and early Middle Devonian age.^1";
- 2159 s[2156] = "OLIVER W.A.jr (1997).- Origins and relationships of colonial Heliophyllum in the upper Middle Devonian (Givetian) of New York.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 053-060.- FC&P 26-2, p. 9, ID=3671^Topic(s): origins, relationships; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: USA, New York^Heliophyllum halli Milne-Edwards & Haime is common to abundant in many Lower and Middle Devonian stratigraphic units in New York. Most Heliophyllum are solitary, but both branching and massive colonies are known. Four "populations" of colonial Heliophyllum in the Givetian part of the sequence are distinct, as is a fifth form that occurs through the section. Each of the colonial forms is interpreted as an independent derivative of solitary forms of H. halli. The relationships appear to range from infrasubspecific to specific, and it is suggested that the complex should be recognized as the Heliophyllum halli species group.^1";
- 2160 s[2157] = "OLIVER W.A.jr, SORAUF J.E. (1994).- Branching Heliophyllum (Devonian Rugose corals) from New York and Ohio.- Journal of Paleontology 68, 6: 1183-1201.- FC&P 24-1, p. 62, ID=4477^Topic(s): branching; Rugosa, Heliophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: USA, New York, Ohio^Solitary species of Heliophyllum are the most common form of the genus but branching and massive colonies do occur, especially in Middle Devonian strata of eastern North America. Heliophyllum delicatum n.sp. offsets laterally and has a dendroid, broad bushy growth form. The species is known only from western and west-central New York and appears to be limited to the lower part of the Deep Run Shale Member of the Moscow Formation (middle Givetian); specimens are common within this restricted geographic and stratigraphic range. The skeleton of H. delicatum was poorly designed for the common coral environments of the Devonian, but seems to have

- been well adapted to muddy, carbonate-poor conditions where its thin skeletal elements required less calcium carbonate and its unsupported branches were not subject to vigorous water movement. *Heliophyllum stewarti* n.sp. is based on a single specimen from the Tenmile Creek Dolomite (middle Givetian) in northwestern Ohio. The colony is phaceloid but each branch is an astreoid cluster without walls between individual corallites. In addition, the apparent protocorallite is turbinate with a larger diameter than any of the ceratoid offsets although offset lengths are several times that of the protocorallite.¹¹";
- 2161 s[2158] = "OLIVER W.A.jr (1974).- Classification and new genera of noncystimorph colonial rugose corals from the Onesquethaw Stage in New York and adjacent areas.- J. Res. U.S. Geol. Surv. 1974, 2, 2: 165-174.- FC&P 4-1, p. 36, ID=5125^Topic(s): colonial, new taxa; Rugosa colonial; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: USA, New York^A proposed classification is outlined for 59 species of colonial rugose corals in 10 genera belonging to the families Stauriidae, Craspedophyllidae (including *Cylindrophyllinae* new subfamily and *Craspedophyllinae*), *Disphyllidae?*, and *Zaphrentidae*, from the Onesquethaw and lower Cazenovia Stages in New York and adjacent areas. These corals are described or redescribed in another report now in press. Three new genera, *Asterobillingsa*, *Grewgiphyllum*, and *Cyathocylindrium*, are described in this report.¹¹";
- 2162 s[2159] = "OLIVER W.A.jr (1976).- Noncystimorph colonial rugose corals of the Onesquethaw and Lower Cazenovia Stages (Lower and Middle Devonian) in New York and adjacent areas.- US Geol. Surv. Prof. pap. 869: 1-156.- FC&P 5-2, p. 7, ID=5409^Topic(s): colonial, new taxa; Rugosa colonial; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L M; Geography: USA, New York^Systematic palaeontology of 39 noncystimorph rugose corals, including the description of 8 new species, with comments on colonial variation and an account of their biostratigraphy and palaeobiogeography.¹¹";
- 2163 s[2160] = "SORAUF J.E., OLIVER W.A.jr (1976).- Septal carinae and microstructure in Middle Devonian *Heliophyllum* (Rugosa) from New York State.- Journal of Paleontology 50: 331-343.- FC&P 5-2, p. 7, ID=5414^Topic(s): structures, microstructures; Rugosa, *Heliophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, New York^Three kinds of septal carinae are recognised in *Heliophyllum*. The simplest form is stratigraphically oldest. The distribution of carinal type in different but possibly conspecific growth forms suggests that it is genetically rather than environmentally controlled.¹¹";
- 2164 s[2161] = "SORAUF J.E. (1977).- Occurrence of abundant *Pachyphyllum* from Upper Devonian (Frasnian) rocks of New York State.- Journal of Paleontology 51: 871-872.- FC&P 7-2, p. 21, ID=5638^Topic(s): ; Rugosa, *Phillipsastreidae*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: USA, New York^[additional material from the horizon which yielded *Pachyphyllum vagabundum*]¹¹";
- 2165 s[2162] = "SORAUF J.E. (1978).- Upper Devonian *Pachyphyllum* (Rugose coral) from New York State.- Journal of Paleontology 52, 4: 818-829.- FC&P 8-2, p. 39, ID=5713^Topic(s): ; Rugosa, *Phillipsastreidae*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: USA, New York^The Upper Devonian rugose coral *Pachyphyllum* is abundant in one outcrop of shallow water sandstones of the West Falls Group (Frasnian) of south central New York. The fauna consists largely of *Pachyphyllum woodmani*, including the form typical of Iowa. *P. woodmani woodmani* n. subsp., and another, *P. woodmani avocaensis* n. subsp. The Iowa species *P. crassicostatum* is also common in this new fauna from the eastern United States.¹¹";
- 2166 s[2163] = "STOCK C.W., BURRY-STOCK J.A. (2001).- A multivariate

analysis of two contemporaneous species of the stromatoporoid *Habrostroma* from the Lower Devonian of New York.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 279-284.- FC&P 30-2, p. 33, ID=1601Topic(s): morphometry, multivariate analysis; stroms, morphometry; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: USA, New York^Two species of *Habrostroma* dominate the stromatoporoid fauna of the Manlius and Coeymans Formations (Lower Devonian, Lochkovian) of New York. In the past, Stock has discriminated between these two species on the basis of localized, cystlike microlaminae within the skeleton. Those with more than 37% of the skeleton containing the cystlike microlaminae were placed in *Habrostroma microporum*, whereas those with less than 34% of the skeleton containing the cystlike microlaminae were placed in *H. centrotum*. All other skeletal structures typically used in stromatoporoid species identification failed to yield consistent differences among species examined. However, Stock was uncomfortable with this classification, so a statistical analysis was carried out to confirm the earlier decisions. Measurements of nine morphologies from 103 specimens of *Habrostroma* were subjected to a hierarchical cluster analysis. Using the average linkage between groups, two distinct clusters were revealed. Group assignments made from the cluster analysis were saved and entered into a canonical discriminant analysis along with the nine morphological variables. An overall wilk's lambda was calculated, and is statistical significant at alpha <.001. The hit rate for classifying group one was 95.5%, while that of group two was 98%, and the total hit rate was 97.09%. The morphological variable contributing the most to the classification of the two groups was the percentage of the skeleton occupied by cystlike microlaminae, the criterion regarded most important in Stock's earlier studies; the second-best classifier was laminar thickness. Both morphological variables were statistical significant at alpha=.01. The statistics confirm that there are two species, *H. centrotum*, and *H. consimile*.^1";

2167 s[2164] = "STOCK C.W. (1988).- Lower Devonian (Gedinnian) Stromatoporoidea of New York: redescription of the type species of *Girty* (1895).- Journal of Paleontology 62: 8-21.- FC&P 17-1, p. 42, ID=2168Topic(s): revision, *Girty* collection; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: USA, New York^The following species are described in detail and illustrated: *Anostylostroma jewetti*, *Parallelostroma foveolatum*, ?*Parallelostroma centrotum*, ?*Parallelostroma microporum*.^1";

2168 s[2165] = "STOCK C.W. (1991).- Lower Devonian (Lochkovian) stromatoporoids from the Manlius Formation of New York.- Journal of Paleontology 65: 897-911.- FC&P 21-1.1, p. 60, ID=3278Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Lochk; Geography: USA, New York^The fauna is dominated by *Habrostroma microporum* and *H. centrotum*. Present in lesser numbers are: *Intexodictyon manliusense* n.sp., *Plectostroma micum*, *Actinostromella vaiverense*, *Densastroma pexisum*, *Habrostroma* cf. *H. centrotum* and *Parallelostroma* sp. The assemblage displays both Silurian and Devonian affinities.^1";

2169 s[2166] = "STOCK C.W. (1997).- Lower Devonian (Lochkovian) Stromatoporoidea from the Coeymans Formation of central New York.- Journal of Paleontology 71, 4: 539-553.http://www.jstor.org/pss/1306575.- FC&P 26-2, p. 82, ID=3772Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: USA, New York^Stromatoporoids are found in the Daysville and Deansboro members of the Coeymans Formation in central New York where they are common to rare. The most common species present are *Habrostroma centrotum* (*Girty*), and *H. microporum* (*Girty*). Present in

Lesser numbers are *Parallelostroma foveolatum* (Girty), *Atopostroma* sp. 1, A. sp. 2, *Coenostroma* cf. *C. monticuliferum* (Winchell), *Coenostroma* sp., *Habrostroma* cf. *H. centrotum* (Girty), and *Coenostelodictyon* cf. *C. krekovi* (Yavorsky). Although previously reported from the Coeymans, *Coenostelodictyon jewetti* (Girty) was not found. Species identifications were based on qualitative traditional methods, supplemented by statistics. The assemblage bears affinities with Lochkovian faunas in Virginia and the Canadian Arctic.¹¹;

2170 s[2167] = "BRETT C.E., COTTRELL J.F. (1982).- Substrate specificity in the Devonian tabulate coral *Pleurodictyum*.- *Lethaia* 15: 247-262.- FC&P 12-1, p. 39, ID=1919Topic(s): ecology; Tabulata, *Pleurodictyum*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: USA, New YorkThe tabulate coral *Pleurodictyum americanum* Roemer has been cited as an example of a host-specific organism occurring exclusively on the shells of gastropods, particularly *Palaeozygopleura hamiltoniae* (Hall). Examination of over 1600 specimens of *P. americanum* from the Middle Devonian Hamilton Group of western New York reveals additional complexities which require reinterpretation. While substrate selectivity for *Palaeozygopleura* shells is evident in all 42 subsamples, a variety of other substrates were also utilized by *Pleurodictyum* including corals, brachiopods, other molluscs and pebbles. Recent scleractinian corals inhabiting soft bottoms show similar substrate preference, selecting for the tubes of live serpulids, or gastropod shells (invariably with a secondary sipunculid host), but also occasionally settling on unoccupied shells or pebbles. Shell surfaces of *P. hamiltoniae*, preserved as external molds on the *Pleurodictyum* epitheca, exhibit encrustations by worm tubes and bryozoans as well as borings and mechanical shell damage, suggesting that these were not the shells of live gastropods. However, the invariant aperture-downward orientation and the high degree of selectivity of *P. americanum* strongly suggests that the shells were occupied by secondary hosts. ¹¹;

2171 s[2168] = "SCHONE B.R., DUNCA E., FIEBIG J., PFEIFFER M. (2005).- Mutvei's solution: an ideal agent for resolving microgrowth structures of biogenic carbonates.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 228, 1-2: 149-166.- FC&P 34, p. 24, ID=7252Topic(s): carbonates biogenic; Systematics: ; Stratigraphy: ; Geography: Accretionary hard parts of many organisms provide excellent archives of past climate and environmental conditions or life history traits. Variable growth rates function as environmental and physiological proxies, and growth increments as calendars. Recognition of growth structures is thus a prime necessity for sclerochronological studies. Here we present a new, handy, easy-to-use and time-efficient technique that resolves annual and sub-annual growth structures in skeletons of a wide range of different organisms. Mutvei's solution simultaneously etches biogenic carbonates and calcium phosphates, fixates the soluble and insoluble organic matrices and fibers, and stains mucopolysaccharides. It produces a filigreed three-dimensional relief of etch-resistant ridges (growth lines) and etched depressions (growth increments) and stains skeletal growth structures in shadings of blue. Growth lines stand out as crisp, darker-blue stained lines. Reflected optical light microscopy (axial and oblique illumination) and scanning electron microscopy can be used to analyze the microgrowth structures. We demonstrate the use of the technique on hard tissues of various marine and freshwater bivalves, a coral, a sclerosponge, a barnacle, gastropods, a cephalopod, a fish otolith and a whale's ear bone. This technique may be of interest for paleoclimatologists, geochemists and biologists. It can significantly expand the use of biogenic hard parts as environmental and physiological indicators because it reveals microgrowth structures of biogenic skeletons that potentially form on a periodic basis and thus function as calendars.¹¹;

- 2172 s[2169] = "LAFUSTE G. (1989).- Microstructure de *Thamnoptychia limbata* (Eaton, 1932), Tabulata, Dévonien, Etat de New-York.- *Geobios* 21, 4: 515-521.- FC&P 19-1.1, p. 28, ID=6783^Topic(s):microstructures, new taxa; Tabulata *Thamnoptychia*; Systematics:Cnidaria; Tabulata; Stratigraphy:Devonian; Geography:USA, New York^The wall of *Thamnoptychia* consists of a granular median lamina flanked by thick margins of cupular microlamellae in which are inserted fibrous spines. Ramose Tabulate Corals, with a considerable peripheral microlamellar thickening, are here united in the family *Thamnoptychiidae* nov. This name substitutes *Dendroporidae* De Fromentel 1861, since *Dendropora* owns a microstructure which differs it from all other Tabulate Corals. [original abstract]^1";
- 2173 s[2170] = "OLIVER W.A.jr, HECHT W.S. (1994).- well-preserved favositid corals in the Oriskany Sands (Lower Devonian) of New York.- *Bulletin New York State Museum* 481: 265-287.- FC&P 24-1, p. 66, ID=4485^Topic(s):ecology; Tabulata, Favositida; Systematics:Cnidaria; Tabulata; Stratigraphy:Devonian L; Geography:USA, New York^Corals are rare in quartz sandstones of any age, and are particularly rare in the medium - to coarse grained quartz sandstone facies of Pragian age in the Appalachians. The occurrence of well-preserved specimens of *Favosites* ("*Emmonsia*") spp. in the Oriskany Sandstone in a local area of central New York provides the opportunity to re-analyze the Oriskany depositional environment and comment on the meaning of "*Emmonsia*" The preservation and details of occurrence of the corals suggest that they essentially grew where found. They were moved and, in many cases, overturned, but lived in the turbulent, nearshore depositional environment of the sandstone. It is concluded herein that "*Emmonsia*" is a morphologic stage in the development of many lineages of *Favosites*. However, the near-restriction of the morphology to the biogeographic Eastern Americas Realm indicates a more complex history. Either Eastern American and Old world *Favosites* were genetically different, or intrinsic or extrinsic factors caused the "*Emmonsia*" morphology to be preferentially expressed in the American biogeographic area. *Favosites* ("*Emmonsia*") *alternata* n.sp. with two morphologic variants (forms A and B) and *F.* ("*E.*") *congesta* n.sp. are described.^1";
- 2174 s[2171] = "RIGBY J.K. (1994).- well-preserved specimens of the sponges *Gondekia* (Heteractinida) and *Pseudohydroceras* (Hexactinellida), Middle Devonian of New York State.- *Journal of Paleontology* 68, 4: 727-734.- FC&P 23-2.1, p. 61, ID=4418^Topic(s):taxonomy; Porifera; Systematics:Porifera; Stratigraphy:Devonian M; Geography:USA, New York^Part and counterpart of a well-preserved specimen of *Gondekia* landfer (Reimann 1945a), and a well-preserved specimen of *Pseudohydroceras erraticum* Reimann 1935, are described from the wanakah Member of the Middle Devonian, Givetian, Ludlowville Formation, of western New York State. The specimen of *Gondekia* is only the second articulated specimen known and is more complete than the holotype. It has an intact skeleton of felted sexiradiates of three orders of spicules; the largest has rays approximately 2mm long. The specimen of *Pseudohydroceras* has preserved hexactine-based spicules in a dictyid skeleton, described for the species for the first time.^1";
- 2175 s[2172] = "ISAACSON P.E., CURRAN A.A. (1979).- Anatomy of Early Devonian carbonate buildups, central New York.- *Geological Society of America, Abstracts with Programs* 11: 17.- FC&P 8-1, p. 49, ID=0206^Topic(s):reefs; reefs stroms; Systematics: Stratigraphy:Devonian L; Geography:USA, New York^Stromatoporoids are important elements of these reefs.^1";
- 2176 s[2173] = "STANLEY G.D.jr, FLOWER R.H. (1977).- *Zaphrentis* cf *tabulata* Hall, Howell 1942 is not a coral.- *FC&P* 6, 1: 16.- FC&P 6-1, p. 16, ID=5490^Topic(s):misidentified coral; false rugosan; Systematics: Stratigraphy:Devonian Ems;

- Geography: USA, New York^Fossils presumed to be rugose corals of the genus Zaphrentis have been reexamined and are found instead to be small orthoconic cephalopods of the family Lamellorthoceratidae Teichert 1961. * These fossils are from the Devonian Esopus Formation of Emsian age in southern New York State. They were identified as corals by E.C. Stumm in a publication by Howell (1942) dealing with fossils from the Esopus. [] The group of cephalopods belonging to the Lamellorthoceratidae is restricted to the Devonian (Siegenian-Couvinian) and has also been reported from France, Germany, the Ural Mountains, Turkey, and North Africa. [first and last fragments of a short note]^1";
- 2177 s[2174] = "RICCARDI A., REISWIG H.M. (1991).- Spongilla heterosclerifera Smith 1918 is an interspecific freshwater sponge mixture (Porifera, Spongillidae).- Canadian Journal of Zoology 70: 352-354.- FC&P 22-2, p. 92, ID=3542^Topic(s): classification; Porifera, Spongillidae; Systematics: Porifera; Stratigraphy: Recent; Geography: USA, New York^A freshwater sponge classified as Spongilla heterosclerifera Smith 1918 and reported only from Oneida Lake, New York, was considered to be an endangered species. Examination of the holotype specimen reveals that it is actually an interspecific mixture of two widely distributed sponges, Ephydatia muelleri (Lieberkuehn) and Eunapius fragilis (Leidy). Spongilla heterosclerifera is therefore a junior synonym, in part, of both of these distinct species. Similar erroneous taxonomic interpretations of species mixtures have been documented and illustrate the importance of recognizing the possibility of species mixing when identifying freshwater sponge taxa.^1";
- 2178 s[2175] = "NELSON S.J. (1975).- Paleontological field guides, northern Canada and Alaska.- Canadian Petroleum Geology Bull. 23, 3: pp?.- FC&P 5-2, p. 9, ID=5430^Topic(s): paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Canada N, USA Alaska^Includes discussion of corals considered most useful as field guides to stratigraphic position in Paleozoic rocks.^1";
- 2179 s[2176] = "STOCK C.W., BENSON D.J. (1983).- Comparison of Fossil Assemblages in Middle Ordovician Bioherms in Alabama with Ordovician carbonate Buildups in North America and Scandinavia.- Geological Society of America, Abstracts with Programs 15: 113.- FC&P 13-1, p. 49, ID=0530^Topic(s): biocoenoses; biocoenoses; Systematics: ; Stratigraphy: Ordovician M; Geography: USA, Alabama, Alaska^^1";
- 2180 s[2177] = "SANDO W.J. (1975).- Mississippian (Lower Carboniferous) coral faunas of the western conterminous United States.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 78-84.- FC&P 5-1, p. 30, ID=5366^Topic(s): biostratigraphy; coral faunas; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: USA W^[synopsis of stratigraphic distribution, paleogeography, and zonation of coral genera]^1";
- 2181 s[2178] = "SANDO W.J. (1981).- The paleoecology of Mississippian corals in the western conterminous United States.- Acta Palaeontologica Polonica 25, 3-4: 619-631.- FC&P 10-2, p. 72, ID=6092^Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: USA W^^1";
- 2182 s[2179] = "SANDBERG C.A., GUTSCHICK R.C., PETERSEN M.S., POOLE F.G., ZIEGLER W. (1991).- Evidence for deep-water deposition within Deseret starved basin in eastern part of mid-Mississippian Antler foreland trough.- SEPM, Pacific section 67 [J.D. Cooper & C.H. Stevens (eds): Paleozoic paleogeography of the western United States-II]: 419-424. [field trip guidebook] - FC&P 21-1.1, p. 48, ID=6812^Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: USA W^^1";
- 2183 s[2180] = "FEDOROWSKI J., BAMBER E.W., STEVENS C.H. (2007).- Lower

Permian Colonial Rugose Corals, Western and Northwestern Pangaea: Taxonomy and Distribution.- NRC Research Press, Ottawa, Canada, 231 pp. ISBN 0-660-19664-6.- FC&P 35, p. 51, ID=2336^Topic(s):distribution; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian L; Geography:Pangea W / NW^The Pangaeian landmass separated Cisuralian (Early Permian) colonial rugose coral faunas into the Tethyan Realm, characterized by the exclusive development of Kepingophyllidae Wu and Zhou, 1982, and waagenophyllidae Wang, 1950, and the Cordilleran-Arctic-Uralian (CAU) Realm, characterized by Durhaminidae Minato and Kato, 1965, and Kleopatrinidae fam. nov. Both realms also contain Lithostrotionidae d'Orbigny, 1852, and Petalaxidae Fomichev, 1953. Within the four families in the CAU Realm we recognize 20 genera, of which four are new (Sandolasma, Cordillerastraea, Iskutella, and Shastalasma), and 156 species, of which 14 are new (Sandolasma elegans, S.? cooperi, S. stonei, Pararachnastraea lyallensis, P. wilsoni, Cordillerastraea complexa, Iskutella gunningi, I. stikinensis, Heintzella borealis, Protowentzelella columellata, Kleopatrina grinnellensis, Permastraea buttensis, Tschussovskenia dilata, and Lytvophyllum sustutense). Twenty-three previously described corals are unassigned because of insufficient data. [first part of extensive summary]^1";

- 2184 s[2181] = "STEVENS C.H. (2009).- New occurrences of Permian corals from the McCloud Belt in western North America.- Palaeontologia Electronica 12, 2: 6A: 16./palaeo-electronica.org/2009_2/175/index.html.- FC&P 36, p. 66, ID=6462^Topic(s):new records; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian; Geography:USA W^Previously unreported Permian rugose corals from several terranes considered part of the McCloud Belt are herein described and figured. These include two species from the Eastern Klamath terrane, one of which is described as new; four species from the Central Belt of the Northern Sierra Nevada, with two additional species thought to have been derived from that terrane; four species from the Bilk Creek terrane; and two species from the Harper Ranch subterrane of the Quesnel terrane, one of which is described as new. * Permian species of Lytvophyllum? and Cystolonsdaleia are now reported from almost all parts of the dispersed McCloud Belt, and Heterocaninia? is now known from the Bilk Creek terrane in addition to the Eastern Klamath terrane. These newly reported occurrences strengthen the interpretation that these terranes were closely associated during Early Permian time. None of these genera, however, occur anywhere along the Pangaeian margin of North America. * Conversely, Protowentzelella and Tschussovskenia, which are abundantly represented in Lower Permian rocks all along the western and northern margins of cratonal North America, are rare in rocks of the McCloud Belt. These faunal differences suggest that the terranes of the McCloud Belt lay far out in the Paleopacific Ocean, far west of cratonal North America during the Early Permian so that faunal exchange was minimal.^1";
- 2185 s[2182] = "STEVENS C.H. (2010).- New Early Permian colonial rugose corals from the central Cordilleran miogeocline, USA.- Journal of Paleontology 84, 3: 529-537.- FC&P 36, p. 68, ID=6464^Topic(s):new taxa; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian L; Geography:USA W^Five new species of Early Permian (late Sakmarian to Kungurian) colonial corals from eastern Nevada and southeastern California, one assigned to a new genus, are described and illustrated. These include Heintzella playfordi n.sp. from the Arcturus Formation in Nevada and the Darwin Canyon Formation in California, Paraheritschioides fergusonensis n.sp. from the Ferguson Mountain and Bird Spring formations in Nevada, and Wendoverella arca n.gen. and n.sp., Permastraea nevadensis n.sp., and Pararachnastraea moormanensis n.sp. from the Pequop Formation in eastern Nevada. These new taxa are distinct from all previously described species, but most are related to other species in the North American miogeocline. Wendoverella arca

- n.sp., however, is unlike any other species described from North America but is quite similar to a Russian species, indicating faunal communication between the Ural Mountains and the Cordilleran miogeocline at least into Artinskian time. [original abstract]^1";
- 2186 s[2183] = "STEVENS C.H., BELASKY P. (2010).- Nature of Permian faunas in western North America: A key to the understanding of the history of allochthonous terranes.- Geomorphology and Plate Tectonics [R.B. Catlin (ed.)]: 275-310; Nova Science Publishers, Inc. ISBN 9781607410034.- FC&P 36, p. 68, ID=6465^Topic(s): geology, biogeography; geology, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: America N W^^1";
- 2187 s[2184] = "STEVENS C.H. (2010).- Distribution of three key Early Permian fossil groups in western USA and northern Mexico and their relevance to interpretation of paleotectonic features along the southwestern margin of Laurentia.- Palaeogeography, Palaeoclimatology, Palaeoecology 288, 1-4: 103-107.- FC&P 36, p. 67, ID=6463^Topic(s): geography; Rugosa, forams; Systematics: Cnidaria Foraminifera; Rugosa; Stratigraphy: Permian L; Geography: USA W^Three species groups, including two groups of corals and one of fusulinids, delineate the zone of favorable marine environments for these animals along the shelves bordering southwestern Laurentia during the Cisuralian (Early Permian). The three species groups are: the coral Protowentzelella group of late Asselian to early Sakmarian age, the fusulinid Eoparafusulina linearis group of late Sakmarian age, and the coral Pararachnastraea illipahensis group of late Artinskian to Kungurian age. Occurrences of these three species groups clearly outline most of the major paleotectonic features that were present along the southwestern margin of the Laurentian shelf at that time. The paucity of data in Mexico, however, leaves open the question of large-scale displacement on the Mojave-Sonora megashear, a feature proposed to cut across northern Mexico and southwestern USA, although the data presented here could be construed to suggest lack of significant displacement in post-Pennsylvanian time.^1";
- 2188 s[2185] = "STEVENS C.H. (1991).- Permian paleogeography of the western United States.- SEPM, Pacific Section 67 [J.D. Cooper & C.H. Stevens (eds): Paleozoic paleogeography of the western United States-II]: 149-166. [field trip guidebook] - FC&P 21-1.1, p. 48, ID=6813^Topic(s): paleogeography; paleogeography; Systematics: ; Stratigraphy: Permian; Geography: USA W^^1";
- 2189 s[2186] = "SENOWBARI-DARYAN B., STANLEY G.D.jr (2009).- Taxonomic affinities and paleogeography of Stromatomorpha Smith, a distinctive Upper Triassic reef-adapted demosponge.- Journal of Paleontology 83, 5: 783-793.- FC&P 36, p. 40, ID=6409^Topic(s): systematics; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Triassic Nor; Geography: USA W^Stromatomorpha californica Smith is a massive, calcified, tropical to subtropical organism of the Late Triassic that produced small biostromes and contributed in building some reefs. It comes from the displaced terranes of Cordilleran North America (Eastern Klamath terrane, Alexander terrane, and Wrangellia). This shallow-water organism formed small laminar masses and sometimes patch reefs. It was first referred to the order Spongiomorphae but was considered to be a coral. Other affinities that have been proposed include hydrozoan, stomatopora, sclerosponge, and chambered sponge. Part of the problem was diagenesis that resulted in dissolution of the siliceous spicules and/or replaced them with calcite. Well-preserved dendroclone spicules found during study of newly discovered specimens necessitate an assignment of Stromatomorpha californica to the demosponge order Orchocladina Rauff. Restudy of examples from the Northern Calcareous Alps extends the distribution of this species to the Tethys, where it was an important secondary framework builder in Upper Triassic (Norian-Rhaetian) reef complexes. Revisions of Stromatomorpha

californica produce much wider pantropical distribution, mirroring paleogeographic patterns revealed for other tropical Triassic taxa. Review of Liassic material from the Jurassic of Morocco, previously assigned to *Stromatomorpha californica* Smith var. *columnaris* Le Maitre, cannot be sustained. Species previously included in *Stromatomorpha* are: *S. stylifera* Frech (type species, Rhaetian), *S. actinostromoides* Boiko (Norian), *S. californica* Smith (Norian), *S. onescui* Balters (Ladinian-Carnian), *S. pamirica* Boiko (Norian), *S. rhaetica* Kuhn (Rhaetian), *S. stromatoporoides* Frech, and *S. tenuiramosa* Boiko (Norian). *Stromatomorpha rhaetica* Kuhn described from the Rhaetian of Vorarlberg, Austria shows no major difference from *S. californica*. An example described as *S. onescui* Balters from the Ladinian-Carnian of the Rarau Mountains, Romania, is very similar to *S. californica* in exhibiting similar spicule types. However, because of the greater distance between individual pillars, horizontal layers, and the older age, *S. onescui* is retained as a separate species. The net-like and regular skeleton of *Spongioromorpha sanpozanensis* Yabe and Sugiyama, from the Upper Triassic of Sambosan (Tosa, Japan), suggests a closer alliance with *Stromatomorpha*, and this taxon possibly could be the same as *S. californica*.^1";

- 2190 s[2187] = "PALMER A.R., ROZANOV A.Yu. (1976).- Archaeocyatha from New Jersey: evidence for an intra-Cambrian unconformity in the north-central Appalachians.- *Geology* 4: 773-774.- FC&P 7-1, p. 18, ID=5571^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: USA, Appalachians^^1";
- 2191 s[2188] = "JAMES N.P., DEBRENNE F. (1980).- First Regular Archaeocyaths from the northern Appalachian Forsteau Formation, western Newfoundland.- *Canadian Journal of Earth Sciences* 17, 12: 1609-1615.- FC&P 10-1, p. 60, ID=6025^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Canada, Newfoundland^^1";
- 2192 s[2189] = "DEBRENNE F., JAMES N.P. (1981).- Reef-associated archaeocyathans from the Lower Cambrian of Labrador and Newfoundland.- *Palaeontology* 24, 2: 343-378.- FC&P 11-1, p. 55, ID=6119^Topic(s): systematics, ecology, biogeography; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Canada, Newfoundland^^1";
- 2193 s[2190] = "KOBBLUK D.L. (1985).- Biota preserved within cavities in Cambrian Epiphyton mounds, Upper Shady Dolomite, southwestern Virginia.- *Journal of Paleontology* 59, 5: 1158-1172.- FC&P 14-2, p. 18_1, ID=6697^Topic(s): reefs, cryptic biota; cavity dwellers; Systematics: Stratigraphy: Cambrian; Geography: USA, Virginia^Microcavities within allochthonous Cambrian Epiphyton algal mounds in the upper Shady Dolomite (Shady Formation) of southwestern Virginia contain a preserved coelobiotic (cavity-dwelling) biota of probable late Early Cambrian age. The microcavities (range from 0.3mm to 15.0mm across (mean, 2.0mm) and are constructed by overgrowth of Epiphyton fronds. Epiphyton dominates the coelobiotic biota, although other algae occur on the cavity roof and walls, including spherical micro-algae (?), crust-forming *Girvanella* and *Cavifera*, a probable endolithic alga found only in the fringe cements within microcavities. Globular Foraminifera (?) or foraminifer-like microorganisms, possible brachiopods, and cylindrical borings also occur on or in the roofs and walls. [first part of an extensive abstract]^1";
- 2194 s[2191] = "COPELAND M.J., BOLTON T.E. (1977).- Additional paleontological observations bearing on the age of the Lourdes Formation (Ordovician), Port-au-Port Peninsula, western Newfoundland.- *Geological Survey of Canada Paper* 77-113B: 1-13.- FC&P 6-2, p. 17, ID=0139^Topic(s): stratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician;

- Geography: Canada, Newfoundland^[mentions and illustrates but does not describe Labechia sp.]^1";
- 2195 s[2192] = "KAPP U.S. (1974).- Mode of growth of middle Chazyan (Ordovician) stromatoporoids, Vermont.- Journal of Paleontology 48, 6: 1235-1240.- FC&P 4-1, p. 46, ID=5177^Topic(s): growth mode; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician M; Geography: USA, Vermont^^1";
- 2196 s[2193] = "MEHRTENS C., CUFFEY R.J. (2003).- Paleoecology of the Day Point Formation (lower Chazy Group, Middle-Upper Ordovician) and its bryozoan reef mounds, northwest Vermont and adjacent New York.- Northeastern Geology and Environmental Sciences 25, 4: 313-329.- FC&P 33-1, p. 94, ID=7240^Topic(s): bryozoan mounds; reefs; Systematics: Bryozoa; Stratigraphy: Ordovician U; Geography: USA, Vermont^The stratigraphy of the Day Point Formation (Middle-Upper Ordovician Chazy Group) is complex, and shows lateral changes in lithology that produce sequences that are unique at different localities around the Champlain Valley. This unit contains bryozoan mounds or reefs built by Batostoma and Champlainopora species. In the lower portion of the formation, the bryozoan mounds and non-mound layers are often found on top of quartzose sand beds, or within the sand. In contrast, no sand is found in the upper Day Point, yet the bryozoan mounds also flourish. The Day Point Formation bryozoan reefs, especially the one exposed on Garden Island, NY are the geologically oldest in North America. They were built mostly by encrusting Batostoma chazyensis and branching Champlainopora chazyensis, in differing vertical and lateral relationships, that had frame-building, sediment-binding, and sediment-forming roles. Nine additional bryozoan species which are taxonomically updated herein, functioned as minor accessories in the sedimentology of these build-ups. Six lithofacies that represent various lagoonal, bar / shoal, and subtidal environments are recognized in the Day Point. These include: (1) highly bioturbated sandstone with symmetrical and bifurcating ripples; (2) bioturbated, brachiopod-rich wackestone; (3) planar crossbedded, interlayered sandstone and sandy packstone; (4) interlayered sandstone and shale grading into sand and limestone layers; (5) grainstone, which at some localities, contains bryozoan mounds, and at other localities, thin non-mound sheet-like layers, and planar-laminated and cross-bedded packstone; (6) fine-grained calcareous sandstone with planar and herringbone cross-bedding, which in places contains small bryozoan mounds. This study has revealed more laterally discontinuous sand units in the lower portion of the Day Point Formation than noted by previous studies. There are repeated sequences of sandstone units succeeded by deeper water (subtidal, open shelf) carbonates in the Day Point, which we interpret to be a series of transgressive cycles. We hypothesize that sedimentation of the sand stopped as a result of a rise in sea level within each cycle. The deeper water induced the accumulation of carbonate sediments, causing the water depth to decrease and allowed sand to accumulate again. Hydraulic variations may explain both the lithologic sequences and the faunal relationships observed in mounds within the Day Point Formation. The Day Point mounds are significantly different from Middle Ordovician bryozoan reefs described elsewhere in the Appalachians. They are older, contain a less diverse bryozoan fauna, and are smaller than bryozoan reefs in the Holston, Rockdell, and Carters Limestones. They are more similar in structure and composition to Middle Ordovician bryozoan mounds in Pennsylvania, Virginia, and Oklahoma, and indeed also resemble living Bahamian bryozoan reefs. [original abstract]^1";
- 2197 s[2194] = "PAQUETTE J., STEARN C.W., KLAPPA C.F. (1983).- An Enigmatic Fossil of Sponge Affinities from Middle Ordovician Rocks of western Newfoundland.- Canadian Journal of Earth Sciences .: 1501-1512.- FC&P 13-1, p. 48, ID=0525^Topic(s): ; Spongiomorpha; Systematics: Porifera; Stratigraphy: Ordovician M;

- 2198 Geography: Canada, Newfoundland^The organism has a skeleton formed of spherules. It is compared with modern sclerosponges.^1"; s[2195] = "TOBIN K.J., WALKER K.R. (1998).- Diagenetic calcite from the Chazy Group (Vermont): an example of aragonite alteration in a greenhouse ocean.- Sedimentary Geology 121: 277-288.- FC&P 28-1, p. 55, ID=3998^Topic(s): diagenesis; diagenesis, calcite; Systematics: ; Stratigraphy: Ordovician M; Geography: USA, Vermont^Marine diagenetic calcite with both a calcitic (low-to-intermediate Mg) and aragonitic origin was examined from the middle Ordovician buildups of the Chazy Group in Vermont. All marine phases have elevated Sr (up to 1800 ppm) compared with that observed from marine precipitates in other middle Ordovician units. Stromatoporoids (labechiids) which were originally aragonitic, have higher Sr values than phases with an original calcite mineralogy (trilobites, marine cement). Additional evidence supporting precursor mineralogy interpretations includes elevated Mg values (up to 3.6 mole% MgCO3) and the presence of microdolomite in interpreted calcitic phases. Originally aragonitic precipitates have lower Mg values and most significantly lack microdolomite. This study demonstrates the presence of elevated Sr values in marine precipitates that formed during a period when calcite, not aragonite, was the dominant physiochemically precipitated calcium carbonate mineralogy that formed from sea water. Elevated Sr is attributable to at least a partially open system diagenetic stabilization of biogenic aragonite.^1";
- 2199 s[2196] = "KAPP U.S. (2007).- Paleoecology of Middle Ordovician Stromatoporoid mounds in Vermont.- Lethaia 8: 195-207.- FC&P 4-2, p. 63, ID=5303^Topic(s): ecology, mounds; reefs; Systematics: ; Stratigraphy: Ordovician M; Geography: USA, Vermont^Fossiliferous mounds of carbonate muds are a distinctive facies in middle Chazy Group (Crown Point Formation) at Isle La Motte, Lake Champlain. The mounds are surrounded by bedded calcarenite of spar cemented pelmatozoan debris. Channels which cut into the mounds during mound growth are filled with the same calcarenite. The mud free intermound rocks and the mound biota suggest agitated, normal marine shallow-water environments. The principal lime-secreting organisms within the mounds are stromatoporoids, calcareous algae, tabulate corals, sponges and bryozoans. Each mound is dominated in terms of biomass by one of three groups: stromatoporoids, calcareous algae and bryozoans. Most of the mound biota first appear at the base of the Crown Point Formation. In the lower Crown Point Formation, the organisms increase in number and species. Both changes in the biota are related to periods of shallowing of the Chazy Sea which are also reflected in the character of the carbonate sands.^1";
- 2200 s[2197] = "BOURQUE P.-A. (1979).- Evolution of a Silurian reef complex in the Gaspé Peninsula, northern Appalachians.- Geological Society of America, Abstracts with Programs 11: 04 .- FC&P 8-1, p. 49, ID=0201^Topic(s): stroms; reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: USA, Appalachians^Stromatoporoids are important constituents of the reefs.^1";
- 2201 s[2198] = "SMOSNA R., MAXWELL T.C. (1988).- Stromatoporoid reefs and banks in the Silurian Appalachian basin.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 350-355.- FC&P 19-2.1, p. 41, ID=2774^Topic(s): strom buildups; strom reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: America N, Appalachian Basin^^1";
- 2202 s[2199] = "MILLER C.E. (2003).- Paleoecology of the Keyser Limestone and its stromatoporoids, in central Pennsylvania.- 68th Annual Field Conference of Pennsylvanian Geologists; Guidebook [J.H. way et al. (eds); Altoona, PA]: pp 30-41. [field trip guide] - FC&P 33-1, p. 41, ID=7196^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy:

- Silurian Prid; Geography: USA, Pennsylvania^This paper reviews the lithofacies, stratigraphy, and paleoenvironments of the Keyser Formation (Silurian, Pridoli) and describes the place of stromatoporoids in various lithofacies. The paleoecological roles of stromatoporoids are described with reference to patch reefs exposed at Altoona (Eldorado quarry), the Altoona Bible Church, near Jersey Shore, and at Mustoe (Virginia). The only species of stromatoporoid mentioned is "Stromatopora" constellata.^1";
- 2203 s[2200] = "STOCK C.W., HOLMES A.E. (2004).- Latest Silurian (Pridoli) reefs in the Appalachian Basin.- Geological Society of America, Abstracts with Programs 36, 3: 51. [abstract] - FC&P 34, p. 92, ID=1344^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian Prid; Geography: USA, Appalachians^^1";
- 2204 s[2201] = "OLIVER W.A.jr (1977).- Biogeography of Late Silurian and Devonian rugose corals.- Palaeogeography, Palaeoclimatology, Palaeoecology 022: 85-135.- FC&P 6-2, p. 15, ID=0118^Topic(s): biogeography, ENA Province; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U, Devonian; Geography: America^An account of rugose coral faunal compositions during the history of the Eastern Americas Realm related to Devonian world palaeogeography^1";
- 2205 s[2202] = "OLIVER W.A.jr (1999).- The principal Pridolian and Lochkovian rugose coral assemblages or communities in the Eastern North America.- Paleocommunities: A Case Study from the Silurian and Lower Devonian [Boucot A. J. & Lawson J. D. (eds); Cambridge University Press]: 800-805.- FC&P 30-1, p. 26, ID=1534^Topic(s): biocoenoses, biozones; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: America, ENA^Several rugose coral assemblages of Pridolian and Lochkovian age in eastern North America have been studied in enough detail to permit discussion of them as "communities".The assemblages are best known in New York and in the Appalachian belt from Virginia to southeastern Québec and the Maritime Provinces. They are unknown or poorly studied in other parts of the east which is biogeographically defined as that part of the Silurian-Devonian North American Plate east of the Transcontinental Arch and south of the central Canadian shield (Oliver, 1977). Older (Ludlovian) assemblages are not well enough known to discuss as "communities", but are briefly characterized in the next section. Some younger Early Devonian assemblages, beyond the scope of this volume, are also briefly reviewed. It is notable that the Pridolian-Lochkovian rugose coral assemblages or communities do not show strong connections with either preceding or succeeding assemblages of the same geographical area. Names given to the coral assemblages or communities are informal and are not considered to be potentially useful outside of eastern North America.^1";
- 2206 s[2203] = "OLIVER W.A.jr (2000).- Stage boundary recognition in the Eastern Americas Realm based on rugose corals.- Courier Forschungsinstitut Senckenberg 220: 57-63.- FC&P 30-1, p. 26, ID=1535^Topic(s): stratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: America, ENA^Most Devonian stages contain characteristic coral assemblages but these tend to be geographically and facies limited and may or may not be useful for recognising stage boundaries. Within eastern North America, corals contribute to the recognition of two boundaries: the base of the Lochkovian (Silurian-Devonian boundary) and the base of the Eifelian (Lower-Middle Devonian Series boundary).^1";
- 2207 s[2204] = "OLIVER W.A.jr (1975).- Endemism and evolution of Late Silurian to Middle Devonian rugose corals in Eastern North America.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 148-160.- FC&P 5-2, p. 6, ID=5407^Topic(s): endemism, phylogeny; Rugosa;

- Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U - Devonian M; Geography: America, ENA^An account of the generic compositions and palaeobiogeography of successive rugose coral faunas of the early to Middle Devonian Eastern North American province^1";
- 2208 s[2205] = "OLIVER W.A.jr (2001).- The origin of Spongophylloides; in eastern North America.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 77-085.- FC&P 30-2, p. 17, ID=1562^Topic(s): origins; Rugosa, Ptenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: America, ENA^A morphologic sequence of ptenophyllid corals in Upper Silurian (Pridolian) and Lower Devonian (Lochkovian) strata in New York and the central Appalachian Mountains poses problems in the recognition, definition and naming of genera. Ptenophyllids occur in the fine-grained, stromatoporoidal limestone facies that crosses the system boundary. Specimens of Embolophyllum are especially common in the Pridolian but morphologically similar forms occur in the Lochkovian. Embolophyllum generally has complete septa but, near the Pridolian-Lochkovian boundary, ptenophyllids with peripherally incomplete septa are common and, above the boundary, many specimens have a broad dissepimentarium that entirely lacks septa. Using conventional morphological criteria, the transitional morphotype might be referred to Dubrovia and the younger form to Spongophylloides. I consider it more likely that, in the Appalachians, the three forms bear ancestor-descendant relationship, and that biologically, the younger two should not be assigned to the established genera they resemble. However, naming new genera that can only be recognized locally is equally unsatisfactory and there seems to be no way to suggest the postulated relationship in Linnéan terms. The overall pattern is similar to what might be expected from reticulate evolution.^1";
- 2209 s[2206] = "OLIVER W.A.jr (1997).- Ptenophyllids in Eastern North America.- Coral Research Bulletin 05: 203-209.- FC&P 27-1, p. 73, ID=3882^Topic(s): distribution; Rugosa, Ptenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U - Devonian M; Geography: America, ENA^Rugose corals of the Family Ptenophyllidae are widely distributed in rocks of Late Silurian to Middle Devonian age. However, in eastern North America, they are not known to occur in rocks of Pragian to early Eifelian age and later Eifelian to Frasnian occurrences are limited to western parts of the area. At each of three Middle and one Upper Devonian (Frasnian) stratigraphic levels, individual Ptenophyllids are rare and only one, two or three species are present. Each occurrence is related to a separate incursion of elements of the Old world fauna into the eastern North American Michigan and Illinois Basins from western or northwestern North America; no Middle or Upper Devonian ptenophyllids are known from the more easterly Appalachian Basin.^1";
- 2210 s[2207] = "STOCK C.W., HOLMES A.E. (1986).- Upper Silurian / Lower Devonian Stromatoporoidea from the Keyser Formation at Mustoe, Highland Co., west-central Virginia.- Journal of Paleontology 60: 555-580.- FC&P 15-2, p. 45, ID=0756^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian U, Devonian L; Geography: USA, Virginia^Nine species of stromatoporoids are described. Seven are species of Parallelostroma and 3 of these are new (P. longicolumnum, P. keyserense, P. multicololumnum). One species each of Plexodictyon and Densatroma are described.^1";
- 2211 s[2208] = "STOCK C.W. (1986).- Reevaluation of the stromatoporoid type specimens of Girty (1895) from the Lower Devonian of New York: implications on correlation within the Appalachian Basin.- Geological Society of America Abstracts with Programs 18: 267.- FC&P 16-1, p. 77, ID=2020^Topic(s): biostratigraphy; stroms, stratigraphy; Systematics: Porifera; Stromatoporoidea;

- Stratigraphy: Silurian / Devonian; Geography: USA, Appalachians^[stromatoporoids may be useful for defining the Silurian / Devonian boundary south of New York]^1";
- 2212 s[2209] = "STOCK C.W. (1986).- Stromatoporoids and the Silurian-Devonian boundary in the Appalachian Basin.- SEPM, Midyear Meeting, Raleigh, N. C., Abstracts volume 3: 106-107.- FC&P 16-1, p. 77, ID=2021^Topic(s): biostratigraphy; stroms, stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian / Devonian; Geography: USA, Appalachians^^1";
- 2213 s[2210] = "OLIVER W.A.jr (1973).- Devonian coral endemism in eastern North America and its bearing on palaeogeography.- Special Papers in Palaeontology 12 / Systematics Association Publ. 9 (Organisms and Continents through Time): 318-319.- FC&P 3-1, p. 27, ID=4887^Topic(s): biogeography; Anthozoa endemism; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: America, ENA^Analysis of the world distribution of rugose coral genera that occur in the eastern half of North America in rocks of latest Silurian and Devonian age helps to delineate palaeobiological provinces of this time and to outline their history. For this purpose, eastern North America (ENA) endemic genera are defined as those known only from ENA, northern South America, north-western Africa, and Spain (?).^1";
- 2214 s[2211] = "OLIVER W.A.jr (1989).- An Early Middle Devonian Coral Faunule from the Needmore Shale in South-Central Pennsylvania and Adjacent Areas of West Virginia and Virginia.- Bulletin U.S. Geol. Surv. 1860: C1-C11.- FC&P 19-1.1, p. 47, ID=2654^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: USA, Pennsylvania, Virginia^A small faunule of solitary rugose corals from the Needmore Shale (Onesquethaw age; probably early Eifelian) includes four species, three of which are described as new. Similarities between the Needmore corals and the corals of the Bois Blanc Formation and the Edgecliff Member of the Onondaga Limestone in New York and Ontario and the Rio Cachiri Group of Venezuela are analyzed, but the ages of these stratigraphic units within the Emsian and Eifelian stages are still not precisely known.^1";
- 2215 s[2212] = "OLIVER W.A.jr (1990).- Extinctions and migrations of Devonian rugose corals in the Eastern Americas Realm.- Lethaia 23: 167-178.- FC&P 19-2.1, p. 23, ID=2735^Topic(s): extinctions, migrations; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: America, ENA^Detailed plotting of the stratigraphic ranges of Devonian rugose coral genera within the Eastern Americas Realm reveals new information about the extinctions and migrations of this largely endemic fauna. There were significant faunal turnovers in the Lochkovian, middle Eifelian and late Givetian, as well as in the often discussed late Frasnian. The late Givetian turnover was nearly as great as the Frasnian one. Inward migration was principally from western North America, and the greatest influxes were during the early Givetian and Frasnian. It seems likely that there were several separate incursions and that some genera were introduced to the east two, or even three times.^1";
- 2216 s[2213] = "OLIVER W.A.jr, SORAUF J.E., BRETT C.E. (1996).- A unique occurrence of Endophyllum (rugose coral; Devonian) in Eastern North America: an ecological and biogeographical puzzle.- Journal of Paleontology 70, 1: 46-56.- FC&P 25-1, p. 33, ID=3014^Topic(s): ecological & biogeographical enigma; Rugosa, Endophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: America, ENA^Endophyllum is described for the first time from North America. The occurrence of a single, large colony in Middle Devonian strata in New York is both biogeographically and environmentally anomalous: it

- belongs to an Old World Realm genus but was found in the Eastern Americas Realm, and it occurred in a gray, ambocoeliid-bearing mudstone, a facies in which morphologically complex corals are otherwise unknown. Available evidence suggests that the coral lived not far from where it was found, possibly on a hardground or bank a few km north of the outcrop. *Endophyllum ciurcai* new species is described.¹¹";
- 2217 s[2214] = "OLIVER W.A.jr (1993).- Origins and relationships of Devonian Rugosa endemic to the Eastern Americas Realm.- Courier Forschungsinstitut Senckenberg 164: 131-140. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 14, ID=3447^Topic(s):endemites, phylogeny; Rugosa, endemites; Systematics:Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: America, ENA^Several families of rugosans, endemic to the Devonian Eastern Americas Realm, are well enough known to justify an analysis of both family- and genus-level relationships. Cladistic methods are used to test ideas on evolution within three recently monographed families with varied results. The analyses are most valuable in providing justification for, or raising questions about, the results of earlier studies. Genera of the Zaphrentidae and Craspedophyllidae are analyzed both separately and as one unit because the families are considered to be closely related. Several outgroups were tried; most successful was the genus *Phaulactis* which has been mentioned elsewhere as a possible zaphrentid ancestor. Results of the analyses are compatible with earlier studies based on conventional, "Simpsonian" methods, and support a near relationship between the two EAR families. Cladistic analysis of the Siphonophrentidae is less satisfactory. No outgroup is evident so a hypothetical "primitive" siphonophrentid, based on conventional ideas of morphologic trends, is substituted. The value of the analysis is in the questions raised about the importance of some of the characters used. A discussion of family relationships is based on comparative morphology, known stratigraphic ranges, and apparent trends. Cladistic analysis at this level is impractical because of the paucity of data and the lack of any general agreement on rugosan classification at the family level.¹¹";
- 2218 s[2215] = "OLIVER W.A.jr (1976).- Biogeography of Devonian rugose corals.- Journal of Paleontology 50: 365-373.- FC&P 5-2, p. 7, ID=5408^Topic(s):biogeography; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: America, ENA^Relates the rise and fall of endemism in Eastern North American rugose coral faunas in the Devonian to contemporary palaeogeography.¹¹";
- 2219 s[2216] = "OLIVER W.A.jr (1993).- The Siphonophrentidae (Rugose Corals, Devonian) of Eastern North America.- US Geological Survey Bulletin 2024-B: I-IV + B1-B32.- FC&P 22-2, p. 81, ID=3509^Topic(s): Rugosa, Siphonophrentidae; Systematics:Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: America, ENA^Rugose corals belonging to the Family Siphonophrentidae Merriam 1974, are morphologically simple and extremely variable. They are widely distributed in Lower and Middle Devonian strata in areas that were formerly parts of the Devonian Eastern Americas Biogeographic Realm. The family, its constituent genera, and all type species are reviewed or redescribed. In addition, all previously named species and some additional species from New York are described. Two new genera are *Metaxyphrentis*, type species *M. prolifica* (Billings), 1858, and *Enallophrentis*, type species *E. simplex* (Hall), 1843. New species are *Briantelasma boucoti* (Lochkovian) and *Enallophrentis broweri*, *Breviphrentis cista*, and *B. pumilla* (all Givetian). *Heterophrentis* Billings 1874 (and *Heterophrentidae* Kullmann 1965), and *Trilophyllum* Simpson 1900, are restricted to the type specimens of their type species because they are unrecognizable.¹¹";
- 2220 s[2217] = "OLIVER W.A.jr (1997).- Evolutionary relationships of the Zaphrentidae and Craspedophyllidae (rugose corals, Devonian) in eastern

- North America.- Geol. Soc. America, Spec. Pap. 321: 317-325.-
 FC&P 27-1, p. 73, ID=3883^Topic(s): phylogeny;
 Rugosa, Zaphrentidae; Systematics: Cnidaria; Rugosa;
 Stratigraphy: Devonian; Geography: America, ENA^Several
 models showing possible evolutionary relationships of the genera of two
 small families of Early and Middle Devonian rugose corals are analyzed.
 Cladograms based on parsimonious character transpositions disagree with
 what is evident in the paleontologic record and are rejected. Those
 based on the record, using character state polarization where the
 record is not clear, are more satisfactory even though much less
 parsimonious. The apparent failure of cladistic methods in this
 analysis reflects the low number of available morphologic characters
 and the number of these characters that are convergent. This is a
 common problem in fossil invertebrates, and it is suggested that the
 principal value of cladistics in such groups is to force a more
 rigorous consideration of the characters on which taxa are based.^1";
- 2221 s [2218] = "HOLMES A.E. (1981).- Systematics and paleoecology of the
 stromatoporoids from the Lower Devonian Keyser Formation at Mustee,
 Virginia.- Alabama University, Master's Thesis.- FC&P
 11-2, p. 36, ID=1854^Topic(s): systematics, ecology; stroms;
 Systematics: Porifera; Stromatoporoidea; Stratigraphy:
 Devonian L; Geography: USA, Virginia^^1";
- 2222 s [2219] = "FAGERSTROM J.A. (1983).- Diversity, Speciation, Endemism and
 Extinction, in Devonian Reef and Level-bottom Communities, Eastern
 North. America.- Coral Reefs 02: 65-70.- FC&P 13-1, p. 48,
 ID=0517^Topic(s): reefs biodiversity; reefs, diversity;
 Systematics: ; Stratigraphy: Devonian; Geography:
 America, ENA^The high diversity and endemism of stromatoporoid
 reefs in the Formosa and Kwataboahagan formations are contrasted with
 the low diversity faunas that are contemporaneous with them and precede
 and follow them.^1";
- 2223 s [2220] = "WARSHAUER S.M., SMOSNA R.A. (1979).- Congruent patch reef
 biofacies: comparison of mid-Appalachian Devonian with modern Florida
 analogues.- Geological Society of America, Abstracts with Programs 11:
 58.- FC&P 8-1, p. 50, ID=0216^Topic(s): reefs, patch
 reefs, fossil - recent analogies; stroms, reefs, ecology;
 Systematics: Porifera; Stromatoporoidea; Stratigraphy:
 Devonian - Recent; Geography: USA, Appalachians,
 Florida^[stroms are important elements in these reefs]^1";
- 2224 s [2221] = "POTY E. (2004).- Stratigraphy and paleobiogeography of
 Carboniferous rugose corals of Nova Scotia.- Canadian Society of
 Petroleum Geologists, Memoir 19: 580-587.- FC&P 33-2, p.
 21, ID=1126^Topic(s): biostratigraphy, biogeography; Rugosa;
 Systematics: Cnidaria; Rugosa; Stratigraphy:
 Carboniferous; Geography: Canada, Nova Scotia^The Upper part
 of the Windsor Group, Nova Scotia, includes limestone members which are
 of great value for local lithostratigraphic correlation. Three of them,
 the Ryan Brook, the Herbert River and the Kennetcook Limestone, contain
 rugose corals. The Ryan Brook Limestone Member has yielded only one
 species of Siphonodendron, suggesting a possible Upper Viséan age. The
 Herbert River Limestone Member marks the base of the upper part of the
 Windsor Group. It is locally rich in Rugosa and yielded species
 belonging to Siphonodendron, Nemistium, Lonsdaleia, Axophyllum,
 Dibunophyllum, Koninckophyllum, a colonial Koninckophyllum and
 Palastraea. Most of the corals were collected in boulders in the Mahone
 Bay area, SW Nova Scotia. These taxa indicate Brigantian age, as
 previously suggested by foraminifera, and are similar to those known in
 Ireland, suggesting close relations between Nova Scotia and the
 Irish-North England basin. The Kennetcook Limestone Member is at the
 top of the Windsor Group. It contains only solitary corals belonging to
 Amplexizaphrentis and Turbinatocania. This fauna, rich in specimens
 but poorly diversified, is known in the Serpukhovian of the Russian
 platform.^1";

- 2225 s[2222] = "FEDOROWSKI J. (1982).- Some rugose corals from the Upper Permian of East Greenland.- Ra pp. Groenlands geol. Unders. 108: 71-91.- FC&P 12-1, p. 20, ID=1883^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Greenland^^1";
- 2226 s[2223] = "FLUGEL H.W. (1973).- Rugose-Korallen aus dem oberen Perm Ost-Groenlands.- Verhandl. Geol. Bund. 1973, 1: 1-58; Wien.- FC&P 3-2, p. 37, ID=4946^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Greenland E^^ fauna of rugose corals is described from Upper Permian rocks in the Kap Scotsch area, Northeast Greenland. The fauna consists of 11 genera and subgenera. A new subgenus is established Calophyllum (Groenlandophyllum), which has no epitheca on the apex of the corallite. A faunal list is given in table 1. The age of the fauna is doubtful, although it is certainly older than latest Permian faunas of the Dzhulfian stage. It is possible that the East Greenland fauna is of the age of the Yabeina Zone as suggested by Dunbar et al. in 1960. It is, therefore to be suspected that at Kap Scotsch the Triassic rocks rest unconformably on Permian strata.^1";
- 2227 s[2224] = "JANSA L.F., TERMIER G., TERMIER H. (1982).- Les Biohermes a algues, spongiares et coraux des series carbonatees de la Flexure bordiere de "Paleoshelf" au large du Canada oriental.- Revue de Micropaleontologie 25: 181-219.- FC&P 15-1.2, p. 45, ID=0784^Topic(s): reefs; reefs; Systematics: algae Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Canada E^Sphaeractinia steinmanni, Disjectopora sp. Cyclicopsis verticalis, and Dehornella sp. are described from Jurassic bioherms in the Demascota G-32 well on the continental shelf.^1";
- 2228 s[2225] = "KETCHER K., ALLMON W.D. (1993).- Environment and mode of deposition of a Pliocene coral bed: Coral thickets and storms in the fossil record.- Palaios 8: 3-17.- FC&P 23-2.1, p. 65, ID=4427^Topic(s): ecology, redeposition; coral bed; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pliocene; Geography: USA, Florida^^ bed of Late Pliocene age from west central Florida is dominated by smoothed, bioeroded and broken colonies of the coral Septastrea crassa (Holmes). This bed appears to have formed as a result of the destruction of a coral thicket by one or more severe storms over a relatively short period of time. The coralla surfaces were "sand-blasted" during the storm(s) and smoothed. The shattered thicket was then subjected to bioerosion for an estimated period of 25-30 years, before being buried relatively quickly by an influx of sediment, possibly by a migrating sand wave. The coral grew upon and was in turn grown upon by a variety of encrusting organisms including barnacles, bryozoans and oysters. The coral bed is continuous with both overlying and underlying assemblages allowing reconstruction of its paleoenvironmental setting and history. Fossil Septastrea crassa thickets preserved elsewhere display different patterns of physical wear and bioerosion, indicating that this coral bed experienced a different mode of formation.^1";
- 2229 s[2226] = "NEWTON C.R., MULLINS H.T., GARDULSKI A.F., HINE A.C., DIX G.R. (1987).- Coral mounds on the West Florida slope: unanswered questions regarding the development of deep-water banks.- Palaios 02: 359-367.- FC&P 23-2.1, p. 66, ID=4430^Topic(s): coral mounds; coral mounds, Lophelia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: USA, Florida^^Late Pleistocene deep-water coral mounds of 10-15m relief occur in a 20km linear zone parallel to the 500m isobath along the west Florida carbonate-ramp slope. These relict mounds were constructed by the densely calcified, ahermatypic framework builder, Lophelia prolifera, and provided habitats for a host of associated invertebrates, including epizoans, epifaunal commensal organisms, nestlers and crevice dwellers, and macroendoliths. scleractinian diversity and taxonomic composition are congruent with those of other

Lophelia buildups in the North Atlantic, particularly buildups in the eastern Atlantic. The scleractinians also retain primary mineralogic, isotopic, and trace-element geochemical signatures, indicating relatively little diagenetic alteration, despite $\sim 40,000$ years b.p.) radiocarbon ages. The small but rapidly expanding global data base on deep-water coral mounds has magnified two key questions concerning the ecologic and environmental controls on mound nucleation, growth, and death. First, what are the principal ecologic controls on dominance within communities of deep-water framework builders? Second, why are there so many relict and so few living deep-water mounds in the modern ocean? Ecological and paleoecological investigation of these questions would elucidate much about the dynamics of deep-water mound growth.¹¹;

2230 s[2227] = "WEISBORD N.E. (1973).- New and little-known Corals from the Tampa Formation of Florida.- State of Florida Dept. of Natur. Res., Bureau of Geology, Div. of Interior Res., Bull. 56: 146 pp., 35pls; Tallahassee, Florida.- **FC#038;P 2-2**, p. 24, ID=4830^Topic(s): monograph; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Miocene L; Geography: USA, Florida^The objective of this paper is to describe the Corals of the Tampa Formation (Lower Miocene) from three localities south and east of the city of Tampa (Florida). 30 species are treated in the paper. 14 species are new. Collections in the Geological Department of Florida State University, Florida Bureau of Geology and U.S. National Museum (Washington). Included in the paper is the description of a new species *Goniopora aucillana* from the Suwannee Limestone (Upper Oligocene) found in Taylor County, Florida.¹¹;

2231 s[2228] = "SORAUF J.E. (2010).- Colonial form, free-living corals, and macroborers from the Pleistocene of South Florida.- *Palaeoworld* 19, 3-4: 426-434.- **FC#038;P 36**, p. 106, ID=6537^Topic(s): morphology, ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: USA, Florida^Study of corallum shape in free-living colonies of *Manicina*, *Siderastrea* and *Solenastrea* collected from the Pleistocene Bermont formation in southern Florida indicates that they were mobile, either self-righting (*Manicina*), or rotatory (*Siderastrea* and *Solenastrea*), with colony forms that are the result of movement during growth. In rotatory corals, growth of a radial and centrifugal nature away from the corallum center indicates that rolling was frequent enough to maintain the health of individual corallites along the skeleton's entire spherical surface, as postulated previously by several authors. Post mortem sponge boring and boring of sipunculid worms and the bivalves *Lithophaga* and *Gastrochaena* during the life of these colonies were common. Colonization by barnacles during the life of some colonies also occurred, but they were generally overgrown. Boring of rotatory coralla decreased the mass of the skeleton and probably increased the ease and frequency of rolling of round colonies. The presence of these rotatory coralla strongly suggests that the lower Bermont sediments accumulated on and around shallow banks populated by numerous free-living corals and some fixed corals such as branching *Porites*, along with a diverse molluscan assemblage indicative of a *Thalassia* (turtle grass) community. The Pleistocene Bermont Formation also contains numerous well-preserved colonies of *Manicina areolata*, indicative of deposition in shallow subtidal environments with abundant sea grass. This species was well-suited to life in this environment, and to overturning by current action, as it has the capacity to right itself after overturning, either biologically or hydrodynamically or both. The Bermont specimens of *Manicina* all (100%) possess a flat or slightly concave base, typical of self-righting forms. Colonies collected in the Bermont Formation show several types of macroborers, sponges, sipunculid worms, but above all, the bivalve genera *Lithophaga* and *Gastrochaena* as well as epibionts, bryozoans and serpulid worms. *Manicina* is associated stratigraphically with rotatory colonies of

- Siderastrea radians, but the two have not been found within the same lamina. However, the two, taken together, provide strong indications of depositional environments on banks populated by sea grasses and associated fauna. [original abstract]^1";
- 2232 s[2229] = "RIGBY J.K., CUNNINGHAM K.J. (2007).- A new, large, Late Pleistocene demosponge from Southeastern Florida.- Journal of Paleontology 81, 4: 788-793.- FC&P 35, p. 46, ID=2327^Topic(s): new taxon; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Pleistocene; Geography: USA, Florida^^1";
- 2233 s[2230] = "DARRELL J.G., TAYLOR P.D. (1989).- Scleractinian symbionts of hermit crabs in the Pliocene of Florida .- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 115-123.- FC&P 19-1.1, p. 13, ID=2529^Topic(s): symbiosis, hermit crabs; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pliocene; Geography: USA, Florida^^1";
- 2234 s[2231] = "WELLS J.W. (1972).- Notes on the fauna of the Chipola Formation V. Symbianga, a new Rhizangiid Coral.- Tulane Studies in Geology and Paleontology 10: 25-28.- FC&P 2-1, p. 21, ID=4734^Topic(s): new taxa; Scleractinia, Symbianga; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: USA, Florida^Description of Symbianga vaughani weisbord from the Chipola Formation (Miocene) of Florida.^1";
- 2235 s[2232] = "WELLS J.W. (????).- A new species of Endopachys (Anthozoa, Scleractinia) from the Miocene of Florida.- Tulane Stud. Geol. Paleontol. 11, 3: 173-175; New Orleans.- FC&P 4-2, p. 54, ID=5249^Topic(s): new taxa; Scleractinia, Endopachys; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: USA, Florida^^1";
- 2236 s[2233] = "WEISBORD N.E. (1974).- Late Cenozoic Corals of South Florida.- Bulletins of American Paleontology 66, 285: 510 pp., 57 pls.- FC&P 4-1, p. 45, ID=5175^Topic(s): monograph; Scleractinia, Hydrocorallina; Systematics: Cnidaria; Scleractinia Hydrozoa; Stratigraphy: Neogene; Geography: USA, Florida^Fifty-two late Cenozoic species of fossil corals are described from the following formations of South Florida: Pinecrest, Caloosahatchee, Glades, Fort Thompson, and Key Largo Limestone / Miami Oolite. Fifty-one of the species are in the order Scleractinia and one in the order Milleporina. Five new species are proposed, and these are Diploria sarasotana, Thysanus floridanus, Dichocoenia caloosahatcheensis, Dichocoenia eminens, and Isophyllia? desotoensis. The salient characters of the several formations are depicted, and their ages, as determined by both biogeologic and radiometric dating, are analyzed and compared.^1";
- 2237 s[2234] = "CUNNINGHAM K.J., RIGBY J.K., WACKER M.A., CURRAN H.A. (2007).- First documentation of tidal-channel sponge biostromes (upper Pleistocene, southeastern Florida).- Geology 35, 5: 475-478.- FC&P 35, p. 41, ID=2318^Topic(s): biostromes; Porifera, biostromes; Systematics: Porifera; Stratigraphy: Pleistocene; Geography: USA, Florida^Sponges are not a common principal component of Cenozoic reefs and are more typically dominant in deep-water and/or cold-water localities. Here we report the discovery of extensive upper Pleistocene shallow-marine, tropical sponge biostromes from the Miami Limestone of southeastern Florida built by a new ceractinomorph demosponge. These upright, barrel- to vase-shaped sponges occur in monospecific aggregations constructed within the tidal channels of an oolitic tidal-bar belt similar to modern examples on the Great Bahama Bank. The biostromes appear to have a ribbon-like geometry, with densely spaced sponges populating a paleochannel along a 3.5 km extent in the most lengthy biostrome. These are very large (as high as 2m and 1.8m in diameter), particularly

well-preserved calcified sponges with walls as hard as concrete. Quartz grains are the most common particles agglutinated in the structure of the sponge walls. Where exposed, sediment fill between the sponges is commonly a highly burrowed or cross-bedded ooid-bearing grainstone and, locally, quartz sand. It is postulated that the dense, localized distribution of these particular sponges was due to a slight edge over competitors for food or energy supply and space in a stressed environment of tidal-influenced salinity and nutrient changes, strong currents, and frequently shifting submarine sand dunes. To our knowledge, this represents the first documentation of sponge biostromes composed of very large upright sponges within high-energy tidal channels between ooid shoals. The remarkably well-preserved accumulations provide an alternative example of sponge reefs for comparative paleoenvironmental studies.¹;

2238 s[2235] = "GREENSTEIN B.J., PANDOLFI J.M. (2003).- Taphonomic alteration of reef corals; effects of reef environment and coral growth form. II. The Florida Keys.- *Palaios* 18, 6: 495-509.- FC&P 33-1, p. 86, ID=7233Topic(s): hermatypic, taphonomy; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Holocene; Geography: USA, Florida^In a companion study to earlier work in the Indo-Pacific [Pandolfi & Greenstein 1997], taphonomic alteration in reef-coral death assemblages was assessed in four distinct reef habitats ranging from 2-30m water depth in the Florida Keys reef tract. Physical and biological taphonomic attributes measured from coral specimens showed great variability with respect to reef environment. Physico-chemical degradation (abrasion and dissolution) was greatest in reef-crest and patch-reef environments. With the exception of encrusting foraminifera, coverage by epi- and endobionts was higher in deep-reef environments (20m and 30m). Variability in dissolution and abrasion is likely the result of the different energy regimes present in the reef habitats examined. Variability in biological attributes results from a combination of increased residence time of coral skeletons on substrates in deep-reef environments, higher overall coral skeletal densities of corals inhabiting deep reef environments, and increased nutrient availability in the deep reefs sampled. Clear gradients in the degree of taphonomic alteration of reef corals with reef habitat indicate the utility of corals as taphofacies indicators in ancient reef settings. In contrast to shallow-water reefs on the Great Barrier Reef, taphonomic alteration of corals in the Florida Keys was equitable across growth forms. [original abstract]^1";

2239 s[2236] = "SWART P.K., DODGE R.E., HUDSON H.J. (1996).- A 240-Year Stable Oxygen and Carbon Isotopic Record in a Coral from South Florida: Implications for the Prediction of Precipitation in Southern Florida.- *Palaios* 11: 362-375.- FC&P 26-1, p. 59, ID=3630Topic(s): stable isotopes, C O; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: USA, Florida^This study reports on the δ18O and δ13C composition of the skeleton from a 240-year-old specimen of *Montastraea faveolata* growing in Biscayne National Park, South Florida. Annual variations in the δ18O of the skeleton deposited during the summer months show a bimodal correlation with summer rainfall. During wetter years, the δ18O of the coral skeleton and the amount of precipitation during the summer months are inversely correlated (r = - 0. 7) reflecting dilution of the seawater by meteoric water lower in δ18O. During years in which summer rainfall is less than normal, increases in precipitation are positively correlated with skeletal δ18O (r = +0. 6) reflecting the input of freshwater from the Everglades higher in δ18O. Based on this correlation the δ18O record of the coral skeleton suggests that the 19th and 18th centuries have been relatively dry compared to the 20th century. Carbon isotopic compositions of the skeleton are positively correlated with δ18O with the minimum in δ13C

occurring several months after the minimum in $\delta^{18}O$. Since the mid 1930s there has been a decrease in $\delta^{13}C$ of the skeleton. Explanations for this trend may be (1) it reflects the increased input of carbon derived from the destruction of terrestrial ecosystems, (2) it is part of a long-term decrease in $\delta^{13}C$ associated with increased addition of fossil fuel-derived CO_2 .¹;

2240 s[2237] = "GHIOLD J., ENOS P. (1982).- Carbonate production of the coral *Diploria labyrinthiformis* in South Florida patch reefs.- *Marine Geol.* 45: 281-296.- FC&P 11-1, p. 57, ID=6132^Topic(s): Scleractinia; carbonate production; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: USA, Florida^Average annual production of $CaCO_3$ (aragonite) by the hermatypic coral *Diploria labyrinthiformis* in the Florida reef tract is 11.8 ± 0.3 kg/m² of reef space occupied by the coral. Annual production was estimated from a population of 271 *Diploria* colonies measured in situ. The mass produced annually is the volume of annual growth times the skeletal density. Cores of 31 *Diploria* colonies were slabbled and X-rayed to reveal annual growth bands. The mean vertical growth rate is 0.35 - 0.06 cm/yr for skeletal density bands representing up to 24 years of growth. The annual volume of growth is approximated by a simple geometric shell whose thickness is determined by the horizontal and vertical growth rates of the colony. Horizontal growth rates are estimated from the ratio of the two lateral axes to the vertical axis. Bulk density determined by dry weight/volume of 9 cylindrical cores is 1.64 ± 0.13 g/cm³. Productivity of 11.8 kg/m²/yr for area occupied by the coral does not vary appreciably among a nearshore patch reef and two outer-shelf patch reefs. For comparison, production rates for 244 *Porites astreoides* near Key West, Florida, is 14 ± 3.3 kg/m²/yr for area occupied by the coral. The 271 colonies of *D. labyrinthiformis* potentially produce sediment which, if spread evenly, would accumulate at a rate of 0.026 m/103 yr for 9008 m³ of reef surveyed. Potential vertical accretion by all corals for the patch reef surveyed is estimated at 2.2 to 6.6 m/103 yr. [original summary]¹;

2241 s[2238] = "PARKINSON R.W. (1989).- Decelerating Holocene Sea-level Rise and its Influence on Southwest Florida Coastal Evolution: A Transgressive / Regressive Stratigraphy.- *Journal of sedimentary Petrology* 59, 6: 960-972.- FC&P 19-1.1, p. 58, ID=2678^Topic(s): eustacy, mangrove coast history; Systematics: ; Stratigraphy: Holocene; Geography: USA, Florida^The Ten Thousand Islands (TTI) are a myriad of low-relief mangrove islands that lie along the low energy, subtropical southwest Florida coast. The region has been subjected to a relative rise in Holocene sea level, which has continuously decelerated to its present rate. Data derived from surface and subsurface sampling indicate that the Holocene sediment package of the TTI area consists of two sediment sequences. The lower sequence is transgressive and was generated as coastal salt marsh and / or terrestrial environments [which] were submerged and replaced by a shallow coastal marine setting. The upper sediment sequence consists primarily of 1) biogenic shallowing upwards sequences or 2) thickened mangrove peat layers, reflecting island emergence and shoreline stabilization, respectively. Island emergence compartmentalized the area, further reducing wave and current energy and promoting the infilling of the protected bays through deposition of organic-rich shelly mudstone and wackestone. Based on coastal stratigraphy and ^{14}C dates, the formation of this transgressive / regressive sediment sequence is directly related to changing rates of Holocene sea-level rise, reported to have occurred between 3,500 and 3,200 YBP. Continued regressive sedimentation could eventually generate a 5-10 m thick transgressive / regressive sediment couplet, with an aerial extent of over 300 km², in roughly 10,000 years. This externally forced sediment couplet compares remarkably well to individual small scale transgressive / regressive cycles which repeat tens to hundreds of times throughout the

- geologic record (see James 1984). The results of this study thus support the allocyclic mechanism as a viable working hypothesis for the generation of these small scale rock cycles.¹";
- 2242 s[2239] = "TOSCANO M.A., LUNDBERG J. (1998).- Early Holocene sea-level record from submerged fossil reefs on the southeast Florida margin.- *Geology* 26, 3: 255-258.- **FC&**P 27-1, p. 121, ID=3880^Topic(s): reef outliers, geochronometry, eustacy; reef outliers; Systematics: ; Stratigraphy: Holocene; Geography: USA, Florida^Massive fossil (outlier) reefs are preserved seaward of the modern shelf and reef tract along the southeast Florida margin. Thermal ionization mass-spectrometric (TMS) U-Th dating of 16 pristine *Acropora palmata* and head corals cored from two transects document early Holocene reef growth from 8.9 to 5.0 ka, from approximately -13.5 to -7 m MSL (mean sea level). These samples fill a gap in the Florida Keys sea-level database and clarify the timing of a significant decrease in the rate of sea-level rise. A portion of this interval, represented by a gap in the Caribbean record of *A. palmata* reefs, has been interpreted as reef drowning during an inferred catastrophic sea-level rise event of >45 mm/yr, or 6.5 m rise between 7.6 and 7.2 ka, attributed to West Antarctic Ice Sheet instability and changes in marine ice extent between 8 and 7 ka. Continuous in situ shallow-water reef growth in Florida during this interval precludes the occurrence of exceedingly rapid rates of sea-level rise and is consistent with the North Atlantic record of deglaciation from 9 to 7 ka. Gaps in the early Holocene sea-level records for Florida and the Caribbean are thus more likely to be artifacts of limited sampling and/or core coverage, and not necessarily a result of drowning.¹";
- 2243 s[2240] = "WEISBORD N.E. (1971).- Corals from the Chipola and Jackson Bluff Formations of Florida.- State of Florida, Dept. of Natur. Res., Bureau of Geol., Geological Bull. 53; 100 pp.- **FC&**P 1-2, p. 24, ID=4692^Topic(s): monograph; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: USA, Florida^^1";
- 2244 s[2241] = "MITCHELL-TAPPING H.J. (1980).- Use of stromatoporoids as an indicator of a coral reef paleoenvironment.- *Florida Scientist* 43: 14-19.- **FC&**P 9-2, p. 51, ID=0371^Topic(s): ecology; Stromatoporoidea Anthozoa; Systematics: Porifera Cnidaria; Stratigraphy: ; Geography: USA, Florida^The paper reviews recent work on the affinities of stromatoporoids to sponges and on their paleoecological position. The author concludes that stromatoporoids occur in reef environments.¹";
- 2245 s[2242] = "PICKERILL R.K., HARLAND T.L. (1984).- Middle Ordovician microborings of probable sponge origin from eastern Canada and southern Norway.- *Journal of Paleontology* 58, 3: 885-891.- **FC&**P 13-2, p. 59, ID=0609^Topic(s): microborings; boring Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Canada, Norway^Identical microborings of Middle Ordovician age are described from eastern Canada and southern Norway. On the basis of size, shape, mode and angle of branching, and overall pattern and minor features, it is concluded that they are attributable to endolithic sponges. Endolithic sponges were more widespread in the Middle Ordovician than previously assumed and were not restricted to reef niches. (Original summary)This paper is mentioned here, because microborings very often occur in coral skeletons.¹";
- 2246 s[2243] = "BEAUVAIS L. (1977).- Une nouvelle espece de Madreporaire dans le Jurassique superieur du Groenland et de l''Ecosse. Implications paleogeographiques.- *Geobios* 10, 1: 135-140.- **FC&**P 6-1, p. 5, ID=5475^Topic(s): new taxa, biogeography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Greenland, Scotland^Description d''Enallocoenia callomoni n.sp., considérations sur la ligne du rivage oxfordien dans l''Atlantique

- Nord-Est.^1";
- 2247 s[2244] = "KOBLOK D.R. (1984).- A new compound skeletal organism from the Rosella Formation (Lower Cambrian).- Journal of Paleontology 58, 3: 703-708.- FC&P 13-2, p. 59, ID=0608^Topic(s): problematica; Anthozoa?, Rosellanta; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: Canada, British Columbia^A new skeletal organism, Rosellatana jamesi n.gen., n.sp., has been found in the Lower Cambrian (Bonnia-Olenellus Zone) Rosella Formation (Atan Group) exposed in the Cassiar Mountains of northern British Columbia.The organisms produced a compound cerioid skeleton comprising regular to rounded polygonal tubes without tabulae but with up to two septa-like partitions; these probably were used "in axial bipartite division. The skeleton is similar in important respects to some Ordovician skeletal Zoantharia. As a result the fossil is assigned tentatively to the Zoantharia within the Anthozoa.^1";
- 2248 s[2245] = "HICKS M. (2006).- A new genus of Early Cambrian coral in Esmeralda County, southwestern Nevada.- Journal of Paleontology 80, 4: 609-615.- FC&P 34, p. 44, ID=1250^Topic(s): coralomorpha; Anthozoa Harklessia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: USA, Nevada^Numerous Early Cambrian corals or "coralorphs", as they are often classified, are recorded from North America, Australia, and Siberia. A new Early Cambrian coral, Harklessia yuenglingensis n.gen. et sp., is found in conjunction with archaeocyathan-microbial reef in Esmeralda County, southwestern Nevada. The coral-bearing reefs are within quartzitic, trilobite-rich packstone beds in the upper portion of the Harkless Formation (Bonnia-Olenellus Zone). Coralla are constructed by subpolygonal to polygonal, cerioid, close-packed corallite tubes. Coralla average 12cm in height by 18cm in diameter with individual corallite tubes ranging from 1.2 to 3.2mm in diameter. Corallites are greater than 25mm in length. Septa and tabulae are not present. Many of the Early Cambrian corals previously described have attributes of the class Anthozoa and subclass Zoantharia, with some specific similarities to tabulate corals. Harklessia yuenglingensis is placed confidently within the class Anthozoa, subclass Zoantharia because its morphological characteristics indicate an affinity to true corals, but whether H. yuenglingensis is a tabulate coral remains uncertain.^1";
- 2249 s[2246] = "TYNAN M. (1981).- Microfossils from the Lower Cambrian Campito and Poleta Formation, White Inyo Mountains, California.- US Geol. Surv. Open File Report 81-743 [Second International Symposium on the Cambrian System, Golden, Colorado]: 231.- FC&P 11-1, p. 56, ID=6130^Topic(s): paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: USA, California^[the author proposed a new order of Zoantharia for "septate tubes" which are interpreted as solitary corallites of a maximum diameter of 1mm for 5mm in length; septal insertion pattern is said bilateral and cyclic as in scleractinian corals, but the corallites apparently lack any axial structures, tabulae, dissepiments, septal grooves, counter cardinal septum and so it is highly dubious if they constitute "the oldest occurrence of stony corals from the United States"]^1";
- 2250 s[2247] = "TYNAN M.C. (1983).- Coral-like microfossils from the Lower Cambrian of California.- Journal of Paleontology 57, 6: 1188-1211.- FC&P 13-1, p. 23, ID=0401^Topic(s): microfossils, new order; microfossils coral - like; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: USA, California^A distinctive group of longitudinally septate, bilaterally symmetrical, phosphatic, tubular microfossil, the Paiutiida n.ord., have been discovered to occur in archaeocyathid-bearing carbonate units of the Lower Cambrian Campito and Poleta formations, white Mountains, Inyo County, California. Possible anthozoan affinity is suggested for the organisms that once occupied these coral-like microfossils. The

tubules are solitary, commonly cylindrical, and rarely exceed a maximum of 1 mm in diameter, or 5 mm in length. A thin epitheca-like layer may be present, and the exterior tubule surface is smooth or weakly annulate. The tubule wall is 0.02–0.05 mm thick and composed of fluorapatite. Tubules are characterized by the presence of Although fundamental compositional and structural differences in skeletal morphology exist among the several Cambrian coral-like groups, and between the later evolved skeleton-secreting anthozoan orders, the basic coral architectural plan is recognizable. It is suggested that all of the groups stem from a common Precambrian ancestral form, but that each arose iteratively from later evolved anemone stocks. Thus, fossils assigned to the new order Paiutiida are included in the subphylum Cnidaria, and questionably assigned to the class Anthozoa. Subclass-level assignment remains uncertain due to the unique compositional and morphological characteristics of the paiutiid skeleton. *Paiutitubulites variabilis* n.gen., n.sp., and *P. durhami* n.sp. are recharacterized by the presence of well-developed secondary septa (secondary as defined herein); *Cambrotubulites trisepta* n.gen., n.sp. and specimens assigned to the genus lack secondary septa. These genera and forms questionably assigned to them are characterized by the absence or weak development of septal grooves., which is a diagnostic feature of the *Paiutitubulitidae* n.fam. The *Paiutitubulitidae* is defined to exclude problematical tubules:— displaying a septal arrangement pattern that is convergent upon that of cnidarian groups that appear to display tetrameral symmetry. These problematical specimens are considered as a separate species, and familial-level classification is uncertain pending further study, although assignment to the *Paiutiida* is unquestioned. (Original summary)

- 2251 s[2248] = "READ B.C. (1980).- Lower Cambrian Archeocyathids buildups Pelly Mountains-Yukon.- Geological Survey of Canada Paper 78-18: 1-53.- FC&P 9-1, p. 51, ID=0300^Topic(s): reefs; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Canada, Yukon Territory^Inventory of Archeocyaths reefs within the region concerned, without determination of the fauna.^1";
- 2252 s[2249] = "MANSY J.L., DEBRENNE F., ZHURAVLEV A.Yu. (1993).- Calcaires a archeocyathes du Cambrien inferieur du Nord de la Colombie britannique (Canada). Implications paleogeographiques et precisions sur l'extension du continent americano-koryakien.- Geobios 16, 6: 41 pp., 11 figs., 2 tabs., 4 pls.- FC&P 23-1.1, p. 84, ID=4193^Topic(s): geography; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Canada, British Columbia^1";
- 2253 s[2250] = "STELCK C.R., HEDINGER A.S. (1975).- Archeocyathids and the Lower Cambrian continental shelf of the Canadian Cordillera.- Canadian Journal of Earth Sciences 12: 2014-2020.- FC&P 5-2, p. 12, ID=5452^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Canada W^Paléogéographie des Archéocyathes, délimités dans la région des Cordillères de l'Ouest du Canada et du Yukon. Pas de nouvelles formes décrites.^1";
- 2254 s[2251] = "DEBRENNE F., MANSY J.L. (1981).- Archeocyaths occurrences and tectonic movements in the Canadian Cordillera.- US Geol. Surv. Open File Report 81-743: 65.- FC&P 11-1, p. 55, ID=6124^Topic(s): ; Archaeocyatha geology; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Canada W^1";
- 2255 s[2252] = "HAMPTON III G.L. (1979).- Stratigraphy and Archeocyathans of Lower Cambrian strata of Old Douglas Mountain, Stevens County, Washington.- Brigham Young University, Geology Studies 26, 2: 27-50.- FC&P 11-1, p. 55, ID=6125^Topic(s): biostratigraphy, paleogeography; Archaeocyatha stratigraphy; Systematics:

- Porifera; Archaeocyatha; Stratigraphy: Cambrian L;
Geography: USA, Washington^^1";
- 2256 s[2253] = "RIGBY J.K., GUNTHER L.F., GUNTHER F. (1997).- The first occurrence of the Burgess Shale Demosponge *Hazelia palmata* Walcott 1920, in the Cambrian of Utah.- *Journal of Paleontology* 71, 6: 994-997.- FC&P 27-1, p. 105, ID=3856^Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Cambrian M; Geography: USA, Utah^A single specimen of *Hazelia palmata* Walcott 1920, was collected from the Middle Cambrian Marjum Formation near Marjum Pass, in the central House Range, western Utah. This is a first occurrence of the species outside the Burgess shale region of British Columbia, Canada. The flattened oval impression of the monaxonid demosponge shows characteristic tufts and spicule structures of the species.^1";
- 2257 s[2254] = "RIGBY J.K., CHURCH S.B. (1990).- A New Middle Cambrian Hexactinellid, *Ratcliffespongia wheeleri*, from western Utah, and Skeletal Structure of *Ratcliffespongia*.- *Journal of Paleontology* 64, 3: 331-334.- FC&P 19-2.1, p. 39, ID=2763^Topic(s): new taxon; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cambrian M; Geography: USA, Utah^A single specimen of *Ratcliffespongia wheeleri* n.sp. from the upper part of the Middle Cambrian Wheeler Shale in the Drum Mountains of western Utah shows two distinct skeletal layers in the limonite-replaced fragment. The probable inner layer has large, circular to elliptical parietal gaps, some of which are aligned horizontally(?); gaps are outlined by long rays of hexactine-based spicules in irregular orientation and spacing. The probable outer layer has several ranks of stauracts in regular reticulation and ranking, all at approximately 45 degrees to the probably horizontal direction. The specimen is part of a probably shallow turbidite-transported assemblage from the margin of the House Range embayment.^1";
- 2258 s[2255] = "WAGGONER B.M., COLLINS A.G. (1995).- A new chondrophorine (Cnidaria, Hydrozoa) from the Cadiz Formation (Middle Cambrian) of California.- *Paläontologische Zeitschrift* 69, 1-2: 7-17.- FC&P 24-2, p. 91, ID=4595^Topic(s): new taxa; Hydrozoa, Chondrophorina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cambrian M; Geography: USA, California^We describe a new species of chondrophorine hydrozoan, *Palaelophacmaea valentinei* sp.nov., from the early Middle Cambrian part of the Cadiz Formation of the Marble Mountains of southeastern California. This find extends the stratigraphic range of this genus into the early Middle Cambrian and its geographic range into the western United States. We review various chondrophorine-like fossils and present a tentative chondrophorine phylogeny in light of this find.^1";
- 2259 s[2256] = "DEBRENNE F., GANGLOFF R.A., LAFUSTE J. (1987).- *Tabuloconus* Handfield: microstructure and its implication in the taxonomy of primitive corals.- *Journal of Paleontology* 61, 1: 1-9.- FC&P 16-1, p. 56, ID=1943^Topic(s): problematica, microstructure; Cnidaria, *Tabuloconus*; Systematics: Cnidaria; Stratigraphy: Cambrian L; Geography: USA, Alaska^Numerous specimens of *Tabuloconus* Handfield, 1969, have been collected in carbonate buildups within the Adams Argillite (Early Cambrian, Tatonduk area, Alaska). The wall structure of this form has been investigated, along with contemporaneous archaeocyathids and algae, through the use of polished ultra-thin sections (2-3 µm thick) and scanning electron microscopy. The results of this microstructural comparison indicate that despite diagenetic alteration *Tabuloconus* has a skeleton that is unlike any presently known and is quite distinct from associated algae and archaeocyathids. It is more elaborate than that found in the archaeocyathids but has not reached the stage of complexity seen in the primitive coral *Cothonion* Jell & Jell, 1976. The presence of some elongated units may represent an initial step towards the fibrous skeleton typical of Paleozoic corals. This study shows that even though

- diagenesis alters the original microstructure of calcareous skeletons, the resultant fabric and detailed structures can be useful in systematic descriptions. *Tabuloconus* is removed from the Gastroconidae Korda due to the presence of rudimentary septa and constitution of the tabularium. A number of species assigned to the genus *Bacatocyathus* Vologdin and included within the Archaeocyatha appear to be examples of *Tabuloconus* or very close relatives. An emended description of *Tabuloconus kordae*, the type species, is proposed.¹";
- 2260 s[2257] = "DEBRENNE F., GANDIN A., GANGLOFF R.A. (1990).- Analyse sedimentologique et paleontologique de calcaires organogenes du Cambrien inferieur de Battle Mountain (Nevada, USA).- Annales de Paléontologie (Vert.-Invert.) 76, 2: 73-119.- FC&P 20-1.1, p. 81, ID=2885^Topic(s): carbonates; organogenic limestones; Systematics: ; Stratigraphy: Cambrian L; Geography: USA, Nevada^^1";
- 2261 s[2258] = "PEDDER A.E.H. (2006).- Zoogeographic data from studies of Palaeozoic corals of the Alexander terrane, southeastern Alaska and British Columbia.- Geological Association of Canada, Special Paper 46: 29-57.- FC&P 35, p. 55, ID=2342^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: America NW^^1";
- 2262 s[2259] = "CHURKIN M.jr (1975).- Geologic and paleogeographic setting of Paleozoic corals in Alaska.- US Geol. Surv. Prof. pap. 823-A: 1-11.- FC&P 5-1, p. 31, ID=5375^Topic(s): geology, geography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: USA, Alaska^[preliminary correlations of coral-bearing strata of Ordovician to Permian age in Alaska with neighbouring parts of Canada and NE USSR]^1";
- 2263 s[2260] = "CHURKIN M.jr (1975).- Palaeozoic corals of Alaska, their stratigraphic occurrence and correlation.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 84-95.- FC&P 5-2, p. 5, ID=5394^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: USA, Alaska^[field relationships of Alaskan Palaeozoic corals with comments on palaeoecology and palaeogeography]^1";
- 2264 s[2261] = "SOJA C.M. (1990).- Bathymetric gradients within a Paleozoic island arc, southeastern Alaska (Alexander terrane).- American Association of Petroleum Geologists Bulletin 74: 767-768.- FC&P 21-1.1, p. 60, ID=3277^Topic(s): bathymetry; bathymetry; Systematics: ; Stratigraphy: Paleozoic; Geography: USA, Alaska Alexander terrane^^1";
- 2265 s[2262] = "RIGBY J.K. (1995).- The hexactinellid sponge *Cyathophycus* from the Lower-Middle Ordovician Vinini Formation of central Nevada.- Journal of Paleontology 69, 3: 409-416. www.jstor.org/pss/1306316.- FC&P 25-1, p. 45, ID=3045^Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Ordovician M; Geography: USA, Nevada^The new species *Cyathophycus pseudoreticulatus* and a fragment of *Cyathophycus reticulatus?* Walcott, 1879, are described and reported from the lower part of the Upper Member of the Vinini Formation from black shale of late whiterockian age. The sponges were collected from the north fork of Vinini Creek, in the north-central part of the Roberts Mountains, Eureka County, Nevada. [original abstract]^1";
- 2266 s[2263] = "RIGBY J.K., JAMISON P. (1994).- Lithistid sponges from the Late Ordovician Fish Haven Dolomite, Bear River Range, Cache County, Utah.- Journal of Paleontology 68, 4: 722-726.- FC&P 23-2.1, p. 61, ID=4419^Topic(s): taxonomy; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: Ordovician U; Geography: USA, Utah^The tricanoclad demosponge *Hindia sphaeroidalis* Duncan 1879, is reported as a common silicified sponge in the basal dolomite of the Deep Lakes Member of the Upper Ordovician Fish Haven Formation of northeastern Utah for the

- first time. A small juvenile orchoclad anthaspidellid, *Hudsonospongia?* sp., is also the first of that family reported from Fish Haven beds and the Deep Lakes Member. Both taxa are from localities on the eastern slope of Mount Magog, north of Tony Grove Lake, in the Bear River Range, Cache County, east of Logan, Utah.¹";
- 2267 s[2264] = "ELIAS R.J. (1985).- Solitary rugose corals of the Upper Ordovician Montoya group, Southern New Mexico and westernmost Texas.- Memoir Paleontological Society 16: 1-58.- FC&P 14-2, p. 32, ID=0946Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: USA, New Mexico, TexasThe Upper Ordovician (middle Edenian to upper Richmondian) Montoya Group of southern New Mexico and westernmost Texas comprises, in ascending order, the Second Value Dolomite, Aleman Formation, and Cutter Dolomite. Solitary rugose corals in the Second Value are *Grewingia robusta* (Whiteaves, 1896), *Bighornia* sp. cf. *B. patella* (Wilson, 1926), *Streptelasma divaricans* (Nicholson, 1875), a new species of *Neotryplasma*, and *Salvadorea?* ssp. A and B. *Salvadorea kingae* Nelson, 1981, *G. franklinensis* n.sp., and *G. crassa alemanensis* n. subsp. occur in the Aleman. Taxa found in the Cutter are *S. kingae cutterensis* n. subsp., *G.* sp. cf. *G. franklinensis*, and *B.* sp. cf. *B. patella*. (Extract from original summary)¹";
- 2268 s[2265] = "ELIAS R.J., POTTER A.W. (1984).- Late Ordovician solitary rugose corals of the Eastern Klamath Mountains, Northern California.- Journal of Paleontology 58: 1203-1214.- FC&P 14-1, p. 45, ID=0960Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: USA, California¹";
- 2269 s[2266] = "ELIAS R.J. (1996).- Corals of the Advance Formation (upper Middle Ordovician), northern Rocky Mountains of British Columbia.- Geol. Surv. Canada Bull. 491: 78-93.- FC&P 27-1, p. 69, ID=3663Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Canada, British ColumbiaAll corals known from slope deposits of the Advance Formation are solitary rugosans. *Paliphyllum norfordi* n.sp., represented by a single specimen, and *Grewingia burdenetisis* n.sp., which is more common, are the only identifiable species. Diversity and abundance are low compared with the taxonomically different coral fauna in approximately coeval shelf deposits of the Johnson Spring Formation, California. *Grewingia burdenensis* is considered to be the ancestor of *Grewingia robusta*, a Late Ordovician species that was widely distributed within the Red River-Stony Mountain Province of cratonic North America. *Paliphyllum norfordi* is the earliest paliphyllid worldwide, and the only rugosan with dissepiments known from the Middle Ordovician of North America. It appears to be most similar to some representatives of *Paliphyllum* in the Dolbor Formation (uppermost Caradoc-lowermost Ashgill), Siberian Platform. Coralla of *G. burdenensis* were subject to little current action or transportation. This species generally lived freely on soft substrates; sediment cohesion may have been low. In one stratigraphic interval, the presence of specimens with attachment structures suggests that the substrate may have been unfavourable for the coral's normal mode of life, or that more objects suitable for attachment were available than usual. The corallum of *P. norfordi* was subject to higher current energy and possibly transportation, and / or longer exposure before final burial. This coral was overturned, possibly due to current activity or substrate instability or both, and redirected its growth upward several times during life. It is the earliest North American solitary rugosan that had the ability to resume upward growth after being fully overturned.¹";
- 2270 s[2267] = "ELIAS R.J., POTTER A.W., WATKINS R. (1994).- Late Ordovician rugose corals of the northern Sierra Nevada, California.- Journal of Paleontology 68, 1: 164-168.- FC&P 23-1.1, p. 62, ID=4047Topic(s): ; Rugosa; Systematics: Cnidaria;

- Rugosa; Stratigraphy: Ordovician U; Geography: USA, California^[Description of Grewingkia penobscotensis Elias 1982 is given] ^1";
- 2271 s [2268] = "RIGBY J.K., POTTER A.W. (1986).- Ordovician sphinctozoan sponges from eastern Klamath Mountains, Northern California.- Journal of Paleontology .- FC&P 15-2, p. 45, ID=0753^Topic(s): systematic position; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Ordovician; Geography: USA, California^Cliefdenella is regarded as an Ordovician sphinctozoan, not a stromatoporoid.^1";
- 2272 s [2269] = "RIGBY J.K., POTTER A.W., BLODGETT R.B. (1988).- Ordovician sphinctozoan sponges of Alaska and Yukon Territory.- Journal of Paleontology 62, 5: 731-746.- FC&P 18-1, p. 50, ID=2295^Topic(s): ; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Ordovician; Geography: America N, Arctic^^1";
- 2273 s [2270] = "STOCK C.W. (1981).- Cliefdenella alaskaensis n.sp. (Stromatoporoidea) from the Middle / Upper Ordovician of central Alaska.- Journal of Paleontology 55: 998-1005.- FC&P 11-2, p. 37, ID=1862^Topic(s): ; stroms, Cliefdenella; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician M/U; Geography: USA, Alaska^This is the first occurrence of the genus in North America. It indicates a middle Caradocian to middle Ashgillian age for the rocks bearing this fossil.^1";
- 2274 s [2271] = "LEMONE D.V. (1996).- Pulchrilamina, the Early Ordovician labechiid stromatoporoid and the El Paso Group bioherms.- West Texas Geological Society Publication No. 96-100: 141-148 [West Texas Geological Society, 1996 Annual Field Trip Guidebook].- FC&P 29-1, p. 46, ID=1527^Topic(s): field trip guide; stroms, Labechiidae; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician L; Geography: USA, Texas^The systematic position of the stromatoporoids is reviewed and the position of webby (1986) that Pulchrilamina is a labechiid is accepted. The Pulchrilamina-mounds of the McKelligon Formation are described and their development in five sedimentological stages is reconstructed.^1";
- 2275 s [2272] = "RIGBY J.K., POTTER A.W., ANDERSON N.C. (2008).- Ordovician sponges from the Montgomery Limestone, Taylorsville area, northern Sierra Nevada, California.- Bulletin of Geosciences 83, 3: 299-310.- FC&P 36, p. 40, ID=6408^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: USA, California^The modest faunule of silicified fossil demosponges, documented here, was recovered from the Upper Ordovician Montgomery Limestone in the Taylorsville area, in the northern Sierra Nevada of northern California. Included are specimens of the ceractinomorph angullogiid Amblysiphonelloidea tubulara Rigby & Potter 1986, the girtyocoelliid Girtyocoeliana epiporata (Rigby & Potter 1986), the seburgasiid Amblysiphonella sp., and the cliefdenellids Cliefdenella alaskaensis Stock 1981, and Rigbyetia obconica (Rigby & Potter 1986). In addition, specimens of the vaceletiid Corymbospongia adnata Rigby & Potter 1986, are described and figured. The assemblage is closely related to faunules of sphinctozoan sponges earlier reported by Rigby & Potter (1986) from the eastern Klamath Mountains, to the west in northern California. [original abstract]^1";
- 2276 s [2273] = "POTTER A.W., WATKINS R., BOUCOT A.J., ELIAS R.J., FLORY R.A., RIGBY J.K. (1990).- Biogeography of the Upper Ordovician Montgomery Limestone, Shoo Fly Complex, northern Sierra Nevada, California, and comparisons of the Shoo Fly Complex with the Yreka terrane.- Geological Society of America, Special Paper 255 [Harwood D.S. & Miller M.M. (eds): Paleozoic and Early Mesozoic Paleogeographic Relations; Sierra Nevada, Klamath Mountains, and Related Terranes]: 33-41.- FC&P 20-1.1, p. 17, ID=2793^Topic(s): biogeography; biogeography; Systematics:

- ; Stratigraphy: Ordovician U; Geography: USA, California^1";
- 2277 s[2274] = "BOCKELIE J.F. (2006).- Bjorn Neuman in memoriam.- FC&P 34: 15-16.- FC&P 34, p. 15, ID=7251^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[short obituary note of B. Neuman]^1";
- 2278 s[2275] = "BUTTLE C.J., ELIAS R.J, NORFORD B.S. (1988).- Upper Ordovician to Lowermost Silurian solitary rugose corals from the Beaverfoot Formation, southern Rocky Mountains, British Columbia and Alberta.- Contr. Canad. Paleont., Geol. Surv. Canada 379: 47-91.- FC&P 17-2, p. 27, ID=2181^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U - Silurian L; Geography: Canada, Rocky Mts^Salvadorea distincta distincta (Wilson 1926), Salvadorea sp. 2 of Nelson 1981, Bighornia patella (Wilson 1926), B. cf. B. bottei Nelson 1963, Grewingkia haysii haysii (Meek 1865), and Deiracorallium prolongatum (Wilson 1926) are present within the Upper Ordovician Bighornia-Thaerodonta Zone of the Beaverfoot Formation. Bighornia wilsonae sp.nov., is recognized from the Montoya Group (Second Value Dolomite) of New Mexico and Texas, and the Red River Formation (Selkirk Member) of southern Manitoba. Paleocological analyses suggest that Grewingkia haysii haysii and Deiracorallium prolongatum inhabited higher energy environments than Salvadorea distincta distincta and Bighornia patella, but all taxa probably lived in close proximity. The Beaverfoot Formation accumulated within the Red River - Stony Mountain Solitary Coral Province. Solitary rugosan species in the Bighornia-Thaerodonta Zone represent an "epicontinental" assemblage, and all occur in the Hudson Bay Basin. The absence of "continental margin" taxa could indicate that the formation was deposited some distance from the edge of the continent, or could reflect environmental factors or geographic barriers. The lowest occurrence of solitary Rugosa defines the base of the Bighornia-Thaerodonta Zone in the Beaverfoot Formation (Whisky Trail Member). Elsewhere such Salvadorea-dominated coral assemblages first appear in Maysvillian to middle Richmondian strata. The zone has been traced to 420 feet (128 m) above the base of the Beaverfoot at Akutlak Creek; its top is probably Richmondian but could be Gamachian. Solitary Rugosa in the thick, combined "poorly fossiliferous interval" and Eostropheodonta Zone of the Beaverfoot Formation are completely different from those of the underlying Bighornia-Thaerodonta Zone. Rhexmaphyllum could be Upper Ordovician (Richmondian, Gamachian) to Lower Silurian (Lower Llandovery). Dinophyllum could be Lower to Middle Llandovery. Streptelasma is also present.^1";
- 2279 s[2276] = "OLIVER W.A.jr, MERRIAM C.W., CHURKIN M.jr (1975).- Ordovician, Silurian and Devonian corals of Alaska.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 95-103.- FC&P 5-2, p. 7, ID=5380^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician - Devonian; Geography: USA, Alaska^A general record of Alaskan Ordovician-Devonian corals faunas at the generic level.^1";
- 2280 s[2277] = "OLIVER W.A.jr, MERRIAM C.W., CHURKIN M.jr (1975).- Ordovician, Silurian and Devonian corals of Alaska.- US Geol. Surv. Prof. Paper 823-B: 1-44.- FC&P 5-1, p. 33, ID=5388^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician - Devonian; Geography: USA, Alaska^For the first time the paper contains summarized and annotated lists of rugose, tabulate and heliolitoid corals of Alaska, ranging from Ordovician to Devonian beds. Many of these corals are illustrated. The very useful paper is a great help for the knowledge of coral assemblages in Alaska and on the other hand it gives many data for coral systematics and also geographical distribution of particular taxa.^1";
- 2281 s[2278] = "PEDDER A.E.H. (1976).- Initial records of two unusual late Silurian rugose coral genera from Yukon territory.- Papers of

geological Survey Canada 76-1B: 285-286.- FC&P 7-2, p. 20, ID=5633^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Canada, Yukon Territory^[new records of Njajuphyllum sp. n. and Yassia sp. n.]^1";

2282 s[2279] = "SOJA C.M. (1994).- Significance of Silurian stromatolite-sphinctozoan reefs.- Geology 22: 355-358.- FC&P 23-1.1, p. 92, ID=4212^Topic(s): stromatolite-sphinctozoan; reefs; Systematics: Porifera Cyanophyta; Sphinctozoa; Stratigraphy: Silurian; Geography: USA, Alaska Alexander terrane^Upper Silurian (Ludlovian) limestones from the Heceta Formation of southeastern Alaska (Alexander terrane) contain skeletal stromatolite reefs and stromatolite mud mounds that were colonized by sphinctozoa sponges. Internal growth cavities, synsedimentary marine cements, and stromatolite debris flows in slope deposits indicate that these reefs grew with relief at the seaward margin of the carbonate platform. The biotas under study have evolutionary significance because they contain the earliest widespread reef-building sphinctozoans and represent a previously unrecognized stage in the evolution of Phanerozoic microbial-metazoan (predominantly poriferan) reefs. On the basis of the presence of Silurian stromatolite-sphinctozoan deposits in southeastern Alaska, southwestern and west-central Alaska, and the Urals, this study also establishes a Late Silurian palaeobiogeographic connection between the Alexander terrane, cratonic northwestern North America, and the Uralian region.^1";

2283 s[2280] = "SOJA C M., MITCHELL M., NEWTON A.J., VENDETTI J., VISAGGI C., ANTOSHKINA A.I., WHITE B. (2003).- Paleoecology of sponge-?hydroid associations in Silurian microbial reefs.- Palaios 18, 3: 225-235.- FC&P 33-1, p. 99, ID=7242^Topic(s): ecology, parasitism?; sponges; Systematics: Porifera; Stratigraphy: Silurian; Geography: USA, Alaska, Russia^Microbial boundstones from Alaska and Russia yield new insights into the paleoecology of silurian biotas that inhabited stromatolite reefs. These high-energy reefs were built along the Uralian Seaway in the Late Silurian by a diverse suite of microorganisms in association with accessory metazoans, predominantly sphinctozoan sponges. Within the stromatolite framework, three species of small, solitary, sphinctozoans (aphrosalpingids) encrusted a variety of hard substrates, mostly skeletal remains but also microbial laminae and cavity surfaces. Fossils encrusted by the sponges include the problematic hydroid *Fistulella*, possible stromatoporoids (re-crystallized), crinoids, the possible cyanobacterium *Ludlovia*, corals, and unidentifiable shelly debris. In addition to the ubiquitous microbial laminae, the sponges, *Fistulella*, and ?stromatoporoids were less commonly encrusted by *Ludlovia*, *Renalcis*, or crinoids. Well-developed attachment surfaces, including enlarged holdfasts, allowed the sponges to achieve stability on the seafloor after larvae settled randomly on available hard surfaces. A greater incidence of sponge encrustations on *Fistulella* than on other organisms indicates that some of the sponges may have enjoyed a commensalistic relationship while attached as juveniles to a living substrate. The sponges orientation on *Fistulella* in the sediment suggests that the relationship between the two taxa may have become parasitic, whereby the weight of the sponges caused *Fistulella* to collapse into the muddy substrate. Recognition of the intimate growth relationships shared by Silurian sphinctozoans, *Fistulella*, and other organisms expands the fossil record of encrusting sponges, identifies a novel sponge-?hydroid association, and reveals organismal responses to competition for space in mid-Paleozoic microbial reefs. [original abstract]^1";

2284 s[2281] = "SOJA C.M. (1990).- Island arc carbonates from the silurian Heceta Formation of SE Alaska (Alexander Terrane).- Journal of Sedimentary Petrography 60: 235-249.- FC&P 19-2.1, p. 42, ID=2778^Topic(s): carbonates; island arc carbonates;

- Systematics: ; Stratigraphy: Silurian; Geography: USA, Alaska Alexander terrane^The succession includes extensive stromatoporoid limestones of reefal facies that slumped into the basin of deposition, and beds rich in amphiporids.^1";
- 2285 s[2282] = "SOJA C.M. (1991).- Origin of Silurian reefs in the Alexander terrane of southeastern Alaska.- Palaios 06: 111-125.- FC&P 23-2.1, p. 67, ID=4434^Topic(s): reefs origins; reefs, geomorphology; Systematics: ; Stratigraphy: Silurian; Geography: USA, Alaska Alexander terrane^Lower to Upper Silurian (upper Llandovery-Ludlow) limestones belonging to the Heceta Formation record several episodes of reef growth in the Alexander terrane of southeastern Alaska. As the oldest carbonates of widespread distribution in the region, the Heceta limestones represent the earliest development of a shallow-marine platform within the Alexander arc and the oldest foundation for reef evolution. The excellent preservation of biostromes, fringing and barrier reefs, and a mud mound in shelf, shelf margin, and slope deposits, respectively, contrasts with the restricted occurrence of many marine sediments that originated within other island arcs. Hence, these deposits provide important insights into the dynamic processes, styles, and bathymetry associated with reef growth in tectonically active oceanic islands. Massive stromatoporoids, corals, and red algae are preserved in fragmental rudstones and represent a fringing reef that formed at the seaward edge of the incipient marine shelf. Accessory constituents in this reef include crinoids and the cyanobacterium Girvanella. Small biostromes were constructed by ramose corals and stromatoporoids on oncolitic substrates in backreef or lagoonal environments. These buildups were associated with low-diversity assemblages of brachiopods and with gastropods, amphiporids, calcareous algae and cyanobacteria. Microbial boundstones reflect the widespread encrustation of cyanobacteria and calcified rnicroproblematica on shelly debris as stromatolitic mats that resulted in the development of a stromatactoid-bearing mud mound and a barrier reef complex. Epiphytaceans, other microbes, and aphrosalpingid sponges were the primary framebuilders of the barrier reefs. These buildups attained significant relief at the shelf margin and shed detritus as slumped blocks and debris flows into deep-water sites along the slope. The similarity of these stromatolitic-aphrosalpingid reefs to those from Siluro-Devonian strata of autochthonous southwestern Alaska suggests paleobiogeographic ties of the Alexander terrane to cratonal North America during the Silurian.^1";
- 2286 s[2283] = "SOJA C.M., WHITE B., ANTOSHKINA A., JOYCE S., MAYHEW L., FLYNN B., GLEASON A. (2000).- Development and decline of a Silurian stromatolite reef complex, Glacier Bay National Park, Alaska.- Palaios 15, 4: 273-292.- FC&P 31-1, p. 73, ID=7112^Topic(s): reef complexes, stromatolites; stromatolite reefs; Systematics: ; Stratigraphy: Silurian; Geography: USA, Alaska Alexander terrane^In Glacier Bay, Alaska, Silurian limestones record the development and demise of a stromatolite reef complex in the Alexander terrane. These microbial deposits are of regional and paleontological significance because they contain paleogeographically distinctive biotas and yield important insights into Phanerozoic stromatolites that inhabited normal-marine subtidal environments. Willoughby limestones exposed on Drake Island reveal that stromatolite growth at the platform margin influenced platform dynamics with the protection of peritidal and lagoonal habitats behind a reef-fringed rim, which experienced early lithification by the precipitation of syndimentary marine cements. [initial part of extensive abstract]^1";
- 2287 s[2284] = "RIGBY J.K., MAHER B.J., BROWNE Q.J. (1991).- New hexactinellids from the Siluro-Devonian of the Snake Mountains, Elko County, Nevada, and a new locality of Gabelia.- Journal of Paleontology 65, 5: 709-714.http://www.jstor.org/pss/1305800.- FC&P 20-2, p. 71, ID=2974^Topic(s): new taxa; Porifera

- Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Silurian / Devonian; Geography: USA, Nevada^New specimens of Gabelia pedunculus Rigby & Murphy 1983, and of the new species Gabelia gigantes and Gabelia fascicula are described from the Siluro-Devonian(?) Roberts Mountains Formation from Loomis Creek Canyon in the Snake Mountains, northeastern Elko County, Nevada. Stalk fragments of G. pedunculus are similar to the holotype from the northern Roberts Mountains, Eureka County, Nevada. Gabelia gigantes n.sp. is a large species with skeletal elements in the stalk twice the size of elements in G. pedunculus. Gabelia fascicula n.sp. is based on thick-walled, cup-like upper parts where gastral layer of coarse, diagonally oriented spicules contrasts to a dermal layer of regular vertical and horizontal bundles of hexactine-based spicules of at least two orders around parietal gaps. The specimens are all part of a probable transported seafloor assemblage.^1";
- 2288 s[2285] = "MEHL D., RIGBY K.J., HOLMES S.R. (1993).- Hexactinellid Sponges from the Silurian - Devonian Roberts Mountains Formation in Nevada and Hypotheses of Hexactine - Stauractine Origin.- Brigham Young University, Geology Studies 39: 101-124.- FC&P 22-1, p. 49, ID=3420^Topic(s): taxonomy, phylogeny; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Silurian Devonian; Geography: USA, Nevada^A moderately diverse fauna of hexactinellid sponges is described from the Devonian(?) upper part of the Silurian - Devonian Roberts Mountain Formation from a locality in Starvation Canyon in the Independence Mountains, Elko County, Nevada. Diagoniella nevadensis Rigby & Stuart 1988, Protospongia conica Rigby & Harris 1979, Protospongia spina n.sp., Protospongia sp. 1, Protospongia sp. 2, and Gabelia pedunculus Rigby & Murphy 1983, are present. These were apparently transported, size sorted, and buried by distal turbidity currents. Many samples have monospecific bedding plane "faunules", which accumulation [?]. Stratigraphic and phylogenetic systematic evidence for increasing complexity versus simplification for the origin of hexactines and stauractines are summarized and discussed; hexactines as old as stauractines appear to have been the basic early spicule at about the beginning of the Cambrian, although evidence is still equivocal.^1";
- 2289 s[2286] = "CLOUGH J.G., BLODGETT R.B. (1985).- Comparative study of the sedimentology and paleoecology of middle Paleozoic algal and coral-stromatoporoid reefs in Alaska.- Proceedings 5th International Coral Reef Conference, Tahiti 2: 78.- FC&P 14-2, p. 44, ID=0933^Topic(s): ; algal-strom-coral reefs; Systematics: algae Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Paleozoic M; Geography: USA, Alaska^^1";
- 2290 s[2287] = "RIGBY J.K., STUART R.J. (1988).- Fossil Sponges from the Silurian-Devonian Robert Mountains Formation in Northeastern Nevada.- Mem. New Mexico Bureau Mines and Mineral Resources Memoir 44 [Wolberg D. L. (ed.): Contributions to Paleozoic Paleontology and Stratigraphy in Honour of Rosseau H. Flower]: 129-137.- FC&P 18-2, p. 47, ID=2509^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Silurian / Devonian; Geography: USA, Nevada^^1";
- 2291 s[2288] = "PEDDER A.E.H. (1984).- Dehiscens Zone corals from the Lower Devonian of Yukon Territory.- Papers of geological Survey Canada 84-1B: 315-325.- FC&P 14-1, p. 47, ID=0980^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: Canada, Yukon Territory^^1";
- 2292 s[2289] = "PEDDER A.E.H. (1975).- Sequence and relationships of three Lower Devonian coral faunas from Yukon Territory.- Papers of geological Survey Canada 75-1B: 285-295.- FC&P 5-2, p. 7, ID=5410^Topic(s): biostratigraphy; coral faunas; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: Canada, Yukon Territory^^1";

- 2293 s[2290] = "MURPHY M.A., BERRY.W.B.N. (1983).- Early Devonian conodont-graptolite collation and correlations with brachiopod and coral zones, Central Nevada.- American Association of Petroleum Geologists Bulletin 67, 3: 371-379.- FC&P 12-2, p. 44, ID=6241^Topic(s): biostratigraphy; stratigraphy corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: USA, Nevada^A range chart of some Early Devonian conodont and graptolite taxa from central Nevada is presented. It is based on the graphic correlation method of Shaw, and shows correlations with the established zones for brachiopods and corals as well as conodonts and graptolites. It indicates that the hesperius through pesavis conodont zones established for western North America are approximately equivalent to the Lochkovian of the Czechoslovakia sequence, and the Pragian begins approximately with the sulcatus zone. The chart also indicates that the zones based on different groups do not coincide, are of very unequal duration, and that intervals of rapid morphologic change correspond to intervals of higher diversity and greater morphologic variation. Species have significantly different longevities, generally those originating during time of greatest morphologic variation being the shorter lived. The approximate duration of the species studied is 2 to 10 m.y. * Use of the graphic correlation method permits better correlation of shelf and basin faunas and enhances the possibility for constructing accurate shelf margin histories and for correlating provincial shelf faunas with those in other parts of the world. [original summary]^1";
- 2294 s[2291] = "ISAACSON P.E., McFADDEN M.D., MEASURES E.A. (1988).- Coral-stromatoporoid buildup succession, Jefferson Formation (Late Devonian), central Idaho, USA.- Canadian Association of Petroleum Geologists Memoir 13 [Geldsetzer H.J., James N.P. & Tebutt G.E. (eds): Reefs: Canada and Adjacent Areas]: 471-477.- FC&P 19-2.1, p. 40, ID=2768^Topic(s): reefs; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Devonian U; Geography: USA, Idaho^^1";
- 2295 s[2292] = "PEDDER A.E.H. (1980).- Devonian corals of late Eifelian age from the Ogilvie Formation of Yukon Territory.- Canadian Journal of Earth Sciences 17: 594-616.- FC&P 9-2, p. 44, ID=0302^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Canada, Yukon Territory^Coral faunas from 254.9 - 345.4m above the base of the type section of the Ogilvie Formation on Mount Burgess, and from parts of other Ogilvie sections, are shown to be equivalent to late Eifelian coral faunas of the Hume Formation of western District of Mackenzie, and its correlatives in southwestern District of Mackenzie and northeastern British Columbia. Although older faunas from lower beds and younger faunas from higher beds of the Ogilvie Formation have been described previously, this is the first description of Hume faunas from the formation. * The Redstoneinae, a new subfamily of the Spongophyllidae, is proposed. Two new genera, Tawuphyllum and Gaynaphyllum, and a new species, Radiastraea norrisi, are also established. * Photographic illustrations of interiors of Iteophyllum virgatum Crickmay, Endophyllum barbatum Crickmay, the lectotype of Smithia verrilli Meek, and neotype of Spongophyllum sedgwicki Edwards & Haime are published for the first time. [original summary]^1";
- 2296 s[2293] = "PEDDER A.E.H. (1985).- Lower Devonian rugose corals of Lochkovian age from Yukon Territory.- Current Research A, Geological Survey of Canada 85-1A: 587-607.- FC&P 14-1, p. 48, ID=0990^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Lochk; Geography: Canada, Yukon Territory^The mucophyllid genus Stylopleura and the spongophyllid genus Carlinastraea are revised In western and arctic North America, the temporal ranges of these genera overlap in Lochkovian time Stylopleura julli and Carlinastraea pygmaea are established as new species. Carlinastraea halysitoides (Etheridge) is revised, and is

shown to have had a remarkable geographic range, that, in Lochkovian time, extended from eastern Australia, through China, Mongolia, Asiatic Russia, the Urals, Yukon Territory and British Columbia, to Nevada. An early Pragian coral from Victoria and New South Wales, eastern Australia, is discussed and figured under the name of *Carlinastraea* sp. cf. *C. halysitoides* (Etheridge).¹";

- 2297 s[2294] = "PEDDER A.E.H., MURPHY M.A. (2004).- Emsian (Lower Devonian) Rugose corals of Nevada: Reservoir of systematics and stratigraphic ranges, and reassessment of faunal provincialism.- *Journal of Paleontology* 78, 5: 838-863.- FC&P 33-2, p. 20, ID=1123^Topic(s): biostratigraphy, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: USA, Nevada^New collection from measured sections provide much of the material for this study. *Holcocystis*, *Atopocaystis*, and *Stummelasma* are erected as new genera. *Atopocastis mucronata* and *Stummelasma sulfurens* are new species; *Holocystis flexa* (Stumm), *Stummelasma lonense* (Stumm), and *S. antelopense* (Merriam) are new combinations. Revised coral ranges are integrated with the standard Nevada conodont zones and brachiopod-based faunal intervals. A range chart for 33 Rugosa emphasizes their value for correlation in Icriodus, or brachiopod-poor biofacies of the Great Basin. It also shows that full recovery from the end Lochkovian/early Pragian coral crisis in the region was delayed until the start of the middle Emsian gronbergi Zone. The recovery was accomplished principally by radiation of the Breviphyllidae and Papilophyllidae, and by immigration or cyathophyllid and other genera. Updated lists of Rugosa genera present in the Great Basin, Mackenzie, and Appohimchi provinces during the Pragian and early Emsian (kindley-lenzi zones) and middle to late Emsian (gronbergiserotinus zones) are given. Qualitative and quantitative data, the latter as Otsuka Coefficients, indicate that the Pragian Great Basin coral faunas can no longer be regarded as part of a temporary westward extension of the Eastern Americas Realm. Nor can they be considered part of the Mackenzie coral province. Genus absence/presence data show that the Great Basin coral province began with a slow recovery of faunas after the late Lochkovian/early Pragian coral crisis, and ended with the arrival of typical Old World Realm families, including the Ptenophyllidae and Stringophyllidae, within the early Eifelian, costatus Zone. During this time faunas of the Mackenzie coral province were so distinct from those of the exotic Alexander and Farewell terranes of Alaska and British Columbia. The duration of the Devonian Great Basin coral province corresponds closely to the duration of a period of depressed seawater temperatures postulated from the distribution of gypidulinid brachiopods.¹";
- 2298 s[2295] = "WRIGHT A.J. (1980).- Occurrence of the Devonian Tetracoral *Grypophyllum mackenziense* in Nevada.- *Journal of Paleontology* 54, 5: 963-967.- FC&P 11-1, p. 48, ID=1764^Topic(s): ; Rugosa, *Grypophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: USA, Nevada^*Grypophyllum mackenziense* (Pedder), a characteristic tetracoral of the *G. mackenziense* Zone of Western Canada, is recorded from a probably Middle Devonian part of the Devils Gate Limestone at J-D Window, in the northern Simpson Park Range, Eureka County, Nevada. The species occurs in one section at the same level as the brachiopod *Tecnocyrtina*, and in another section up to 28m higher than *Tecnocyrtina*. This indicates that the teilzones of *Tecnocyrtina* (higher) and *G. mackenziense* (lower) overlap in Nevada. ¹";
- 2299 s[2296] = "MCLEAN R.A. (1982).- *Ceciliaphyllum*, a new charactophyllid coral genus from the Upper Devonian (late Frasnian) of British Columbia.- *Papers of Geological Survey Canada* 82-1C, 95-98.- FC&P 12-1, p. 38, ID=1916^Topic(s): new taxa; Rugosa, *Ceciliaphyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Canada, British Columbia^*Ceciliaphyllum* [gen.n.], with type species *C. bastillense*

- sp.nov., is described from strata equivalent to the Ronde Member of the Southesk Formation at Surprise Pass, east-central British Columbia. At present, similar forms are known only from the Frasnian of Poland.¹";
- 2300 s[2297] = "SORAUF J.E. (1987).- The rugose coral *Tabulophyllum traversensis* from the Onate Formation (Middle Devonian) of the Mud Springs Mountains, New Mexico.- *Journal of Paleontology* 61, 1: 14-20.- FC&P 16-1, p. 57, ID=1955^Topic(s): ; Rugosa, Tabulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: USA, New Mexico^^1";
- 2301 s[2298] = "SORAUF J.E. (1988).- Rugose corals from the Frasnian (Upper Devonian) Sly Gap and Contadero Formations of the San Andres Mountains, south-central New Mexico.- *Mem. New Mexico Bur. Mines & Miner. Resour.* 44: 153-183.- FC&P 19-2.1, p. 33, ID=2750^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: USA, New Mexico^Devonian strata in the northern San Andres Mountains of southern New Mexico contain abundant faunas of fossil rugose corals in calcareous beds of the Sly Gap and Contadero Formations. The lower and middle Sly Gap Formation contains abundant solitary corals occurring with numerous brachiopods. For the most part, these are *Macgeea thomasi*, with a few specimens of *Tabulophyllum ovinum* n.sp. and *T.(?) versutum* n.sp. Colonial corals, with accompanying solitary forms, are common to abundant in nodular limestones of the uppermost part of the Sly Gap Formation. They are *Medusaephyllum woodmani*, *M. variabile* n.sp., *lowaphyllum johanni*, *Hexagonaria capitolium* n.sp., and *Radiastraea rhodesi* n.sp. *Tabulophyllum bilaterale* n.sp. is the most common solitary form. All rugose corals collected from the Contadero Formation came from limestones forming the uppermost part of the Salinas Peak Member. Almost all individual corals are assigned to *Tabulophyllum zonatum* n.sp., with a single specimen of *Medusaephyllum confluens* n.sp. The Sly Gap and Contadero corals comprise typical Frasnian faunal assemblages. The Sly Gap fauna is placed in the *Palmatolepis gigas* conodont Zone; the Contadero is placed in the overlying lower *Palmatolepis triangularis* conodont Subzone, thus representing a very late Frasnian fauna.¹";
- 2302 s[2299] = "SORAUF J.E. (1992).- Late Devonian (Famennian) rugose coral fauna of the Percha Shale of southwestern New Mexico.- *Journal of Paleontology* 66, 5: 730-749.- FC&P 22-1, p. 34, ID=3390^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: USA, New Mexico^Solitary rugose corals (Cnidaria, Rugosa) are common to abundant in the calcareous Box Member of the late Famennian Percha Shale (Lower expansa Zone) of southwestern New Mexico; the Box is best developed in the western part of the Percha outcrop belt. The corals include a number of forms characteristic of Strunian faunas throughout the world. Recognized hereby are *Gorizdronia* sp. cf. *G. tenuis* Rozkowska, *Campophyllum? ursinum* n.sp., *Caninia cooperi* n.sp., *Siphonophyllia? folia* n.sp., *S.? corbicula* n.sp., "*Bothrophyllum*" *argenteum* n.sp., "*B.*" *argenteum argenteum* n.subsp., "*B.*" *argenteum bilaterale* n.subsp., "*B.*" *argenteum dibunophylloides* n.subsp., *Arachnolasmella elytra* n.sp., and *Cyathoclisia* sp. A. This fauna is clearly ancestral to Carboniferous genera and species. Percha species, where represented by large populations, are seen to be remarkably variable, especially in axial structure.¹";
- 2303 s[2300] = "MCLEAN R.A. (1997).- Middle Devonian rugose coral faunas in Northeastern British Columbia and District of Mackenzie, western Canada.- *Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica* 92, 1/4: 289-300.- FC&P 26-2, p. 31, ID=3721^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: Canada W^Rugose corals of mid-late Eifelian age are diverse and relatively abundant in widespread open shelf carbonates of Northeastern British Columbia (lower Keg River and Dunedin formations) and District of

Mackenzie (Lonely Bay, Nahanni, Headless and Hume formations). The overlying Givetian carbonate complex of northeastern British Columbia and southern District of Mackenzie (Presqu'île Barrier) has only sparsely developed rugosans, but beds flanking the barrier (upper Dunedin, Pine Point, Sulphur Point formations) locally develop more diverse faunas of early-mid Givetian age. Downslope from the barrier complex, numerous early-mid Givetian pinnacle reefs (upper Keg River, Horn Plateau formations) bear particularly diverse and abundant rugose coral assemblages. In the lower Mackenzie River valley of northern District of Mackenzie a series of reefal complexes of mid-late Givetian age (Ramparts Formation) carries significant rugosan faunas, especially in platform and flanking beds.^{^1};

2304 s[2301] = "PEDDER A.E.H. (2010).- Lower-Middle Devonian rugose coral faunas of Nevada: Contribution to an understanding of the "barren" E Zone and Chotec Event in the Great Basin.- Bulletin of Geosciences 85, 1: 1-26. ISSN 1214-1119.- FC&P 36, p. 62, ID=6454Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L M; Geography: USA, Nevada^The "lower Middle Devonian" part of a coral zonation proposed for the region in 1974 comprised in ascending order D2 and D3 subzones and a "barren" E zone. In terms of the conodont zonation currently employed in Nevada, the D2 subzone is Emsian gronbergi and inversus zones. The original stratigraphic definition of the D3 subzone places it in the upper Emsian serotinus Zone on Lone Mountain, whereas the coral index defining the zone has been collected subsequently only from Eifelian upper costatus Zone beds. The original stratigraphic definition of the "barren" E zone places it in a lower part of the costatus Zone, above an inferred depositional break. Thus, as defined on Lone Mountain, the D3 subzone is slightly younger than the E zone. These zones are not barren. Revised taxonomy and age determinations of previously described species, coupled with new data from the southern Sulphur Spring and northern Antelope ranges, have revealed four successive coral assemblages ranging from serotinus to costatus Zone age. Differences between the second and third of these assemblages are particularly significant, and may be considered to represent a local manifestation of the Chotec Event. A detailed review of the genus Synaptophyllum shows it to be an Emsian endemic in the Maghrebo-European Realm, not an early Eifelian endemic in the Eastern Americas Realm. New taxa comprise a family, one genus and two species. Romanophyllum paulyi gen. et sp.nov., which possibly represents one of the last vestiges of the Pragian-Emsian Great Basin coral province, is assigned to the Romanophyllidae fam. n. Xystriphyllum trojani sp.nov. is described as an example of one of earliest ptenophyllid species to return to the Great Basin after the absence of the family from the region since late Lochkovian time.^{^1};

2305 s[2302] = "PEDDER A.E.H. (2002).- New systematic and biostratigraphic data concerning Breviphyllidae (Lower Devonian Rugosa) of Nevada.- Coral Research Bulletin 7: 141-166. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 60, ID=1627Topic(s): biostratigraphy; Rugosa, Breviphrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: USA, Nevada^Previous Lower to Middle Devonian coral biostratigraphy for Nevada is reviewed. A reassessment of Merriam's 1974 Emsian coral assemblages zones indicates that his D1 Subzone is longer ranging than it was thought to be and his D3 Subzone is probably Middle Devonian, costatus zone. Composition of the Breviphyllidae Taylor 1951 is revised to include Breviphyllum Stumm 1949, Breviphrentis Stumm 1949, Nevadophyllum Stumm 1937, Ogilviplasma Pedder 1978, weyerides gen. Nov., Bartineophyllum gen. nov., and possibly Baoshanophyllum Song 1974 and its probable synonym Puanophyllum Wang 1983. Breviphrentis kirki, Nevadophyllum eximium, Weyerides salicensis, W. serus and

- Bartineophyllum hassli are erected as new species. Ages of all the formally described taxa are calibrated against standard conodont zonations and the Nevada faunal intervals of Johnson (1977).¹;
- 2306 s[2303] = "PEDDER A.E.H., MURPHY M.A. (2003).- The Papiliophyllidae (Lower Devonian Rugosa): their systematics and reinterpreted biostratigraphic value in Nevada.- Journal of Paleontology 77, 4: 601-624.- FC&P 33-1, p. 60, ID=1386Topic(s): biostratigraphy; Rugosa, Papiliophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: USA, NevadaField work has greatly increased the number of well-dated papiliophyllid corals available from Nevada. The established range of the family is expanded from Pragian and lower Emsian to Pragian and almost the entire Emsian. Ranges of species are calibrated against Johnson faunal intervals and a revised Pragian and lowermost Emsian conodont zonation proposed by Murphy for Nevada. Study of all repositated material has led to some revision of every member of the family, Eurekaophyllum, previously imperfectly known from a single specimen of vague stratigraphic origin, is shown to be a useful upper Emsian index. Nine reported occurrences of the family in Europe and Asia are re-examined and, except for a possible occurrence on Novaya Zemlya, all are rejected. The three named genera of the family are apparently endemic to the southwestern North American craton. Papiliophyllum elegantulum asymmetricum new subspecies, P. murphyi new species and Eurekaophyllum vescum new species are described by Pedder. [original abstract]^1";
- 2307 s[2304] = "QI WENTONG, STEARN C.W. (1994).- Stromatoporoids from the Slave Point Formation (Givetian) at Evie Lake, northeastern British Columbia, Canada.- Acta Scientiarum Universitatis Pekingensis [Pei-ching ta hsueh hsueh pao] 29, 6: 715-728.- FC&P 24-1, p. 81, ID=4512Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: Canada, British ColumbiaEleven species (none new) are described from a core of the reef facies of the Evie Lake reef complex. The structures are extensively infiltrated by bitumen that preserves microstructures well. The fauna has Trupetostroma warreni, Stachyodes thomasclarki and S. spongiosa in common with the Swan Hills reefs. It is particularly characterized by the distinctive Actinostroma whiteavesii and Pseudotrupetostroma vitreum. The latter species and Taleastroma logansportense indicate affinity with the Givetian faunas of Poland and the Ohio valley area.^1";
- 2308 s[2305] = "AUL J.L. (2010).- Stromatoporoids and the Upper Devonian Alamo Impact Breccia in southeastern Nevada.- University of Alabama, unpublished Master's Thesis; viii + 63 pp; Tuscaloosa, Alabama. [MSc Thesis] - FC&P 36, p. 27, ID=6387Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: USA, Nevada[in addition to the species of stromatoporoids occurring in the Alamo Impact Breccia (see Aul et al. 2010), the following species were found in the Guilmette Formation (lower Frasnian) below the Alamo: Actinostroma cf. A. clathratum, Clathrocoilona cf. C. involuta, Stictostroma maclareni, Trupetostroma bassleri, and Arctostroma contextum]^1";
- 2309 s[2306] = "AUL J.L., STOCK C.W., MORROW J.R., SANDBERG C.A. (2010).- Provenance and implications of stromatoporoids redeposited in Upper Devonian Alamo Impact Breccia, SE Nevada.- Geological Society of America Abstracts with Programs 42, 5: 173. [abstract] - FC&P 36, p. 27, ID=6388Topic(s): redeposition; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: USA, NevadaThe Alamo Impact Breccia is found within the Frasnian-age Guilmette Formation. Chronostratigraphically it occurs with the punctata conodont Zone. Stromatoporoids are the main booklist within the Alamo. Six species were found within the Breccia: Hammatostroma albertans, Habrostroma

- turbinatum, Actinostroma sp., Atelodictyon sp., Hermatoporella sp., and Atopostroma distans. The first five species are considered to be Frasnian and/or Givetian in age; however, Atopostroma distans is Emsian in age. The authors conclude that the bolide that caused the Alamo Breccia excavated as deep as Emsian. As Ordovician conodonts occur in the Alamo as well, the authors further conclude that stromatoporoid-bearing strata older than Emsian do not occur in southeastern Nevada, and that because the Emsian strata in southeastern Nevada are unfossiliferous dolostones, the specimens of A. distans were transported into the area by tsunamis associated with the impact.¹";
- 2310 s[2307] = "HARRINGTON R.J. (1987).- Lithofacies and biofacies of the Middle and Upper Devonian Sultan Formation at Mountain Springs, Clark County, Nevada: implications for stromatoporoid paleoecology.- Journal of Paleontology 61: 649-662.- FC&P 16-2, p. 34, ID=2084Topic(s): geology; geology; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Devonian M U; Geography: USA, Nevada¹[stromatoporoids occur in a wide range of paleoenvironments in this succession and are thought to have been generalists capable of tolerating a wide range of conditions; the preservation is too poor for generic or specific identifications; various growth forms are discussed]¹";
- 2311 s[2308] = "FLORY R.A. (1977).- Devonian Tabulate corals of Central Nevada.- California University, Riverside Campus Museum Contribution 4: 89-98.- FC&P 7-1, p. 21, ID=0176Topic(s): Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: USA, Nevada¹Dolomites at the edge of the shallow Kiddle Devonian shelf in central Nevada contain nests of well preserved brachiopods and tabulate corals in an association of the Rasenriff type. The Nevada occurrence is named the Spinatrypina-Thamnopora Community because of the abundance of those two forms with Cryptatrypa and a few other brachiopods and corals. The Spinatrypina -Thamnopora Community is believed to have inhabited a shallow, quiet water biotope behind the shelf edge. Cryptatrypa paracircula, Spinatrypina asymmetrica, and Syringopora noranna are proposed as new species. [original summary]¹";
- 2312 s[2309] = "CHUDINOVA I.I., CHURKIN M.jr, EBERLEIN G.D. (1974).- Devonian syringoporoid corals from Southeastern Alaska.- Journal of Paleontology 48, 1: 125-134.- FC&P 3-2, p. 42, ID=4965Topic(s): Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: USA, Alaska¹Five species of tabulate corals - Syringopora and Syringoporella - are described from Devonian limestones in a geosynclinal sequence of volcanic rocks and graywacke. These corals and associated faunas rich in solitary and colonial rugose corals are correlated with coral faunas of North America and the USSR. Two of the species described are new: Syringopora formosa sp.nov. and Syringoporella rara sp.nov.¹";
- 2313 s[2310] = "RIGBY J.K., MEHL D. (1994).- A Middle Devonian sponge fauna from the northern Simpson Park Range, Central Nevada.- Brigham Young University, Geology Studies 40: 111-153.- FC&P 23-2.1, p. 57, ID=4409Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Devonian M; Geography: USA, Nevada¹";
- 2314 s[2311] = "SOJA C.M. (1988).- Early Devonian benthic communities of Alexander terrane, SE Alaska.- Lethaia 21: 319-338.- FC&P 18-1, p. 53, ID=2310Topic(s): benthic communities; fossils; Systematics: Stratigraphy: Devonian L; Geography: USA, Alaska¹[one of the facies described is the stromatoporoid facies but no systematic descriptions are included]¹";
- 2315 s[2312] = "MCLEAN D.J., MOUNTJOY E.W. (1994).- Allocyclic control on Late Devonian buildup development, southern Canadian Rocky Mountains.- Journal of Sedimentary Research B64: 326-340.- FC&P 23-2.1, p. 55, ID=4401Topic(s): reefs, allocyclic growth control; reefs; Systematics: Stratigraphy: Devonian U;

Geography: Canada, Rocky Mts^Parasequence stacking patterns suggest that buildup stratigraphy was controlled by fluctuations in relative sea level. The meter-scale shallowing upward parasequences of the Flume and Cairn formations consist of a basal domal or bulbous Stromatoporoid floatstone / rudstone overlain by a fragmented Amphipora or Thamnopora wackestone / packstone and in turn overlain by either an Amphipora wackestone / packstone or an algal laminite. The domal Stromatoporoid rudstone is interpreted as the deepest of these facies and the laminites as intertidal. The parasequences can be used to correlate sections.^1";

- 2316 s[2313] = "MAURIN A.F., RAASCH G.O. (1972).- Early-Frasnian stratigraphy, Kakwa-Cecilia Lakes, British Columbia, Canada.- Notes et Mémoires 10, Total, C.F.P. Paris, 80 pp.- FC&P 2-2, p. 17, ID=4806^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian Fra; Geography: Canada, British Columbia^After 1968 field reconnaissance, a party spent three weeks of summer 1969 in the General Kakwa area (British Columbia). Northward shaling-out of Early Frasnian (Flume carbonates) was detailed both sedimentologically and paleontologically. Field involvement of these techniques secured appropriate faunal sampling which permitted later detailed study of faunal assemblages during winter 1969-1970. Strata herein studied cover this part of the Frasnian outcrop generally known as the Flume member and stratigraphically correlate with the Beaver Hill Lake - Waterways subsurface section, and northeastern Alberta exposures. The four studied sections exhibit the shaling-out of Southern carbonates deposited on a shallow open marine shelf. Tentative build-ups were erected at the margins of the shelf amidst biostromal banks. Stromatoporas were the major agents responsible for such reefing. Northerly deepening conditions, or geographical changes in current regimes, hindered both frame builders' life and carbonate deposition, favoring shales accumulation. Marine conditions were almost the same along the horizontal slice of water for bottom dwellers such as Brachiopods. An extremely rich Brachiopod fauna allows very detailed correlations between sections spread over a 15 kilometer strip (coupled with classical coral associations). Part II deals with paleontological breakdown of the Flume section into five main faunal assemblages. The quality of collected material is such that the three medial assemblages are of uppermost value for correlating eastward into the Alberta Plain subcrop, the well-described outcrop of Waterways, and subsurface of Northwest Territories. Corals and Brachiopods correlations are extended to United States. with the help of published Conodont and Cephalopod evidence, relationship with European zones is tentatively established. A reevaluation of the full Frasnian biostratigraphic zonation is proposed in Appendix with emphasis on lower zones, namely DFR2 Ladogioides pax zone, DFR3 Atrypa scutiformis zone (gathering assemblages II and III), and DFR4 Atrypa gregeri zone.^1";
- 2317 s[2314] = "JOHNSON J.G., FLORY R.A. (1972).- A Rasenriff fauna from the Middle Devonian of Nevada.- Journal of Paleontology 46, 6: 892-899.- FC&P 7-1, p. 21, ID=5574^Topic(s): reefs fossils; reefs fossils; Systematics: ; Stratigraphy: Devonian M; Geography: USA, Nevada^^1";
- 2318 s[2315] = "PEDDER A.E.H., KLAPPER G. (1977).- Fauna and correlation of the type section of the Cranswick Formation (Devonian), Mackenzie Mountains, Yukon Territory.- Geol. Surv. Canada paper 77-1B: 227-234.- FC&P 7-2, p. 18, ID=5621^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: ; Stratigraphy: Devonian Ems; Geography: Canada, Yukon Territory^Besides some rugose corals, tabulate corals are also figured. These are: Favosites sp. cf. F. goldfussi sensu Hill & Jell 1969, Crassialveolites sp. indet., Echyropora sp.nov. and Bogimbailites sp.nov. * The latter ones are both discovered for the first time in North America. Echyropora Tong-Dzuy Thanh 1965, is well known from Vietnam, and Bogimbailites Bondarenko 1966, from Central Kazakhstan and

- from the island of Chios in the Aegean Sea. The age of the fauna is in accordance with conodonts of the upper Lower Devonian.^1";
- 2319 s[2316] = "MOUNTJOY E.W., RIDING R. (1981).- Foreslope stromatoporoid-renaloid bioherm with evidence of early cementation, Devonian, Ancient Wall Reef Complex, Rocky Mountains.- *Sedimentology* 28: 299-319.- FC&P 10-2, p. 75, ID=6099^Topic(s):reefs, geology; bioherms; Systematics: Stratigraphy: Devonian Fra; Geography: Canada, Rocky Mts^[a small mound on the margin of this Frasnian reef complex is composed of the stromatoporoids *Anostylostroma*, *Euryamphipora*, and *Stachyodes* as well as the enigmatic organisms *Izhella* and *Renalcis*; the stromatoporoids are not described]^1";
- 2320 s[2317] = "SANDO W.J. (1984).- Significance of epibionts on horn corals from the Chainman Shale (Upper Mississippian) of Utah.- *Journal of Paleontology* 58, 1: 185-196.- FC&P 13-1, p. 40, ID=0481^Topic(s):epibionts; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: USA, Utah^Epibionts *Tolypamma* ? sp. (Protozoa), *Eridopora* sp. (Bryozoa), *Petrocrania* sp. (Brachiopoda), *Spirorbis* ? sp. (Annelida), and *Vermiforichnus* sp. (Annelida) on the curved conical coralla of *Barytichisma* sp. (Coelenterata) show a strong preference for the concave side of the corallum and are more abundant on the upper half of the corallum than on the lower half. This distribution helps confirm Bernard's (1904) hypothesis that the corallum assumed a living position lying on its side, after toppling from an early attached upright growth position, and curved upward from the substrate in order to maintain an optimum living position later in life. The distribution also indicates that these epibionts inhabited the host coralla mostly while the polyps were alive. Epibionts *Thallophyta* (algae or fungi) and *Bascomella* sp. (Arthropoda) established themselves on the host coralla later than the other epibionts and have a random distribution with respect to the plane of curvature, indicating that these organisms inhabited the hosts mainly after death of the polyps.^1";
- 2321 s[2318] = "COCKE J.M., BOARDMAN D.R.II, MAPES R.H. (1991).- Stratigraphic distribution and facies control of Late Pennsylvanian coral assemblages in north-central Texas.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; *Compte Rendu* 2: 304-327.- FC&P 21-1.1, p. 45, ID=3223^Topic(s):biostratigraphy, facies; Anthozoa communities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: USA, Texas^^1";
- 2322 s[2319] = "ARMSTRONG A.K. (1975).- Stratigraphy and paleoecology of Carboniferous Corals, Lisburne Group, Brooks Ranges, Arctic Alaska.- *Bulletins of American Paleontology* 67, 287: 17-51.- FC&P 4-2, p. 55, ID=5254^Topic(s):biostratigraphy, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: USA, Alaska^The Carboniferous Lisburne Group of arctic Alaska contains Coral fauna ranging in age from Osagean (Early Mississippian) to Atokan (Middle Pennsylvanian). Osagean beds have a small fauna of solitary and tabulate corals.^1";
- 2323 s[2320] = "ARMSTRONG A.K. (1975).- Carboniferous corals of arctic Alaska.- *Drevniye Cnidaria* [B.S. Sokolov (ed.)], 2: 103-105.- FC&P 5-1, p. 28, ID=5345^Topic(s):distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: USA, Alaska^[synopsis of stratigraphic and geographic distribution of coral species]^1";
- 2324 s[2321] = "ARMSTRONG A.K. (1975).- Carboniferous corals of Alaska, a preliminary report.- *US Geol. Survey Prof. Paper* 823-C; 14 pp.- FC&P 5-1, p. 28, ID=5346^Topic(s):distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: USA, Alaska^[synopsis of stratigraphic, geographic, and ecologic distribution of coral species]^1";

- 2325 s[2322] = "SUTHERLAND P.K. (1984).- Chaetetes reefs of exceptional size in Marble Falls Limestone (Pennsylvanian), central Texas.- Palaeontographica Americana 54: 543-547 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 51, ID=1011^Topic(s): reefs; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: USA, Texas^^1";
- 2326 s[2323] = "NELSON W.J., LANGENHEIM R.L.jr (1980).- Ecological observations on Chaetetes in Southern Nevada.- Pacific Geology 14: 1-22; Tokyo.- FC&P 10-2, p. 77, ID=6000^Topic(s): ecology; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: USA, Nevada^Occurrences of Chaetetes favosus and Ch. milleporaceus are narrowly restricted, both temporally and lithologically, within the Bird Spring Group in the Arrow Canyon Quadrangle, Clark County Nevada. Ch. favosus is confined to the later Atokan and Ch. milleporaceus to the earliest Desmoinesian in this area, although both taxa enjoy a far greater biozone. Both taxa are restricted further to a few, thin key beds, generally containing many individuals, within their local range. Microfacies and faunal analysis of the Chaetetes biostromes indicate deposition in normal marine waters somewhat below tidal range, at, or just below wave base. Similar rocks and faunal associations, however, occur in the absence of Chaetetes in rocks both below and above the Chaetetes-bearing sequence. Thus the environmental factor restricting Chaetetes distribution remains undetected. * Autoecological study of Chaetetes shows that it required a solid substrate and that it was capable of regeneration after being partially choked by fine-grained sediments. * It is suggested that Ch. favosus and Ch. milleporaceus may be environmentally differentiated forms of the same Mendelian species. [original summary]^1";
- 2327 s[2324] = "SADA K., DANNER W.R. (1973).- Late Lower Carboniferous Eostaffella and Hexaphyllia from Central Oregon, U.S.A.- Trans. Proc. Palaeont. Soc. Japan, N.S. 91: 151-160.- FC&P 3-1, p. 28, ID=4890^Topic(s): ; Heterocorallia, Hexaphyllia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous Vise; Geography: USA, Oregon^^1";
- 2328 s[2325] = "SANDO W.J. (1985).- Paraheritschioides, a new rugose coral genus from the Upper Pennsylvanian of Idaho.- Journal of Paleontology 59, 4: 979-985.- FC&P 14-2, p. 35, ID=0915^Topic(s): new taxa; Rugosa, Paraheritschioides; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: USA, Idaho^Colonial rugose corals are rare and generally poorly diversified in the Upper Pennsylvanian of the western interior region, conterminous USA. Paraheritschioides n.gen., which includes P. grandis n.sp. and P. complexa n.sp. from the Oquirrh Formation in Idaho, provides a new tool for distinguishing Upper Pennsylvanian rocks in the western interior. The new genus is also represented by P. stevensi (Wilson) in the Permian McCloud Limestone of northern California. The new family Heritschioididae is created to include Paraheritschioides, Heritschioides, Amandophyllum and Heintzella.^1";
- 2329 s[2326] = "SUTHERLAND P.K. (1989).- Intraspecific variability in the rugose coral Stelechophyllum? mclareni from the Lower Carboniferous (Visean) of northeastern British Columbia.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 13-22.- FC&P 19-1.1, p. 12, ID=2518^Topic(s): variability; Rugosa, Stelechophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Canada, British Columbia^^1";
- 2330 s[2327] = "ARMSTRONG A.K. (1972).- Pennsylvanian carbonates, Palaeoecology and Rugose Colonial Corals, North Flank, Eastern Brooks Range, Arctic Alaska.- Geol. Surv. U.S., Prof. Paper 747: 1-19.-

- 2331 **s**[2328] = "ARMSTRONG A.K. (1973).- Carboniferous colonial rugose corals, biostratigraphy and paleoecology, Lisburne Group, Arctic Alaska.- *FC'* 2, 1: 4-4'. - *FC'* 2-1, p. 4, ID=6265^Topic(s): massive, distribution; Rugosa massive; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: USA, Alaska^1";
- 2332 **s**[2329] = "ARMSTRONG A.K. (1970).- Carbonate facies and the lithostrotionid corals of the Mississippian Kograk Formation, De Long Mountains, northwestern Alaska.- *US Geol. Surv. Prof. Paper 664: 38 pp., 14 pls, 37 figs.*- *FC'* 2-1, p. 4, ID=6266^Topic(s): carbonates; carbonates, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: USA, Alaska^1";
- 2333 **s**[2330] = "RODRIGUEZ S., BAMBER E.W. (2010).- Unusual offsetting in Serpukhovian (Lower Carboniferous) representatives of the rugose coral genus *Schoenophyllum* Simpson, 1900.- *Palaeoworld 19, 3-4: 401-409.*- *FC'* 36, p. 63, ID=6456^Topic(s): blastogeny; Rugosa *Schoenophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Serp; Geography: Canada^1*Schoenophyllum* has been described as a columellate, fasciculate genus in which the corallites bear slender lateral processes regarded as supporting structures or as tubules connecting adjacent corallites. Recent investigation of Serpukhovian specimens from the Etherington Formation and its lateral equivalents in western Canada has shown these lateral processes to be sub-horizontal to moderately elevated tubule-like structures forming the initial stages of new offsets and commonly containing tabulae. They locally reach and may interfere with the walls of neighbouring corallites, but remain structurally distinct from them and do not allow communication between parent and adjacent corallites. The initial, tubule-like stage is followed by a steeply elevated to vertical, sparsely septate stage in which the axial structure is developed as a prolongation of the cardinal septum. The origin and nature of the axial structure suggests assignment of *Schoenophyllum* to the family *Petalaxidae*.^1";
- 2334 **s**[2331] = "ARMSTRONG A.K. (1972).- Biostratigraphy of Mississippian lithostrotionoid corals, Lisburne Group, Arctic Alaska.- *US Geol. Surv. Prof. Paper 743A: 28 pp., 9 pls.*- *FC'* 2-1, p. 4, ID=6267^Topic(s): biostratigraphy; stratigraphy, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: USA, Alaska^1";
- 2335 **s**[2332] = "ROWETT C.L., TIMMER R. (1973).- Lophophyllid, Hapsiphyllid and Polycoelid corals of Pennsylvanian age from the east-central Alaska Range.- *Pacif. Geol. 1973, 6: 1-18.*- *FC'* 4-1, p. 37, ID=5130^Topic(s): ; Rugosa, Lophophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: USA, Alaska^1";
- 2336 **s**[2333] = "MAMET B.L., NELSON S.J. (1984).- Stratigraphic position of Carboniferous *Macgowanella* and *Sinopora? pascuali*, Canadian Cordillera.- *Canadian Journal of Earth Sciences 21, 4: 500-501.*- *FC'* 15-2, p. 31, ID=0679^Topic(s): stratigraphy; Tabulata, *Sinopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Bashk; Geography: Canada, Cordillera^1*Microfossils* associated with Carboniferous *Macgowanella* and *Sinopora? pascuali* allow more precise age determinations than previously determined. *Macgowanella*, a possible bryozoan holdfast, is represented by two species, *M. tenuiradiata* (Warren) and *M. stellata* (Warren), both from the Viséan (Upper Mississippian, Meramecian) Mount Head Formation of the southern Canadian Rocky Mountains. *Microfossils*

- indicate a correlation with upper Viséan Zone 14, equivalent to the lower upper Meramecian Marston/lower Opal members of the Mount Head Formation. The syringoporid coral *Sinopora? pascuali* is from near Kamloops, British Columbia. Microfossils support the Early Pennsylvanian date earlier assigned, correlating it with Zones 20 or 21, Bashkirian = Morrowan to basal Atokan. ^1";
- 2337 s[2334] = "NELSON S.J. (1977).- Mississippian syringoporid corals, southern Canadian Rocky Mountains.- Canadian Petroleum Geology Bulletin . 518-581.- FC&P 7-1, p. 25, ID=0189^Topic(s): ; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous L; Geography: Canada, Rocky Mts^^1";
- 2338 s[2335] = "NELSON S.J. (1982).- New Pennsylvanian (?) syringoporoid coral from Kamloops area, British Columbia.- Canadian Journal of Earth Sciences 19: 376-380.- FC&P 15-2, p. 31, ID=0682^Topic(s): ; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous U; Geography: Canada, British Columbia^^1";
- 2339 s[2336] = "DICKSON J.A.D., WOOD R.A., KIRKLAND B.L. (1996).- Exceptional preservation of the sponge *Fissispongia cloaca* from the Pennsylvanian Holder Formation, New Mexico.- Palaios 11: 559-570. <http://www.jstor.org/pss/3515191>.- FC&P 26-1, p. 75, ID=3650^Topic(s): aragonite; Porifera, Fissispongia; Systematics: Porifera; Stratigraphy: Carboniferous U; Geography: USA, New Mexico^Exceptionally preserved aragonitic demosponge material occurs within the Virgilian Holder Formation, Sacramento Mountains, south-central New Mexico. *Fissispongia tortacloaca* (King) is identified, a species previously known only from completely calcified specimens. Standard optical microscopy and SEM examination of broken surfaces of the *F. tortacloaca* skeleton distinguishes between primary spherulites and a later epitaxial overgrowth. *F. tortacloaca* biomineralization is readily comparable to that of the modern agelasid demosponge *Astrosclera willeyana*, thus confirming the demosponge affinity of this form. Cathodoluminescence microscopy and back scatter SEM examination identifies selective silicification and calcitization of the spherulite centers. These diagenetic minerals affect the initial spherulite biomineralization mimicking the original microstructural fabric. Elemental composition of *F. tortacloaca* (Sr=7600ppm, S=1640ppm and Mg=150ppm) is close to that of modern *A. willeyana* (Sr=10,000ppm, S=1780ppm and Mg=320ppm). Sr concentration in *F. tortacloaca* indicates that late Pennsylvanian seawater had slightly less Sr (7ppm) than modern seawater. S is interpreted as having been incorporated into sponge aragonite as SO₄. The stable isotope composition of *F. tortacloaca* (d13C=+5.5%; d18O=-2.1‰) is compatible with other Virgilian skeletal carbonates from the USA, but is about 1‰ heavier than *A. willeyana* (d13C=+4.4%; d18O=-0.8‰). The d18O composition of *F. tortacloaca* indicates tropical to subtropical temperatures between 24-30°C using Grossman and Ku's expression T°C=20.6-4.34 (d18O-sw): assuming the Pennsylvanian ocean had a d18O composition similar to modern seawater with an 1.2‰ variation due to glacial ice volume effects. [original abstract]^1";
- 2340 s[2337] = "MOLINEUX A. (1994).- A late Pennsylvanian encruster: terminal Paleozoic calcified demosponge? .- Canadian Society of Petroleum Geologists, Memoir 17 [Embry A., Beauchamp B. & Glass D. (eds): Pangea: Global Environments and Resources]: 967-982.- FC&P 24-1, p. 81, ID=4511^Topic(s): enigmatic encruster; Porifera Incrustospongia; Systematics: Porifera; Stratigraphy: Carboniferous U; Geography: USA, Texas^[*Incrustospongia meandrica* n. gen and sp. is a stromatoporoid-like late Desmoian to early Virgilian encruster from north-central Texas. Diagenetic alteration has obscured internal structure but layering, pillar-like structures and traces of

- fasciculate aragonite bundles can be seen. Astrorrhizae and mamelons are absent. The surface is well preserved and shows small round and vermiform elevations. Rugose corals, gastropods, bivalves, and brachiopods provided attachment sites. Features point to an affinity with modern calcified demosponges ("sclerosponges").] ^1";
- 2341 s[2338] = "RITTER S.M., MORRIS T.H. (1997).- Oldest and lowest latitudinal occurrence of Paleoaplysina, Middle Pennsylvanian, Ely Limestone, Burbank Hills, Utah.- *Palaios* 12, 4: 397-401.<http://www.jstor.org/pss/3515339>.- FC&P 27-1, p. 109, ID=3864^Topic(s): reef building; problematic, Paleoaplysina; Systematics: problematica; Stratigraphy: Carboniferous U; Geography: USA, Utah^A primitive variety of Palaeoaplysina laminaeformis Krotov is the primary biotic constituent of a two-meter-thick biostrome in the upper Ely Limestone of western Utah. Associated fusulinaceans and stromatoporoids indicate an early Desmoinesian (Middle Pennsylvanian) age, making it the oldest documented occurrence of non-ancestral Palaeoaplysina in the world. Plate-supported packstone with 40-60% interstitial peloidal mud and silt-size fossil debris constitutes the dominant biostrome rock fabric. During the Late Carboniferous, non-ancestral palaeoaplysiniids were restricted to the Ely and Sublett basins of Utah and Idaho, respectively. By Early Permian time, however, they played a significant role in the construction of reefs and biostromes across the entire northern margin of Laurussia.^1";
- 2342 s[2339] = "JEFFERY D.L., STANTON R.J. (1996).- Growth History of Lower Mississippian Waulsortian Mounds: Distribution, Stratal Patterns, and Geometries, New Mexico.- *Facies* 35, 1: 29-58.- FC&P 25-2, p. 69, ID=3174^Topic(s): reefs Waulsortian; reefs waulsortian; Systematics: ; Stratigraphy: Carboniferous L; Geography: USA, New Mexico^The factors controlling the localization and growth of Lower Mississippian Waulsortian mounds have been difficult to establish because of limited exposure of individual mounds and mound-bearing platforms in western Europe, where the Waulsortian facies have been studied most intensively. Mounds on the Lower Mississippian homoclinal ramp of the Lake Valley Formation in the Sacramento Mountains, however, are exposed exceptionally well at platform, outcrop, and mound scales in an area roughly 5 by 20km, and provide the opportunity to better understand these aspects of Waulsortian mounds. [first fragment of extensive summary]^1";
- 2343 s[2340] = "SANDO W.J. (1993).- Coralliferous carbonate shelves of Mississippian age, west side of Antler orogen, central Nevada.- *U.S. Geological Survey Bulletin* 1988-F: 29 pp.- FC&P 23-2.1, p. 47, ID=4274^Topic(s): carbonate platforms; carbonate shelves; Systematics: ; Stratigraphy: Carboniferous L; Geography: USA, Nevada^1";
- 2344 s[2341] = "HEUER E. (1973).- The paleoautecology of the megafauna of the Pennsylvanian Wolf Fountain Shale in the Possum Kingdom area, Palo Pinto County Texas.- *Dissert. Abstr. international*. B, 1973, 34, 5: 2202-2205.- FC&P 4-2, p. 57, ID=5268^Topic(s): ecology; ecology; Systematics: ; Stratigraphy: Carboniferous U; Geography: USA, Texas^1";
- 2345 s[2342] = "ARMSTRONG A.K., MAMET B.L. (1977).- Carboniferous microfacies, microfossils, and corals, Lisburne Group, arctic Alaska.- *US Geol. Surv. Prof. paper* 849; 144 pp.- FC&P 7-2, p. 22, ID=5641^Topic(s): microfacies; microfacies, paleontology; Systematics: ; Stratigraphy: Carboniferous; Geography: USA, Alaska^1";
- 2346 s[2343] = "WU WANGSHI, STEVENS C.H., BAMBER E.W. (1985).- New Carboniferous and Permian boreal corals from northwestern British Columbia, Canada.- *Journal of Paleontology* 59, 6: 1489-1504.- FC&P 15-1.2, p. 32, ID=0816^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Canada, British

- Columbia^Lower Namurian and Permian colonial rugose corals from the eugeosynclinal, volcanic-sedimentary Cache Creek and Stikine groups represent contrasting Tethyan and Boreal faunas. *Parapavona* major n.gen., n.sp., from the lower Horsefeed Formation (Cache Creek Group, Atlin Terrane), is the first representative of the Tethyan family Pseudopavonidae described from North America. It is associated with *Siphonodendron* sp. and lower Namurian microfossils of mixed North American and Tethyan affinities. Boreal corals from the lower Asitka Group (Stikine Assemblage) include *Protolonsdaleiastraea?* sp., and *Lytvophyllum?* sp., which are associated with middle Asselian to lower Artinskian fusulinaceans and are closely related to Lower Permian corals from the Ural Mountains, Spitzbergen, and Arctic Canada.^1";
- 2347 s[2344] = "FEDOROWSKI J. (1987).- Upper Palaeozoic Rugose Corals from Southwestern Texas and Adjacent Areas: Gaptank Formation and Wolfcampian Corals. Part I.- *Palaeontologia Polonica* 48: 271 pp., 87 figs, 13 tabs, 43 pls.- FC&P 16-2, p. 17, ID=2038^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U / Permian L; Geography: USA, Texas^The present volume contains descriptions of the major part of the nondissepimentate taxa of the order Stauriida Verrill 1865 from the Upper Carboniferous and Lowermost Permian Gaptank Formation and from Wolfcampian (Lower Permian). The further subdivision of the Stauriida is not certain. From the 4 families distinguished only one is assigned to the suborder Stereolasmatina Hill 1981. The systematic position of the families Lindstroemiidae Pocta 1902, Lophophyllidiidae Moore and Jeffords 1945 and Lophotichiidae Weyer 1972 is uncertain. Thirteen genera of which: *Assmulia* and *Falsiamplexus* are new and 9 subgenera, of which *Abeophyllum*, *Ailigia*, *Ericina* and *Vacoa* are new, were identified. Among the total number of 61 species described, 33 are new and 10 were left in the open nomenclature. The systematic descriptions were accompanied by introductory considerations on the evolution and paleogeography of the Permian Rugosa. The table of occurrence of all species described, as well as morphologically-comparative tables of more diversified taxa were also included.^1";
- 2348 s[2345] = "SUGIYAMA T., SADER K., DANNER W.R. (1999).- Carboniferous and Permian corals from Kamloops, British Columbia.- XIV International Congress on the Carboniferous - Permian; Calgary/Alberta: Guidebook for pre-Conference field-trip No. 9: 555 pp., 1 fig., 1pl.- FC&P 32-2, p. 61, ID=1395^Topic(s): ; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Carboniferous, Permian; Geography: Canada, British Columbia^Ten species representing eight genera of rugose corals and some heterocoral species, ranging in age from Late Mississippian to Early Permian, were tentatively identified from several limestone bodies exposed near Kamloops. The localities yielding these corals are shown on figure 1. Paleontological remarks on the corals from each locality and their estimated geological ages are given below.^1";
- 2349 s[2346] = "LEMONE D.V., STEVENS C.H., SIMPSON R.D. (1976).- The *Stylastraea-Lithostrotionella* Lower Permian (Middle Wolfcamp) Coral Zone in the Franklin Mountains, El Paso County, Texas.- *Palaeont. Soc. Japan, Trans. Proc* 77-82.- FC&P 6-1, p. 26, ID=0060^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: USA, Texas^[brief summary of coral zone occurrences]^1";
- 2350 s[2347] = "WILSON E.C. (1984).- Stratigraphic range extensions and coral province affiliations of stony corals in the Lower Permian McCloud Limestone of California.- *Palaeontographica Americana* 54: .-. [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 51, ID=1017^Topic(s): biostratigraphy, biogeography; Anthozoa, stony corals; Systematics: Cnidaria; Anthozoa; Stratigraphy:

- 2351 s[2348] = "WILSON E.C. (1991).- Permian corals from the Spring Mountains, Nevada.- Journal of Paleontology 65, 5: 727-741.- FC&P 20-2, p. 54, ID=2930^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: USA, Nevada^Rugose and tabulate corals from the Lower Permian (Wolfcampian, Leonardian) Bird Spring Group in the Lee Canyon section of the Spring Mountains, Clark County, Nevada, are referred to eight genera and ten species. New taxa are Fomichevella nevadensis n.sp., F. waltersi n.sp., Mccloudius parvus n.sp., and Paraheritschioides richi n.sp. The fauna is most similar to the shelf fauna in eastern Nevada, but there are significant similarities to corals from the Antler Highland embayments of central Nevada and southern Idaho and to faunas of the same age in northern California and northern British Columbia. The paleogeography is interpreted as shallow water near the east side of the mouth of a south-opening coastal sea, bordered on the east by the continent and on the west by the Antler Highland. Corals migrated south along the western shores of the Antler Highland and mixed with the shelf fauna, perhaps with some corals crossing from Tethys to the coast. The modern eastern Pacific tropical coral faunas, which have several hermatypic coral genera and species derived from the western Pacific in the Pleistocene, may occupy a somewhat similar geography near the mouth of the modern Gulf of California.^1";
- 2352 s[2349] = "WILSON E.G., LANGENHEIM R.L.jr (1993).- Early Permian corals from Arrow Canyon, Clark County, Nevada.- Journal of Paleontology 67, 6: 935-945.- FC&P 23-2.1, p. 47, ID=4379^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: USA, Nevada^1";
- 2353 s[2350] = "BELASKY P., RUNNEGAR B. (1994).- Permian longitudes of Wrangellia, Stikinia, and Eastern Klamath terranes based on coral biogeography.- Geology 22: 1095-1098.- FC&P 24-1, p. 54, ID=4459^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: America NW^Trend-surface analysis of biogeographic data and probabilistic estimates of diversity and similarity provide a new approach to understanding the origin of North American suspect terranes. Results from Permian corals indicate that (1) the eastern boundary of the Tethyan coral province was about 2000 km west of the North American craton; (2) Eastern Klamath and Stikinia were close to one another and were up to 6700 km west of North America during the Early Permian; (3) Wrangellia was situated to the southeast of Stikinia, as much as 5000 km west of the craton; (4) the Late Permian location of the Eastern Klamath terrane was 3000-5800 km west of the craton and between 11° and 21° N; and (5) the Eastern Klamath terrane moved westward during the Permian, possibly as a result of back-arc spreading.^1";
- 2354 s[2351] = "WILSON E.G. (1994).- Early Permian corals from the Providence Mountains, San Bernardino County, California.- Journal of Paleontology 68, 5: 938-951.- FC&P 24-1, p. 64, ID=4480^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: USA, California^Rugose and tabulate corals from the Lower Permian (Wolfcampian) part of the Bird Spring Group in the Providence Mountains, San Bernardino County, southeastern California, comprise eight species in eight genera. Heritschioides mckassoni n.sp. is the lowest stratigraphic record for this index genus on the undoubted shelf of western North America. Paraheritschioides applegatei n.sp. is the first record for the genus in southern California. Neomultithecopora providensis n.sp. is a second species for the genus in the southern Great Basin. The other five species provide close ties to previously described faunas from the Spring Mountains and the Arrow Canyon Range of southwestern and southeastern Nevada. The combined Wolfcampian coral

- faunas of these three areas are somewhat closer at the genus and species level to the McCloud Limestone Wolfcampian faunas of northern California than to the Wolfcampian shelf faunas in east-central Nevada. Additional species present in the combined faunas are known, originally from the Wolfcampian of central Nevada and Kansas and a genus is not otherwise known south of British Columbia. The faunas suggest a sub-province of the Durhamianid Coral Province for the southern California and southern Nevada area and perhaps imply partial isolation from the more northerly parts of the province by land barriers such as the Antler Highlands.¹¹;
- 2355 s[2352] = "ROWETT C.L. (1975).- Stratigraphic distribution of Permian corals in Alaska.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 105-113.- FC&P 5-1, p. 30, ID=5364Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: USA, Alaska¹¹[synopsis of generic composition and stratigraphic and geographic distribution of coral faunas]¹¹;
- 2356 s[2353] = "ROWETT C.L. (1975).- Stratigraphic distribution of Permian corals in Alaska.- US Geol. Survey Prof. Paper 823-D; 17 pp.- FC&P 5-1, p. 30, ID=5365Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: USA, Alaska¹¹[synopsis of generic composition and stratigraphic and geographic distribution of coral faunas]¹¹;
- 2357 s[2354] = "HILL A. (1978).- Systematics, biostratigraphy, and paleoenvironments of Late Virgillian and Early Wolfcampian corals, Bird Spring Group, Arrow Canyon Quadrangle, Clark County, Nevada.- Univ. of Illinois, Dept Geology: vi + 105 pp., 5 figs, 11 tables, 6 pls; unpublished MSc Thesis.- FC&P 7-1, p. 17, ID=5568Topic(s): taxonomy, biostratigraphy, ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: USA, Nevada¹¹Late Wolfcampian corals in the Las Vegas and Arrow Canyon Ranges include *Lithostrotion dilitata* Easton, L. cf. *L. dilitata* Easton, *Diphyphyllum connorsensis* Easton, *Heterocaninia* sp., *Pseudozaphrentoides* n.sp., *Roemeripora* n.sp., and *Syringopora multattenuata* McChesney. *Roemeripora wimani* Heritsch, *Syringopora multattenuata* McChesney and *Multithecopora hypatiae* Wilson occur in the Virgilian. The rugose corals and *Roemeripora* spp. primarily occur in rocks of Nowak and Carrozi's (1973) microfacies 7, which indicates a lagoonal environment. *Syringoporoids* also occur in the lagoonal environment, but are more abundant in microfacies 2 and 3, which represent the seaward face and crest of the bar confining the lagoon. * The following fusulinids provide biostratigraphic control of the coral occurrences: * Wolfcampian - *Triticites creekensis* Thompson and *Schwagerina* (?) *multispira* Thompson and Hazzard; * Virgilian - *Pseudofusulinella utahensis* Thompson and Bissell, *Oketaella* n.sp., *Triticites birdspringensis* Cassity and Langenheim. The more fusiform *P. utahensis* and *Triticites* spp. characterize the seaward slope and crest of the bar in contrast to the more globose *O. n.sp.* and *S. (?) multispira* in the lagoon.¹¹;
- 2358 s[2355] = "RIGBY J.K., BELL G.L.jr, THOMPSON K. (2007).- Hexactinellid and associated sponges from the Upper Reef Trail Member of the Bell Canyon Formation, Southern Guadalupe Mountains National Park, Texas.- Journal of Paleontology 81, 6: 1241-1256.- FC&P 35, p. 45, ID=2325Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Permian M; Geography: USA, Texas¹¹A small faunule of silicified hexactinellid sponges and root tufts has been recovered from the upper Guadalupian Reef Trail Member of the Bell Canyon Formation, from the Patterson Hills, in the southwestern part of the Guadalupe Mountains National Park in western Texas. Some demosponges from the type section of the Reef Trail Member, near the mouth of McKittrick Canyon on the front of the Guadalupe Mountains in the park, have also

been documented. Included in the faunule from the Patterson Hills localities are the new amphidiscosid hexactinellid pelicasponge *Trailospongia reischii* n.gen. and sp., the questionable pelicaspongiid *Hexirregularia nana* n.gen. and sp., and the dictyospongiid hexactinellids *Microstaura doliolum* Finks, 1960, and *Microstaura minima* n.gen. and sp., and *Microstaura parva* n.gen. and sp. They are associated with specimens of the lyssacinoid brachiosponges *Toomeyospongiella gigantia* Rigby and Bell, 2005, *Toomeyospongia modica* n.sp., and *Toomeyospongia* [sic! should be *Toomeyospongiella*] *minuta* n.gen. and sp., and fragments of three different types of root tufts, termed Tufts 1, 3, and 4. Two specimens of the new cylindrical demosponge *Mckittrickella pratti* n.gen. and sp. are associated with Tuft 2 in the collection from the type section of the Reef Trail Member, and a third specimen was collected from the member in the Patterson Hills. These sponges from Localities 1-7 are the youngest Permian sponges known from the region, and possibly from North America.¹";

- 2359 s[2356] = "RIGBY J.K., LINDER G.A., STEVENS C.H. (2004).- A new occurrence of the *hydrozoan*; *Radiotrabelopora reticulata* Fan, Rigby and Zhang, 1991, in the Permian of California.- *Journal of Paleontology* 78, 2: 410-413.- **FC**;P 34, p. 24, ID=1216**Topic(s):** distribution; Hydrozoa, Radiotrabelopora; **Systematics:** Cnidaria; Hydrozoa; **Stratigraphy:** Permian; **Geography:** USA, California**Examples of the *hydrozoan*; *Radiotrabelopora reticulata* Fan, Rigby, and Zhang, 1991 have been recently recovered from Lower Permian rocks in the Inyo Mountains, Owens Valley area, of east-central California by G. Linder and C. Stevens. That genus and species were originally described from the Middle Permian (Leonardian-Lower Guadalupian) Maokou Formation from western Hubei, China, by Fan et al. (1991). This is the first report of the genus and species from North America. * The fossils were collected from Unit 7 of the Owens Valley Group, US Geological Survey Map I-1932 (Stone et al., 1989). This unit represents a carbonate buildup composed of wackestones, packstones, and grainstones that formed on an uplift composed of an Upper Carboniferous-lowermost Permian deepwater limestone sequence. Basinward, this unit lenses into rocks that accumulated in deeper water. Fossils from Unit 7, in order of abundance, include pelmatozoan parts, epimastoporid and phylloid algae, and fusulinids. Tubiphytes Maslov, 1956, bryozoans, and the *hydrozoans*; are much less common, and brachiopods and corals are rare. Algae are abundant throughout the section, becoming dominant in the upper part, where they are associated with the *hydrozoans*;**. [initial part of a short note]¹";
- 2360 s[2357] = "STEVENS C.H., RYCERSKI B.A. (1983).- Permian colonial rugose corals in the western Americas - aids in positioning of suspect terranes.- Pre-Jurassic rocks in western North America suspect terranes: 23-36 [Stevens C. H. (ed.); Pacific Section of Society of Economic Paleontologists and Mineralogists, Los Angeles, California].- **FC**;P 13-1, p. 41, ID=0483**Topic(s):** biogeography, suspect terranes; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Permian; **Geography:** America N, Cordillera¹";
- 2361 s[2358] = "WILSON E.C. (1985).- Rugose corals (Coelenterata, Anthozoa) from the Lower Permian McCloud Limestone at Tombstone Mountain, Northern California.- Natural History Museum of Los Angeles County, Contributions in Science 316: 1-11.- **FC**;P 15-1.2, p. 32, ID=0814**Topic(s):** Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Permian; **Geography:** USA, California**A rugose coral faunule consisting of one solitary and three massive species occurs in an Upper Wolfcampian Series stratum of the McCloud Limestone at Tombstone Mountain, Shasta County, California. It is the youngest coral fauna in the formation and has species in common with the older parts of the formation and with Lower Permian formations**

- of Oregon and Spitsbergen. *Wexolina tombstonensis* n.gen., n.sp. is a very large solitary coral. *Kleopatrina* (K.) *svalbardense* Fedorowski was described from the Lower Permian (Sakmarian) Treskelodden Formation of Spitsbergen. *Langenheimia klamathensis* Wilson ranges lower in the formation elsewhere. *Petalaxis occidentalis* (Merriam) was described from the Lower Permian Coyote Butte Formation of Oregon. Coarsely clastic sediments, algae, and corals indicate a high-energy, shallow-water, warm, marine paleoenvironment. (Original summary)^1";
- 2362 s[2359] = "STEVENS C.H., RYCERSKI B. (1989).- Early Permian colonial rugose corals from the Stikine River area, British Columbia, Canada.- *Journal of Paleontology* 63, 2: 158-181.- FC&P 18-2, p. 33, ID=2479^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: Canada, Stikine terrane^Twenty-two species of Early Permian colonial rugose corals belonging to 12 genera, and 10 locations in the Stikine River area in northwestern British Columbia, Canada, are described. These include three new species of *Fomichevella* (*F. magna*, *F. southeri*, *F. bamberi*), two species of *Heintzella*; five species of *Heritschioides*, of which three are new (*H. bagleyae*, *H. garvinae*, *H. hoganae*), two new species of *Petalaxis* (*P. guasparinae*, *P. neriae*), and two new species of *Lytvophyllum* (*L.? mongeri*, *L. wersoni*). In addition, five new species assigned to five new genera are here named: *Eastonastraea complexa*, *Fedorowskiella simplex*, *Pararachnastraea lewisi*; *Stikineastraea thomasi*, and *Wilsonastraea rigbyi*. * These corals occur in rocks forming part of the Stikine terrane, the largest tectonostratigraphic unit in western Canada. This coral fauna shows a very close affinity with that of the Lower Permian McCloud Limestone of eastern Klamath Mountains of northern California, and there is some similarity to the Coyote Butte fauna of Oregon. Several species compare most closely with species from Spitsbergen, but there are few similarities with any cratonal North American faunas and none with Tethyan faunas.^1";
- 2363 s[2360] = "STEVENS C.H., YANCEY T.E., HANGER R.A. (1990).- Significance of the provincial signature of Early Permian faunas of the eastern Klamath terrane.- *Geological Society of America, Special Paper 255* [Harwood D.S. & Miller M.M. (eds): *Paleozoic and early Mesozoic paleogeographic relations: Sierra Nevada, Klamath Mountains and related terranes*]: 201-218.- FC&P 21-1.1, p. 48, ID=3242^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: USA, California Klamath terrane^^1";
- 2364 s[2361] = "FEDOROWSKI J. (1993).- Intraspecific variability in two Upper Permian rugose coral species.- *Courier Forschungsinstitut Senckenberg* 164: 255-262. [P. Oekentorp-Kuster (ed.) *Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera*, Vol. 1].- FC&P 22-2, p. 18, ID=3460^Topic(s): variability; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: USA, Texas^Two species, belonging to different genera, but collected from the same two localities USNM 740D and 725F in the Guadalupian Bell Canyon Formation of SW Texas, USA, exhibit a striking similarity, almost identity in their measurements and in some morphological features. Also, intermediate generic morphological characteristics have been recognized in some coralla. In addition, there is a group of specimens that achieved their new generic character (the columella) not by inheriting it from the earlier columellate species, but by some morphological changes in the half-aulate species, co-existing with the columellate species. Such a derivation indicates that the columella is only analogous, not homologous, in both descendent groups of specimens. The data presented emphasize the need for careful taxonomical studies.^1";
- 2365 s[2362] = "FEDOROWSKI J. (1986).- *Diffingiina*, a new suborder of the rugose corals from SW Texas.- *Acta Palaeontologica Polonica* 30, 3-4: 209-240. [imprint 1985].- FC&P 16-1, p. 59,

ID=1959^Topic(s): new taxa; Rugosa, Diffingiina; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: USA, Texas^Diffingiina subordo n., tentatively included in Stauriida Verrill, 1865, is characterized by the adaxial split of the inner end of at least one (the cardinal) septum; the development of the basal plate and the vertical position of the young corallite at the beginning of its growth; the absence of the septal furrows; the shortening of the counter septum at least during some part of the neanic growth; the trabecular microstructure of septa; and the biform tabularium. The attachment scars have once been illustrated for the Rugosa, but they were recognized only in this paper. All taxa included in the suborder are new, because their basic characteristics have not been reported so far as present in the Rugosa. Two new families have been established: the monotypic family Plerodiffiidae fam. n., containing only a single species Plerodiffia eaglebuttensis sp. n., and the family Diffingiidae fam. n. subdivided into two subfamilies. In the monotypic subfamily Diffingiinae subfam. n. seven new species have been recognized. The presence of two opposite trends in the morphological development suggests the possibility of further increase in the number of genera within the subfamily. The subfamily Turgidiffiinae subfam. n. contains two genera: Turgidiffia gen. n. with three new species and the new genus and species left in the open nomenclature.^1";

- 2366 s[2363] = "STEVENS C.H., STONE P. (2009).- New Permian durhaminid cerioid corals from east-central California.- Journal of Paleontology 83, 6: 946-953.- FC&P 36, p. 66, ID=6461^Topic(s): new taxa; Rugosa Durhaminidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: USA, California^Permian colonial corals from Artinskian to Kungurian strata in the Conglomerate Mesa area, Inyo Mountains, east-central California, include five new species, one of which is assigned to a new genus. The new taxa are: Malpaisia maceyi n.gen. and n.sp., Parachnastraea bellula n.sp., P. delicata n.sp., P. owensensis n.sp., and Cordillerastraea inyoensis n.sp. These species, several of which compare most closely with other Artinskian and Kungurian species from eastern Nevada and northern Mexico, represent three distinct stocks that differentiated on an isolated submarine uplift offshore from the main part of the Cordilleran carbonate shelf. [original abstract]^1";
- 2367 s[2364] = "STEVENS C.H., MILLER M.M., NESTELL M. (1987).- A new Permian waagenophyllid coral from the Klamath Mountains, California.- Journal of Paleontology 61, 4: 690-699.- FC&P 16-2, p. 20, ID=2046^Topic(s): new taxa; Rugosa, Waagenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: USA, California^Specimens of a new species of the Permian waagenophyllid coral genus Waagenophyllum, w. klamathensis, have been recovered from limestone lenses near the top of the Upper Permian Dekkas Formation in the eastern Klamath Mountains, and similar specimens have been collected from an isolated limestone mass in the eastern Hayfork terrane of the southwestern Klamath Mountains, northern California. Another specimen of Waagenophyllum, which may represent another species, has been recovered from another limestone mass in the Hayfork terrane. These specimens of Waagenophyllum, a genus which otherwise is restricted to the Tethyan Province, provide the only tie between the Permian limestone masses of the eastern Hayfork terrane, which also contain typical Tethyan foraminifers, and the eastern Klamath Mountains terrane (McCloud belt), which contains many fossils with non-Tethyan affinities.^1";
- 2368 s[2365] = "WILSON E.C. (1982).- Wolfcampian Rugose and Tabulate corals (Coelenterata: Anthozoa) from the Lower Permian McCloud Limestone of Northern California.- Contrib. Sci. 337: 1-90 (Los Angeles).- FC&P 11-1, p. 51, ID=1763^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Permian L Wolf; Geography: USA, California^Six sections measured across the McCloud Limestone, Shasta

County, northern California, are Lower Permian (Wolfcampian Series), represent a composite thickness of at least 5,500 feet (about 1,700 m), and contain rich invertebrate faunas including at least 49 species of rugose and tabulate corals. 42 species in 17 genera of rugose corals are described, including four new species. The general generic composition is characteristic of the Durhaminid Coral Province known from rocks in the Ural Mountains, Novaya Zemlya, Spitzbergen, Arctic North America, and western North America as far south as southern California. Some genera appear to be endemic to western North America. The corals did not form reefs but were randomly spaced on calcareous bioclastic substrates in shallow waters of the Cordilleran eugeosyncline near the Permian paleoequator in an area temporarily lacking much volcanic sedimentation. [original summary] The tabulate corals described here are: *Bayhaium merriamorum*, *B. virginiae* n.sp., *Enigmolithes roberti* n.sp., *Michelinia nelsoni* n.sp., *Neomultithecopora sandoi* n.sp., *Syringopora mcutcheonae*, *S. multattenuata*. Among the Rugosa mostly new species are described; solitary corals (*Aulophyllum*, *Clisiophyllum*, *Gshelia*, *Heterocaninia*); fasciculate corals (*Durhamina*, *Heritschioides*, *Mccloudius* n.gen., *Siphonodendron*, *Yatsengia*); cerioid corals (*Bassius* n.gen., *Dillerium* n.gen., *Kleopatrina*, Kl. (*Porfiriella*), *Langenheimia* n.gen., *Petalaxis*, *Traskina* n.gen.); cerioid-astreoid corals (*Arachnastraea*).¹;

- 2369 s[2366] = "RIGBY J.K., SENOWBARI-DARYAN B. (1996).- *Gigantospongia*, new genus, the largest known Permian sponge, Capitan Limestone, Guadalupe Mountains, New Mexico.- *Journal of Paleontology* 70, 3: 347-355.www.jstor.org/pss/1306431.- FC&P 25-1, p. 46, ID=3052Topic(s): new genus; Porifera *Gigantospongia*; Systematics: Porifera; Stratigraphy: Permian; Geography: USA, New MexicoSeveral specimens of the large, discoidal, new inozoid genus and species, *Gigantospongia discoforma*, have been discovered in the Upper Permian, Upper Capitan Limestone in the northern Guadalupe Mountains of New Mexico, near Carlsbad Caverns. The holotype is nearly 2.5m across, as exposed, and ranges from 8-20mm thick, with numerous canals transverse and parallel to the principal plane. These canals are approximately 1mm in diameter and separated by tracts 1-2mm thick. Thickened dermal and gastral layers, each approximately 1mm thick, occur at tops and bases of both the holotype and associated paratypes in the "Sponge window" exposures of Bat Cave Draw, and in specimens from Chinaberry and Hackberry Draws. Inverted *Lemonea conica* Senowbari-Daryan, 1990, is apparently attached to the base, and appears to have grown inverted in a void formed or capped by the tabular inozoid. Well-preserved specimens of *Amblysiphonella* also appear inverted, as do examples of *Lemonea cylindrica* (Girty, 1908), a new species of *Lemonea*, and *Guadalupia explanata* (King, 1943), which occur between the holotype and an underlying paratype. All appear coated with *Archaeolithoporella* crusts. Microstructure of the inozoan skeleton is obscured by diagenesis. [original abstract]¹;
- 2370 s[2367] = "SENOWBARI-DARYAN B., RIGBY J.K. (1996).- First Report of *Lercaritubus* in North America, from the Permian Capitan Limestone, Guadalupe Mountains, New Mexico.- *Journal of Paleontology* 70, 1: 22-26.www.jstor.org/pss/1306366.- FC&P 25-1, p. 45, ID=3050Topic(s): problematic benthic fossil; ??? *Lercaritubus*; Systematics: problematica; Stratigraphy: Permian; Geography: USA, New Mexico*Lercaritubus problematicus* Flügel, Senowbari-Daryan, and Di Stefano, 1990, a problematic organism, was initially described from Lower and Middle Permian rocks of Sicily, was subsequently recognized in Upper Permian reefs of Oman and reefal limestones of the Tethyan realm. It is here described for the first time from North America, from the Middle Permian reefoidal Upper Capitan Limestone of the Guadalupe Mountains in New Mexico. *Lercaritubus problematicus* has a stratigraphic range of Lower to Upper Permian and occurs widely in Permian tropical reef deposits. [original

- abstract]^1";
- 2371 s[2368] = "WATKINS R., WILSON E.C. (1989).- Paleoecologic and biogeographic significance of the biostromal organism Palaeoaplysina in the Lower Permian McCloud Limestone, Eastern Klamath Mountains, California.- Palaios 04: 181-192.- FC&P 19-1.1, p. 68, ID=2703^Topic(s): reef-builder; enigmatic Palaeoaplysina; Systematics: problematica; Stratigraphy: Permian L; Geography: USA, California^This encruster, of unknown affinity, forms reefal facies that extend from the North American Cordillera through the Canadian Arctic to the Urals^1";
- 2372 s[2369] = "WOOD R.A., DICKSON J.A.D., KIRKLAND B. (1996).- New observations on the ecology of the Permian Capitan Reef, Texas and New Mexico.- Palaeontology 39, 3: 733-762.- FC&P 25-2, p. 77, ID=3091^Topic(s): ecology; reefs; Systematics: ; Stratigraphy: Permian; Geography: USA, Texas, New Mexico^The Permian Capitan reef was a predominantly heterotrophic ecosystem strongly differentiated into open surface and cryptic communities. Unlike modern phototrophic coralgal reefs, most of the preservable epibenthos was housed within the cryptos and zonation developed only in the shallow parts of the reef. Contrary to established opinion, most sphinctozoan sponges did not grow upright to form a baffling framework but rather were pendent cryptobionts, as were nodular bryozoans and rare solitary rugose corals and crinoids. Indeed, many members of the cryptos were obligate cryptobionts. Much of the Middle Capitan reef framework was constructed by a scaffolding of large frondose bryozoans, with the subsidiary platy sphinctozoan Guadalupia zitteliana. Bathymetrically shallow areas of both the Middle and Upper Capitan reef, however, were characterized by platy sponges. In parts of the Upper Capitan, some platy sponges (Gigantospongia discoforma) reached up to 2 m in diameter and formed the ceilings of huge cavities which supported an extensive cryptos. In the absence of destructive forces (both biotic and physical) prevalent on modern reefs, the relatively fragile Capitan reef remained intact after the death of the constructing organisms. Rigidity was imparted to this community by a postmortem encrustation of Tubiphytes and Archaeolithoporella, together with microbial micrite. The resultant cavernous framework was partially infilled with sediment and preserved by syndimentary intergrowth of aragonitic botryoids and Archaeolithoporella. Extensive cement precipitation was favoured by a number of factors including deep anoxia, which generated upwelling waters with elevated alkalinity. Although the accumulation rate of the Capitan may have been comparable to that of modern coralgal reefs, both the trophic structure and relative contributions of inorganic and organic carbonate were profoundly different.^1";
- 2373 s[2370] = "NOE S.U. (1996).- Late-Stage Reef Evolution of the Permian Reef Complex: Shelf Margin and Outer-Shelf Development of the Tansill Formation (Late Permian), Northern Guadalupe Mountains, New Mexico, USA.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 42, ID=3609^Topic(s): geology; reefs; Systematics: ; Stratigraphy: Permian Guad; Geography: USA, New Mexico^The outer-shelf of the Tansill Formation (Late Guadalupian; Kazanian) in the northern Guadalupe Mountains (Permian Reef Complex, New Mexico, USA), located between the peritidal pisolitic shelf crest and the submerged shelf margin, is characterized by a patch reef facies in the seaward part and a peritidal island facies in its landward part. These isolated buildups represent the youngest Permian bioconstructions of SW-North America which formed before the onset of the salinity crisis in the Delaware Basin during latest Permian (Ochoan evaporites). Three types of patch reefs were observed: 1) wave resistant calcisponge / algal / cement reefs of a modified Capitan reef facies located next to the

shelf margin, 2) partially wave resistant reef mounds scattered across the seaward part of the outer-shelf, and 3) non-wave resistant skeletal mounds restricted to the landward part of the outer-shelf. After the demise of the underlying shelf margin reef rim (Capitan Reef) which was caused by a regional relative sealevel drop, increasing salinity in the adjacent Delaware Basin prevented a new formation of a continuous reef rim. Instead, the site of reef building shifted landward onto the shallow outer-shelf, where on-shelf currents and aperiodic precipitation were responsible for effective mixing of water masses and lowering of hyper salinity. Distribution of those patch reefs in space and time documents a progradational pattern reflecting the general shallowing-upward trend and continuous salinity increase during latest Guadalupian.¹¹;

2374 s[2371] = "WEIDLICH O. (1996).- Comparative Analysis of Late Permian Reefal Limestones From the Capitan Reef (New Mexico, USA) and the Oman Mountains.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC;P 26-1, p. 43, ID=3611Topic(s):comparison; reefs; Systematics:; Stratigraphy:Permian U; Geography:USA, New Mexico, Oman MtsLate Permian reefal limestones from the Capitan Reef (New Mexico, USA) and the Oman Mountains were investigated with respect to microfacies and quantitative composition. The communities correspond to sponge reefs, algal cement reefs, phylloid algal reefs, and probably rugose coral reefs. The carbonate budget (the percentage of macro-reefbuilders, micro-framework, internal sediment, and marine-phreatic cements on the base of field-derived acetate sheets) is characteristic for the different case studies. The quantitative data from the Capitan reef point to dominance of low-growing organisms and marine phreatic cements. The communities from the Oman Mountains are rich in sediment. Taphonomic processes including breakdown of reefbuilders by waves or bioerosion were less important than constructional processes.";

2375 s[2372] = "WEIDLICH O., FAGERSTROM J.A. (1998).- Evolution of the Upper Capitan-Massive (Permian), Guadalupe Mountains, New Mexico.- Brigham Young University, Geology Studies 43: 167-187.- FC;P 27-2, p. 79, ID=3948Topic(s):reef complexes, geohistory; reef complexes; Systematics:; Stratigraphy:Permian; Geography:USA, New MexicoA photo-transect of the seaward reef tract and six subvertically arranged reef maps covering about 13 m2 of outcrop surface provide digitized images and quantitative data for the interpretation of the evolution of the upper Capitan-massive near Whites City, New Mexico. The seaward reef front consists of a sequence from a phylloid algal sub-community to varied sponge-algal/cement reef sub-communities to a Tubiphytes-dominated reef. Progradational geometries suggested by seaward-shifting of facies boundaries are especially apparent in the Gigantospongia zone due to basinward extension of sheet-like inozoans sheltering elongate cavities. The unit above is characterized by a gradual disintegration of the framework as evidenced by an increase in platform sediment and decrease in framework. In the youngest Tubiphytes-dominated reef stage, only small incrusting reefbuilders constructed the framework, while macro-reefbuilders decreased significantly. Sponge-algal/cement reef sub-communities are the dominant element of the reef front. A quantitative analysis of digitized maps from this sub-community indicates that macro-reefbuilders, chiefly calcareous sponges (1-7%) and phylloid algae (0-3%) formed only a minor part of the framework. Post-mortem biostratonic processes caused local skeletal breakage and fragment alignment. The most important reef element with an areal cover of 57-96% is the micro-framework, a consortium of low-growing organisms (e.g., Tubiphytes or Archaeolithoporella) and syndimentary, marine-phreatic cements. Open reef cavities were either filled with early diagenetic cements (0-22%) or internal sediment (0-38%) of

different origins including reef-derived wacke/packstones, platform-derived grainstones, and/or brownish quartz-rich sediments. The grainstones locally yield the fusulinid *Codonofusiella paradoxa* indicative of an Upper Yates or Lower Tansill age.¹;

- 2376 s[2373] = "FAGERSTROM J.A., WEIDLICH O. (1999).- Strengths and Weaknesses of the Reef Guild Concept and Quantitative Data: Application to the Upper Capitan-Massive Community (Permian), Guadalupe Mountains, New Mexico-Texas.- *Facies* 40, 1: 131-156.- **FC#038;P 28-1**, p. 63, ID=4005^Topic(s): guild concept; reefs; Systematics: ; Stratigraphy: Permian; Geography: USA, New Mexico, Texas^Analyses of large acetate sheet tracings, close-up photos and 105 sub-horizontal quadrat surfaces at four localities near the base of the Guadalupe Mountains Escarpment indicate that the biotic framework of the upper Capitan reef was built by about 35 species: one codiacean (*Eugonophyllum* sp.), 17 calcisponges, 9 bryozoans, one richthofenid brachiopod, some crinoids (known only from columns), 4 Problematics and microbes. This widespread fossil community included members of the Constructor, Baffler and Binder Guilds. A re-evaluation of the Guild Concept (Fagerstrom 1987, 1991) highlights the validity of the functional roles of the Constructor and Binder Guilds for reef construction. Members of the Baffler Guild, however, need to be revised and an interpretation of microbial micrite and cryptic biota remains controversial. Open surface phylloid algal and cryptic sponge-bryozoan dominated sub-communities were of only local importance. The upper Capitan-massive differs from its Permian counterparts in the low diversity and areal cover of the frame-building biota, low micrite content and abundant micro-frameworks, i.e. intergrown small sponges, Problematica and syndepositional cements (botryoidal and isopachous, fibrous calcite). [part of extensive summary]¹;
- 2377 s[2374] = "HUNT D.W., FITCHEN W.M., KOSA E. (2003).- Syndepositional deformation of the Permian Capitan reef carbonate platform, Guadalupe Mountains, New Mexico, USA.- *Sedimentary Geology* 154, 3-4: 89-126.- **FC#038;P 33-1**, p. 87, ID=7234^Topic(s): reef carbonates, syndepositional faults; reef carbonates; Systematics: ; Stratigraphy: Permian; Geography: USA, Texas^The average rate of fault displacement (0.021 m/ka) and the maximum rates of fault propagation (0.088-0.123 m/ka) were normally less than the platform accumulation rates (0.053-0.336 m/ka). Thus, the faults were normally blind and rarely broke the platform top so that slumps and fault-scarp degradation breccias are rare. The fault zones were substantially modified by diagenesis during platform development. They are up to 9m wide, taper both up and downward, have irregular margins and complex fills mainly of sedimentary origin. Their margins and fill were subject to extensive modification by karstic(?) / mixing zone dissolution, gravitational collapse and dolomitising fluids. Consequently, tectonic fabrics and kinematic indicators are rare. Preserved tectonic fabrics consistently indicate a normal and reverse dip-slip sense of movement. Previously, these faults were mistaken for "neptunian" dykes and fissures, so that the Seven Rivers and Yates 1-2 HFS shelf stratigraphy has been miscorrelated across them. It is apparent that the stratal relationships exposed in the Guadalupe Mountains do not simply preserve the original depositional morphology of the Capitan-equivalent shelf. The subsidence history, stratigraphy and development of the platform succession is more complex than previously thought. The study has important implications for many aspects of the Capitan system, including: (i) shelf-reef correlations, (ii) the controls on platform architecture and development, (iii) Capitan reef palaeobathymetry, (iv) diagenesis, and (v) the amplitude of sea-level changes affecting the platforms stratigraphic development. [final part of original abstract]¹;
- 2378 s[2375] = "STANLEY G.D.jr (2005).- Coral microatolls from the Triassic of Nevada: oldest scleractinian examples.- *Coral Reefs* 24, 2: 247. [short note] - **FC#038;P 34**, p. 92, ID=1343^Topic(s):

- coral, microatolls; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: USA, Nevada^1";
- 2379 s [2376] = "ZONNEVELD J.-P., HENDERSON C.M., STANLEY G.D.jr, ORCHARD M.J., GINGRAS M.K. (2006).- Oldest scleractinian coral reefs on the North American craton: Upper Triassic (Carnian), northeastern British Columbia, Canada.- Palaeogeography, Palaeoclimatology, Palaeoecology 243, 3-4: 421-450.- FC&P 35, p. 101, ID=2432^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic U; Geography: Canada, British Columbia^Bioclastic accumulations composed of crinoids, brachiopods, molluscs, spongiomorphs and scleractinian corals occur within Upper Triassic strata of the lower Baldonne1 Formation at Pardonet Hill in northeastern British Columbia, Canada. These small buildups (~100 to 500 m3) have planar bases and broadly convex tops. These mounds are interpreted as small patch reefs composed of packstone, bioclastic floatstone / rudstone and carbonate breccia intercalated with mixed siliciclastic carbonate sediments deposited in a shallow subtidal setting (i.e. above fairweather wave base). Amalgamated hummocky cross-stratified to current ripple-laminated, quartz-dominated sandstone beds and numerous sharp-based, normally graded bioclastic (commonly encrinitic) packstone / grainstone-quartz-sandstone couplets characterize inter-reef lithologies. Conodont biostratigraphy indicates that the Pardonet Hill patch reefs occur within strata dated as earliest Upper Carnian (lower nodosus zone). The Pardonet Hill patch reefs originated and developed during an interval of regional sea level lowstand. Strata within which these patch reefs occur represent the westernmost migration of the Triassic shoreline in western Canada. Disappearance of coral reefs in the study area may have been affected by rapid marine transgression and failure of reef faunas to recolonize the new shore zone further to the east. The Pardonet Hill locality occurred on the western margin of the North American craton during the Triassic. Prior to their discovery reef-like structures dominated by corals in the western Panthalassa were limited to allochthonous terranes (now part of the Cordillera). The Pardonet Hill patch reefs occur at approximately 30° Triassic paleolatitude. In modern settings, this is at the extreme latitudinal margin of subtropical zooxanthellate reef development. The presence of benthic faunas characteristic of low-paleolatitude settings on the northwestern coast of Pangea has significant implications in paleotectonic and paleoenvironmental reconstructions.^1";
- 2380 s [2377] = "PROZ P.-A., DECROUEZ D. (1997).- Middle Triassic Cnidarians from the New Pass Range, Central Nevada.- Revue de Paleobiologie 16, 2: 511-525.- FC&P 27-2, p. 60, ID=3925^Topic(s): Cnidaria; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic M; Geography: USA, Nevada^The list of specimens encompasses also Jurassic corals.^1";
- 2381 s [2378] = "STANLEY G.D.jr, WHALEN M.T. (1989).- Triassic corals and spongiomorphs from Hells Canyon, Wallowa Terrane, Oregon.- Journal of Paleontology 63, 6: 800-819.- FC&P 19-1.1, p. 54, ID=2669^Topic(s): taxonomy, biogeography; corals spongiomorphs; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: Triassic U; Geography: USA, Oregon wallowa terrane^Twenty-one species of corals and three species of spongiomoprhs occur in a series of richly fossiliferous, molluscan-dominated beds with silicified bioclasts in the Upper Triassic Martin Bridge Limestone of Hells Canyon, Oregon. Two of these, Maeandrostylis grandiseptus and Recticostastraea wallowaensis are new species. Recticostastraea is designated as a new genus. The Fauna is early Norian and occurs in the island arc wallowa terrane, one of many tectonostratigraphic terranes in western North America. Like other examples, it appears to have developed independently of the North American craton and to have links with wrangellia. The fossil corals and spongiomorphs are para-autochthonous, occurring in a series of tempestite beds. They are

interpreted to have inhabited a shallow-water carbonate platform that developed around a tropical island arc following cessation of volcanic activity. The corals and spongiomorphs are associated with abundant gastropods and a diverse epifaunal suspension-feeding bivalve fauna. Relative to the corals, branching spongiomorphs, *Spongiomorpha ramosa*, are more abundant and occur with relatively common branching, sheet to plate-like, colonial corals. Solitary corals are relatively rare. The associated bedded limestone includes a variety of shallow-water microfacies but throughout the Hells Canyon sequence, reef structure is absent. Together, the 24 coral and spongiomorph taxa show mixed paleogeographic affinities with Upper Triassic faunas known only from alpine regions of the western Tethys (five species), the Pamir Mountains, USSR (two species), and the island of Timor (one species). Five additional species are pan-Thethyan and exceptionally cosmopolitan, but 11 species (45,8 %) occur only in displaced terranes. Of these, a significant component (six species) is endemic to the wallowa terrane. At least four Hells Canyon taxa, previously thought endemic to North American terranes, have recently been reported from the high-latitude Koryak terrane of northeastern USSR, a displaced tropical volcanic terrane of the northwestern Pacific. For Triassic corals, this is the first example of a clear link between western Pacific and eastern Pacific terranes. Less similarity exists with the Wrangell Mountains, Alaska, where identical age lower Norian silicified corals and spongiomorphs are known.¹¹;

- 2382 s[2379] = "STANLEY G.D.jr, MACKAY M.L., SMITH P.L. (2005).- Paleoautecology of Heterastridium: a globally distributed hydrozoan from Upper Triassic terranes of the North American Cordillera.- 5th Field Workshop IGCP Project 458, Triassic-Jurassic Boundary Events; Tata, Hungary: 23-24. [abstract] - FC&P 34, p. 104, ID=1370^Topic(s): ecology; Hydrozoa, Heterastridium; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Triassic U; Geography: America N, Cordillera¹¹";
- 2383 s[2380] = "CARRUTHERS A.H., STANLEY G.D.jr (2008).- Systematic analysis of Upper Triassic silicified scleractinian corals from Wrangellia and the Alexander Terrane, Alaska and British Columbia.- Journal of Paleontology 83, 3: 470-491.- FC&P 35, p. 72, ID=2379^Topic(s): biogeography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: America NW^Acid processing allowed systematic identification of 458 Upper Triassic silicified scleractinian corals (20 genera, 47 species) from the Alexander terrane (southeast Alaska) and Wrangellia (Wrangell Mountains, southern Alaska and Vancouver Island, Canada). Coral faunas, here presented, show taxonomic affinity with coeval collections from other Cordilleran terranes, specifically the wallowa terrane (northeastern Oregon and Idaho) and Peru (South America) as well as the distant Tethys region. Genera from the Alexander terrane include: *Kompsasteria* Roniewicz, *Gablonzeria* Cuif, *Cuifia* Melnikova, *Paracuifia* Melnikova, *Distichophyllia* Cuif, *Retiophyllia* Cuif, *Kuhnastraea* Cuif, *Margarosmia* Volz, *Distichomeandra* Cuif, *Astraeomorpha* Reuss, *Pamiroseris* Melnikova, *Crassistella* Roniewicz, *Stylophyllum* Frech, and *Meandrostylis* Frech. Genera from Wrangellia include: *Gablonzeria* Cuif, *Distichophyllia* Cuif, *Retiophyllia* Cuif, *Kuhnastraea* Cuif, *Margarosmia* Volz, *Distichomeandra* Cuif, *Astraeomorpha* Reuss, *Parastraeomorpha* Roniewicz, *Chondrocoenia* Roniewicz, *Pamiroseris* Melnikova, *Crassistella* Roniewicz, *Ampakabastraea*? Alloiteau, *Recticostastraea* Stanley and whalen, *Meandrostylis* Frech, *Anthostylis* Roniewicz, and the new genus *Campesteria* n.gen. New species include: *Gablonzeria grandiosa* n.sp., *Paracuifia smithi* n.sp., *Paracuifia jennieae* n.sp., *P. anomala* n.sp., *Retiophyllia dendriformis* n.sp., *R. obtusa* n.sp., and *Campesteria prolixia* n.sp.¹¹;
- 2384 s[2381] = "SENOWBARI-DARYAN B., STANLEY G.D.jr (1988).- Triassic sponges (Sphinctozoa) from Hells Canyon, Oregon.- Journal of

- Paleontology 62, 3: 419-423.- **FC&P 17-2**, p. 35, ID=2198^Topic(s): taxonomy, biogeography; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Triassic U; Geography: USA, Oregon^Two Upper Triassic sphinctozoan sponges of the family Sebargasiidae were recovered from silicified residues collected in Hells Canyon, Oregon. These sponges are Amblysiphonella cf A. steinmanni (Haas), known from the Tethys region and Colospongia whaleni n.sp., an endemic species. The latter sponge was placed in the superfamily Porata by Seilacher (1962). The presence of well-preserved cribrate plates in this sponge, in addition to pores of the chamber walls, is a unique condition never before reported in any porate sphinctozoans. Aporate counterparts known primarily from the Triassic Alps have similar cribrate plates but lack the pores in the chamber walls. The sponges from Hells Canyon are associated with abundant bivalves and corals of marked Tethyan affinities and come from a displaced terrane known as the wallowa Terrane. It was a tropical island arc suspected to have paleogeographic relationships with Wrangellia, however these sponges have not yet been found in any other Cordilleran terrane.^1";
- 2385 s[2382] = "STANLEY G.D.jr (1986).- Late Triassic coelenterate faunas of western Idaho and northwestern Oregon: implications for biostratigraphy and paleogeography.- US Geological Survey Professional Paper 1435: 23-39.- **FC&P 17-1**, p. 17, ID=2110^Topic(s): biostratigraphy, geography; Cnidaria; Systematics: Cnidaria; Stratigraphy: Triassic U; Geography: USA, Idaho, Oregon^^1";
- 2386 s[2383] = "RONIEWICZ E., STANLEY G.D.jr (1998).- Middle Triassic Cnidarians from the New Pass Range, Central Nevada.- Journal of Paleontology 72, 2: 246-256.- **FC&P 27-2**, p. 60, ID=3926^Topic(s): phylogeny, biogeography; Cnidaria; Systematics: Cnidaria; Stratigraphy: Triassic M; Geography: USA, Nevada^We described three scleractinian corals and one species of hydrozoan from the New Pass Range, central Nevada, which together constitute the oldest Triassic cnidarian assemblage from North America. They occur in carbonate rocks tentatively correlated with the Augusta Mountain Formation, Star Peak Group. At generic and higher levels, these cnidarians seem representative of early Mesozoic Tethyan faunas and carbonate lithofacies, but they indicate some endemism. Although the original aragonitic skeletons and microstructure are destroyed by recrystallisation, the corals still yield important details allowing their correct taxonomic assignment. They contain the minitrabecular cerioid coral, Ceriostella variabilis new genus and species, the thick-trabecular, thamnasteroid coral Mesomorpha newpassensis new species, and an undeterminable cuifastreid coral tentatively assigned to Cuifastraea. The discovery of Mesomorpha marks the first occurrence of this genus outside the Jurassic and Cretaceous seas. Also discovered is a remarkably coral-like hydrozoan, Cassianastraea reussi (Laube), already known from the Carnian stage of the western Tethys. This is the first occurrence of this species outside the western Tethys.^1";
- 2387 s[2384] = "SENOWBARI-DARYAN B., CARUTHERS A.H., STANLEY G.D.jr (2008).- The first Upper Triassic silicified hypercalcified sponges from the Alexander Terrane, Gravina Island and Keku Strait, southeast Alaska.- Journal of Paleontology 82, 2: 344-350.- **FC&P 35**, p. 47, ID=2329^Topic(s): hypercalcified, taxonomy biogeography; Porifera hypercalcified; Systematics: Porifera; Stratigraphy: Triassic U; Geography: USA, Alaska^This paper describes the first silicified Upper Triassic (Early Norian) hypercalcified sponges known from the Alexander terrane, southeast Alaska. Sponges consist of five taxa from the Cornwallis Limestone of Keku Strait, southeast Alaska: Amblysiphonella Steinmann, Parauvanella Senowbari-Daryan and Di Stefano, Nevadathalamia cylindrica (Seilacher), N. minima n.sp., and Stellispongia (S. cf. subsphaerica Dieci, Antonacci, and Zardini). The

hypercalcified sponges of the Alexander terrane as described in this paper provide paleogeographic linkage with other far-flung terranes of western North America, namely the Western Great Basin of Nevada, Stikinia of the Yukon, as well as the Antimonio terrane of northwestern Mexico. In addition, Parauvanella cf. ferdowensis is known from the Upper Triassic Nayband Formation, Iran. Finally Stellispongia cf. subsphaerica is known from the Upper Carnian Cassian Formation of the Dolomite Alps. Sponges (particularly hypercalcified inozoans, sphinctozoans, chaetetids, and sponge-like organisms) are known worldwide from many Upper Triassic reef and nonreef sites. Although Upper Triassic deposits within the Cordilleran terranes and cratonal North America do not typically contain reeflike buildups, hypercalcifying sponge-like organisms were noted as occurring as part of the intricate paleoecological structure within a biostrome along the western shoreline of Gravina Island, southeast Alaska (southern Alexander terrane). This is in contrast to Keku Strait, southeast Alaska (central Alexander terrane), where hypercalcified sponges were identified from limestone beds within nonreef deposits.¹;

- 2388 s[2385] = "CARRUTHERS A.H., STANLEY G.D., BLODGETT R.B., BAICHTAL I. (2004).- Upper Triassic shallow water marine fauna from the Alexander Terrane (SE Alaska) and its paleogeographic significance.- Geological Society of America, Abstracts with Programs 36, 4: 5-6. [abstract] - FC&P 33-2, p. 41, ID=1190Topic(s): biogeography; Spongiomorphs, biogeography; Systematics: Porifera; Stratigraphy: Triassic U; Geography: USA, Alaska^[spongiomorphs and Heterastridium are recorded in this fauna]^1";
- 2389 s[2386] = "STANLEY G.D.jr, SENOWBARI-DARYAN B. (1986).- Upper Triassic Dachstein-type reef limestone from the Wallowa Mountains, Oregon: first reported occurrence in the United States.- Palaios 01: 172-177.- FC&P 23-2.1, p. 68, ID=2113Topic(s): reefs Dachstein type; reefs, dachstein type; Systematics: ; Stratigraphy: Triassic U; Geography: USA, Oregon^The first known occurrence in the United States of a Dachstein-type reef sequence is here reported from the Wallowa Mountains of northeastern Oregon. It is a massive reef limestone overlain by a bedded, bioclastic unit The debris-producing organisms, framework-building corals and sponges, as well as the associated sedimentary features and microfacies, show striking similarities to the Late Triassic Dachstein Reef Limestone of central Europe. The only other reef sequence with which they compare is in the Yukon of Canada.¹;
- 2390 s[2387] = "STANLEY G.D.jr (1987).- Travels of an ancient reef.- Natural History 96, 11: 36-43.- FC&P 17-1, p. 18, ID=2115Topic(s): dachstein type; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: USA, Oregon^^1";
- 2391 s[2388] = "STANLEY G.D.jr, NELSON J.L. (1996).- New investigations on the Eaglenest Mountain, northern Quesnel terrane: an Upper Triassic reef facies in the Takla Group, central British Columbia (93N/11E).- Geological Fieldwork. British Columbia Geological Survey Branch 1995, 1: 127-135.- FC&P 26-1, p. 71, ID=3644Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Canada, British Columbia^The limestone lithofacies on Eaglenest Mountain represent the remains of an Upper Triassic reef that was populated by sponges, corals and a variety of reef-building and reef-dwelling organisms. This limestone is one of the few remnant Upper Triassic reefs in the Cordillera that have yielded well preserved fossils. [extracted from the conclusions]^1";
- 2392 s[2389] = "REID R.P., GINSBURG R.N. (1986).- The role of framework in upper Triassic patch reefs in the Yukon (Canada).- Palaios 01: 590-600.- FC&P 23-2.1, p. 67, ID=4432Topic(s): reefs, morphology; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Canada, Yukon Territory^Upper Triassic patch reefs in the southern Yukon include tabular reefs, about 30m thick, and semicircular and elongate reefs, over 100m thick. The

tabular reefs consist predominantly of framework built by small calcareous sponges, spongiomorphs, and corals; they are designated as framework buildups, analogous, in a genetic sense, to modern coral reefs. On the other hand, framework is a minor component of the semicircular and elongate reefs, which consist predominantly of skeletal sediment. The skeletal sediment of these reefs is interpreted as a local accumulation of small and disarticulated organisms produced independently of reef framework. Consequently, sediment producers, rather than framebuilding fossils, are inferred to have been the primary builders of these structures, designated as sediment buildups genetically analogous to modern algal bioherms. The sediment buildups in the Yukon are similar to upper Rhaetian patch reefs in Austria. However, the origin of the Austrian reefs has been attributed to framebuilding fossils and sediment producers have not been identified as important reef builders.^1";

- 2393 s[2390] = "STANLEY G.D.jr (1979).- Paleocology, structure and distribution of Triassic coral buildups in western North America.- Univ. Kansas Paleont. Contrib. Article 65: 68 pp., 10 pls.- FC&P 9-2, p. 20, ID=5870^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic; Geography: America NW^^1";
- 2394 s[2391] = "STANLEY G.D.jr, SENOWBARI-DARYAN B. (1999).- Upper Triassic reef fauna from the Quesnel terrane, central British Columbia, Canada.- Journal of Paleontology 73, 5: 787-802.http://www.jstor.org/pss/1306840.- FC&P 29-1, p. 40, ID=7027^Topic(s): reef fauna; reef fauna; Systematics: ; Stratigraphy: Triassic U; Geography: Canada, British Columbia^Massive Upper Triassic (Norian) reef limestone at Eaglenest Mountain, Takla Group, British Columbia, contains a wide variety of shallow-water fossils in two different carbonate units. A sponge-coral facies contains the sponges Fanthalamia astoma (Seilacher, 1962), Fanthalamia multicanalis new species, Cinnabaria expansa (Seilacher, 1962), and Cinnabaria? sp. Cinnabaria expansa is a widely distributed North American terrane species which, along with F. astoma, was previously known from the Luning Formation of Nevada. Also included is the "disjectoporoid", Pamiropora sonorensis Stanley, 1994, and a massive spongiomorph, Spongiomorpha tenuis Smith, 1927, previously endemic to the Eastern Klamath terrane of California. Colonial corals include: Retiophyllia quesneliana new species, Chondrocoenia waltheri (Frech, 1890), Crassistella cf. juvavica (Frech, 1890), Distichomeandra cf. austriaca (Frech, 1890), and Alpinophyllia flexuosa Roniewicz, 1989. A limestone conglomerate overlying these beds is dominated almost exclusively by the planktonic hydrozoan, Heterastridium conglobatum Reuss, 1865. A problematic taxon Lovcenipora cf. chaetetiformis Vinassa de Regny, 1915, is reported for the first time outside Timor and the Tethys. The faunas provide a first glimpse into the reef biota of the Quesnel terrane. They contain taxa previously known from the distant Tethys but also include endemics from other inboard terranes. [original abstract]^1";
- 2395 s[2392] = "BEAUVAIS L., POULTON T.P. (1980).- Quelques Coraux du Trias et du Jurassique du Canada.- Current Res. Geol. Survey of Canada, Etude 80-1C: 95-101.- FC&P 10-1, p. 22, ID=5889^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic Jurassic; Geography: Canada^^1";
- 2396 s[2393] = "STANLEY G.D.jr, BEAUVAIS L. (1990).- Middle Jurassic Corals from the wallowa Terrane, West-Central Idaho.- Journal of Paleontology 64, 3: 352-362.- FC&P 19-2.1, p. 37, ID=2757^Topic(s): taxonomy, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Baj; Geography: USA, Idaho wallowa terrane^New colonial corals from near Pittsburg Landing, Idaho, are clearly dated as Middle Jurassic (Bajocian) in age. They consist of Coenastrea hyatti (Wells) and Thecomeandra vallieri n.sp., and occur abundantly with molluscan fossils in thin, biostromal

- Limestone beds in the Coon Hollow Formation. These fossils are the youngest shelly faunas yet known from the wallowa terrane. The similarity of the coral and bivalve fauna to endemic faunas of the western Interior suggests that during Middle Jurassic time, the wallowa terrane was close enough to the North American craton for faunal exchange with the western Interior Embayment. The Pittsburg Landing corals appear dissimilar from Middle Jurassic corals known from other terranes of the western Cordillera.¹";
- 2397 s[2394] = "STANLEY G.D.jr, MCROBERTS C.A. (1993).- A coral reef in the Telkwa range, British Columbia: the earliest Jurassic example.- Canadian Journal of Earth Sciences 30: 819-831.- FC&P 23-2.1, p. 68, ID=4435Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Sine; Geography: Canada, British Columbia^A very early Jurassic (Sinemurian) coral reef is described from Telkwa Range (British Columbia, Canada). The 48 m thick bioherm is dominated by large dendroid/phaceloid corals, mainly Phacelostylophyllum rugosum, also known from the Upper Triassic of Italy. The reef seems to be the first Jurassic reef after the end-Triassic mass extinction which profoundly affected reef ecosystems.¹";
- 2398 s[2395] = "STANLEY G.D.jr, BEAUVAIS L. (1994).- Corals from an Early Jurassic coral reef in British Columbia: refuge on an oceanic island reef.- Lethaia 27: 35-47.- FC&P 24-1, p. 72, ID=4501Topic(s): taxonomy, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Sine; Geography: Canada, British Columbia^An Early Jurassic (Sinemurian) reef in the Telkwa Range, British Columbia, Canada, yields coral species previously known from Morocco, Great Britain, Italy, Peru, and Chile. The principal constructional coral, Phacelostylophyllum rugosum (Laube), known from the Upper Triassic Dolomite Alps in northern Italy, is a holdover species. This coral survived the mass extinctions of the end-Triassic without leaving any other Jurassic records outside Canada. Other corals from the Telkwa reef include Stylophylloopsis victoriae (Duncan) and Actinastraea minima Beauvais known from Jurassic rocks of the Tethys. Closely related corals, Phacelostylophyllum chocolatensis (Wells) and Actinastraea plana (Duncan), are from southern Peru. The paleogeographic occurrence of the Canadian reef in the volcanic terrane of Stikinia supports the contention that volcanic islands in distant outposts of the ancient Pacific served as refugia. In the aftermath of the end-Triassic reef decimation affecting the Tethys, corals and reef building activities continued on ancient islands of the ancestral Pacific. The Hispanic Corridor, connecting the western Tethys with the western Pacific, may have played an important role during Sinemurian time.¹";
- 2399 s[2396] = "SCOTT R.W., MOLINEUX A. LÖSER H., MANCINI E.A. (2007).- Lower Albian Sequence Stratigraphy and Coral Buildups: Glen Rose Formation, Texas.- SEPM Special Publications 87 [R.W. Scott (ed.): Cretaceous rudists and carbonate platforms: environmental feedback]: 181-191. ISBN 9781565761278.- FC&P 35, p. 114, ID=2451Topic(s): sequence stratigraphy, coral reefs; sequence stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Alb; Geography: USA, Texas^The Glen Rose Formation of the Comanchean Series represents the second circum-Gulf carbonate shelf that extended from Florida to Mexico. The Glen Rose comprises limestone, dolomite, and thin interbeds of marl and calcareous shale that overlie the Hensel Sandstone and underlie the Fredericksburg Group in Texas. The Glen Rose is here formally divided into Lower and Upper, mappable members separated at the top of the regionally persistent Corbula Marker, and a boundary stratotype section is designated. The age of the Glen Rose Formation ranges from latest Aptian to near the end of the Early Albian, from approximately 113.3 Ma to 108.0 Ma, and encompasses four ammonite zones. Three local assemblage zones facilitate correlation of Glen Rose outcrops in Texas.

The *Salenia texana* Credner Assemblage Zone spans a marl, 3 to 4 m thick, with a diverse shelf biota in the upper part of the Lower Member. The *Corbula* Range Zone is at the top of the Lower Member. The *Loriola rosana* Cooke Assemblage Zone is in the middle part of the Upper Member. The Glen Rose together with the underlying Hensel Sandstone comprise at least five medium-scale depositional cycles separated by transgressive disconformities. Two types of biotic accumulations are well developed in the Lower Glen Rose Member, coral-rudist assemblages and caprinid-dominated assemblages. Coral-rudist biostromes crop out at the Narrows of the Blanco River and had no bathymetric relief and do not qualify as reefs. Colonial corals are common and are part of a Tethyan fauna; toudasiids and other mollusks comprise a diverse assemblage. Coral diversity is underestimated because of incomplete preservation and sampling. These biostromes are overlain by grainstone capped by a subaerial contact that serves as a sequence boundary between cycles one and two. The younger caprinid bioherms at Pipe Creek have up to 10 m of depositional relief. The bioherm facies grade landward into shoreface grainstone and seaward into shelf wackestone. The caprinid species, *Coalcomana ramosa*, dominates this low-diversity assemblage and is endemic to the Caribbean Province. The bioherm facies are overlain by dolomitic, stromatolitic facies with dinosaur tracks. The contact with the overlying *Salenia* Zone is a sequence boundary between cycles two and three. Two more long-term cycles may be identified in the Upper Glen Rose Member. The coral-rudist biostromes and the caprinid bioherms formed paleocommunities on the landward ramp of the interior marine shelf. The coral-rudist biostromes developed below normal wave base but above storm wave base and shoaled above wave base and were subaerially exposed. The caprinid bioherms formed on a ramp and grew into the zone of normal wave action in mainly normal marine salinities.¹;

- 2400 s[2397] = "COATES A.G., KAUFFMAN E.G. (1973).- Stratigraphy, paleontology and paleoenvironment of a Cretaceous coral thicket, Lamy, New Mexico.- *Journal of Paleontology* 47, 5: 953-968.- FC&P 3-2, p. 44, ID=4971Topic(s): reefs coral, geology; reefs, coral, thickets; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: USA, New Mexico¹";
- 2401 s[2398] = "RIGBY J.K., EMBREE P., MURPHY M. (1996).- An unusual upper Cretaceous (Santonian) hexactinellid sponge from the Great Valley sequence, western Sacramento valley, northern California.- *Journal of Paleontology* 70, 5: 713-717.<http://www.jstor.org/pss/1306475>.- FC&P 26-1, p. 74, ID=3649Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cretaceous Sant; Geography: USA, CaliforniaThe new farreid hexactinellid sponge Hormathospongia dictyota new genus and new species, is described from the upper Santonian Dobbins Shale Member of the Forbes Formation of the Upper Cretaceous Great Valley Sequence from the west side of the Sacramento Valley, northwest of Sacramento. The relatively simple skeleton is composed of quadrangularly arranged hexactines with overlapping rays, an arrangement strikingly similar to the skeletal structure of early Paleozoic reticulosid hexactinellid. However, the California Cretaceous sponges clearly show those spicules embedded in siliceous beams that are united to form a solid dictyonal skeletal framework of only a single layer of regular mesh. Such an occurrence and stratigraphic relationships suggests that the dictyonine sponges had their origin from the simply spiculed reticulosid hexactinellids rather than from the more complex dictyosponges.¹";
- 2402 s[2399] = "WELLS J.W. (1973).- *Texastrea*, a new scleractinian coral from the Lower Cretaceous of Texas.- *Journal of Paleontology* 47, 3: 913-914.- FC&P 2-2, p. 24, ID=4831Topic(s): new taxa; Scleractinia, *Texastrea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: USA, TexasDiagnosis of *Texastrea* (family Astrocoeniidae) and description of

- the type-species: *Texastrea catenata* (Albian of Goldthwaite Reef, Mills County, Texas).^1";
- 2403 s[2400] = "PERKINS R.D. (1989).- Origin of micro-rhombic calcite matrix within Cretaceous reservoir rock, West Stuart City Trend, Texas.- *Sedimentary Geology* 063: 313-321.- FC&P 19-1.1, p. 66, ID=2702^Topic(s): diagenesis; diagenesis; Systematics: ; Stratigraphy: Cretaceous L; Geography: USA, Texas^Although most of this paper is concerned with diagenesis, it also records the importance of stromatoporoids as partners with rudist in the formation of these Early Cretaceous limestones.^1";
- 2404 s[2401] = "LOUCKS R.G., KERANS C. (2003).- Lower Cretaceous Glen Rose "patch reef" reservoir in the Chittim Field, Maverick County, south Texas.- *Transactions of Gulf Coast Association of Geological Societies* 53: 490 -503.- FC&P 33-1, p. 94, ID=7239^Topic(s): sedimentology, hydrocarbons; reefs; Systematics: ; Stratigraphy: Cretaceous L; Geography: USA, Texas^Biohermal buildups, or "patch reefs", have become an important play type in Maverick County in southwest Texas. Their primary method of discovery is by 3-D seismic analysis. The bioherms produce mainly gas and condensate. The porous biohermal section and associated facies are >70 feet thick and consist from the base upward of (1) burrowed, mud-dominated lime packstone that increases in grain content upward and includes fragmented and whole requienid rudists, (2) mud-rich lime packstone containing abundant whole requienids, stromatoporoids, corals, and a few caprinid rudists, (3) lime boundstone (bafflestone and bindstone) consisting of requienids, stromatoporoids, corals, Chondrodonta, rare caprinids, echinoid and mollusk fragments, and binding stromatoporoids and *Lithocodium*, and (4) coarse-grained lime grainstone (rudstone) that has the same components as the boundstone. The biohermal section has an average porosity of 9.2% and an average permeability of 2.9md. The bioherms are found in the highstand systems tract of the lower Glen Rose high-frequency sequence (third-order-sequence 7 of Kerans and Loucks, 2003) within the longer term Glen Rose composite highstand sequence. It is anticipated that in this setting, strings of subparallel isolated buildups will be encountered rather than a continuous barrier that would be associated with a late highstand prograding system at the shelf margin. [original abstract]^1";
- 2405 s[2402] = "FROST S.H., SCHAFERSMAN S.D. (1978).- Upper Oligocene coral reef of the Anahuac Formation, Damon Mound.- *Houston Geol. Soc. Guidebook, Field trip to Damon Mound*: 36-53.- FC&P 7-2, p. 7, ID=5601^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: USA, Texas^excursion guide^1";
- 2406 s[2403] = "GIAMMONA C. (1977).- Octocorals from the Eocene Stone City Formation, Texas.- *FC&P* 6, 1: 17.- FC&P 6-1, p. 17, ID=5487^Topic(s): ; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Eocene; Geography: USA, Texas^The geologic history of the Octocorallia is poorly known. A fossil record extends back to the Cretaceous, and doubtful or problematic octocoral-like fossils have been reported as far back as the Pre-Cambrian. * However, the record is sparse because the organisms are largely of soft tissue which is not preserved, because the spicules or stem fragments of calcite are easily overlooked unless they are being particularly sought, and because the full range of taxa within the subclass can not be recognized on the basis of the limited material that can be found as fossils.n * The octocoral collection from the Stone City Formation, consisting of 35 stem fragments and holdfasts, belong to the order Gorgonacea. They represent the fifth reported occurrence of octocorals in the Tertiary strata of the Gulf Coast, the second reported occurrence in the Texas Tertiary, and the first certain reported fossil occurrence of the family Gorgoniidae. * In addition to studying the octocoral fossils along the Gulf Coast, a stratigraphic

distribution chart is being prepared for the octocorals on a global basis. If any Newsletter readers have found octocoral fragments in their collections of other fossil materials, I would be happy to try and provide them with a taxonomic identification in exchange for locality and stratigraphic information. I would also appreciate any information on published or unpublished literature concerning this topic - especially as octocorals may be mentioned as ancillary remarks in a paper with a different major subject. [full text of s short note]^1";

- 2407 s[2404] = "BAILEY R.H., TEDESCO S.A. (1986).- Paleocology of a Pliocene coral thicket from North Carolina: an example of temporal change in community structure and function.- Journal of Paleontology 60, 6: 1159-1176.- FC&P 16-1, p. 71, ID=2006^Topic(s): ecology; reefs; Systematics: ; Stratigraphy: Pliocene; Geography: USA, California^A two meter stratigraphic interval within the Chowan River Formation of North Carolina contains a thicket of branching coral, *Septastrea crassa* (Holmes), associated with a diverse macrofaunal assemblage. The thicket modified a local shelf habitat by providing protection and feeding opportunities for certain vagrant epifaunal species. Faunal adjustments wrought by the thicket and thicket growth represent autogenic succession. Coral growth rates and preservation suggest a time span of about 100-300 years for thicket development. Bottom shoaling, associated with a eustatic regression, caused movement of a depth controlled environmental gradient during thicket growth. As the habitat changed, a plane bottom macrofaunal assemblage replaced the thicket assemblage by reordering abundances of intergradational species and introducing a few new species. Faunal density, diversity, trophic structure and modes of life of component species were altered during replacement. Observed temporal community changes are best explained as gradual faunal adjustments along a shelf stress gradient. Short term allogenic or autogenic events may temporarily perturb gradual changes. Changes associated with the thicket development are interpreted as a brief autogenic perturbation of long term community replacement.^1";
- 2408 s[2405] = "OPRESKO D.M. (2005).- A new species of antipatharian coral (Cnidaria: Anthozoa: Antipatharia) from the southern California Bight.- Zootaxa 852: 1-10.- FC&P 33-2, p. 40, ID=1185^Topic(s): new taxa; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: USA, California^A new species of antipatharian coral (Anthozoa: Antipatharia) is described from the southern California Bight. The species, *Antipathes dendrochristos* new species, forms large, multi-branched, bushy colonies that can reach a height of 2 m or more. The species is characterized by having small branchlets arranged primarily bilaterally and alternately, but in varying degrees of regularity; by small conical spines less than 0.1 mm tall, and by small polyps usually less than 1.4 mm in transverse diameter. The species occurs in colors of white, orange/gold, pinkish-orange, pink, red, and red-brown.^1";
- 2409 s[2406] = "DUPLESSIS K., REISWIG H.M. (2000).- Description of a new deep-water calcareous sponge (Porifera: Calcarea) from Northern California.- Pacific Science 54, 1: 10-14.- FC&P 32-2, p. 77, ID=1422^Topic(s): deep water; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Recent; Geography: USA, California^A new species, *Sycon escanabensis* Duplessis & Reiswig, is described from material retrieved by submersible from 3500m depth in the Escanaba Trough, central Gorda Ridge, off northern California. The species differs from all other members of the genus by the combination of conspicuous tripartite body organization and slender, lancet-head diactins that ornament the external surface and the oscular margin. This is the first deep-water (> 1000m) calcareous sponge described from the North Pacific Basin. [original abstract]^1";
- 2410 s[2407] = "REISWIG H.M. (1999).- New hexactinellid sponges from the

- Mendocino Ridge, Northern California, USA.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 499-509.- FC&P 28-2, p. 9, ID=6981^Topic(s): new taxa; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: USA, California^^1";
- 2411 s[2408] = "OLIVER W.A.jr (1975).- Age of Corals from northern California.- Journal of Paleontology 49, 2; 1 p.- FC&P 4-2, p. 60, ID=5285^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: USA, California^^1";
- 2412 s[2409] = "RIGBY J.K., MAHER B.J. (1995).- Age of the hexactinellid beds of the Roberts Mountains Formation, Snake Mountains, Elko County, Nevada and additions to the sponge fauna.- Journal of Paleontology 69, 6: 1020-1029.http://www.jstor.org/pss/1306407.- FC&P 25-1, p. 45, ID=3049^Topic(s): stratigraphy, taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: ; Geography: USA, Nevada^The graptolite, Bohemograptus bohemicus tenuis (Boucek, 1936), was collected with additional hexactinellid sponges from the Roberts Mountains Formation in the Snake Mountains of Elko County, Nevada, and dates the sponge beds as Ludlovian. To the modest fauna of hexactinellid sponges described by Rigby et al. (1991), can be added the new sponge genera and species Divaricospongia dilata and Fistellaspongia inclinata. The new species, Gabelia intermedia, is intermediate in size between the moderately fine-textured Gabelia pedunculus Rigby and Murphy, 1983, and the large Gabelia giganta Rigby et al. 1991. Additional specimens of Gabelia pedunculus were collected in association with well-preserved specimens of Gabelia fasciculata Rigby et al. 1991, which show additional skeletal and canal details. Associated coarse root tufts and patches of protosponge skeletal mesh were also discovered as part of the new collections and are described here, although not generically nor specifically identifiable. [original abstract]^1";
- 2413 s[2410] = "MERRIAM C.W. (1973).- Paleontology and stratigraphy of the Rabbit Hill limestone and Lone Mountain dolomite of Central Nevada.- Geol. Surv. USA, Prof. Paper 1973, 808: 1-50.- FC&P 3-2, p. 40, ID=4960^Topic(s): biostratigraphy; paleontology; Systematics: ; Stratigraphy: ; Geography: USA, Nevada^^1";
- 2414 s[2411] = "ORCHARD M.J., CORDEY F., RUI L., BAMBER E.W., MAMET B., STRUIK L.C., SANO H., TAYLOR H.J. (2001).- Biostratigraphic and biogeographic constraints on the Carboniferous to Jurassic Cache Creek Terrane in central British Columbia.- Canadian Journal of Earth Sciences 38, 4: 551-578.- FC&P 31-1, p. 54, ID=7107^Topic(s): biostratigraphy, biogeography; paleontology; Systematics: ; Stratigraphy: ; Geography: America W, Cache Creek terrane^Conodonts, radiolarians, foraminiferids, and corals provide constraints on the geology and tectonics of the Nechako region. They also support the notion that the Cache Creek Terrane is allochthonous with respect to the North American craton. The 117 conodont collections, assigned to 20 faunas, range in age from Bashkirian (Late Carboniferous) to Norian (Late Triassic); 70 radiolarian collections representing 12 zones range from Gzhelian (Late Carboniferous) to Toarcian (Early Jurassic); 335 collections assigned to 11 fusulinacean assemblages (with associated foram-algal associations) range from Bashkirian to Wordian (Middle Permian); and two coral faunas are of Bashkirian and Wordian age. The fossils document a long but sporadic history of sedimentary events within the Cache Creek Complex that included two major carbonate buildups in the Late Carboniferous (Pope limestone) and Middle Permian (Copley limestone), punctuated by intervening Early Permian deepening; basaltic eruptions during the mid Carboniferous and mid Permian; the onset of oceanic chert sedimentation close to the Carboniferous-Permian boundary

- and its persistence through the Late Triassic (Sowchea succession); latest Permian and Early Triassic mixed clastics and volcanics (Kloch Lake succession); Middle and Late Triassic reworking of carbonates (Whitefish limestone), including cavity fill in older limestones (Necoslíe breccia), and fine-grained clastic sedimentation extending into the Early Jurassic (Tezzeron succession). Tethyan, eastern Pacific, and (or) low-latitude biogeographic attributes of the faunas are noted in the Gzhelian (fusulines); Artinskian (conodonts, fusulines), Wordian (fusulines, corals, conodonts), and Ladinian (conodonts, radiolarians). The Cache Creek Terrane lay far to the west of the North American continent during these times. [original abstract]^1";
- 2415 s[2412] = "STANLEY G.D.jr (1980).- Triassic carbonate buildups of western North America: Comparisons with the Alpine Triassic in Europe.- Rivista Italiana di Paleontologia e Stratigrafia 85, 3-4: 877-894.- FC&P 9-2, p. 20, ID=5871^Topic(s): reefs; reefs; Systematics: Stratigraphy: Triassic; Geography: America NW, Alps^^1";
- 2416 s[2413] = "DEBRENNE F. (1987).- Archaeocyatha from Mexico in the Smithsonian Institution. New data from recent collectings.- Geobios 20, 2: 267-273.- FC&P 16-1, p. 79, ID=2031^Topic(s): Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Mexico^^1";
- 2417 s[2414] = "DEBRENNE F., GANDIN A., ROWLAND S.M. (1987).- Lower Cambrian bioconstructions in Northwestern Mexico (Caborca Region).- International Symposium Terminal Precambrian and Cambrian Geology, Yichang (Sept. 8-14 1987), Abstracts volume: 17-18.- FC&P 17-1, p. 43, ID=2170^Topic(s): reefs; Archaeocyatha reefs; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Mexico NW^^1";
- 2418 s[2415] = "DEBRENNE F., GANDIN A., ROWLAND S.M. (1989).- Lower Cambrian bioconstructions in Northwestern Mexico (Sonora). Depositional setting, paleobiology and systematics of archaeocyaths.- Geobios 22, 2: 157-195.- FC&P 19-1.1, p. 70, ID=2710^Topic(s): reefs, taxonomy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Mexico, Sonora^In the Puerto Blanco Formation two types of archaeocyathan buildups occur: 1) Framework reefs occurring at the base of the carbonate interval of the Formation, made up of archaeocyathan framework encrusted by Renalcis; abundant fibrous cement present - irregular archaeocyaths are dominant. 2) Girvanella dominated buildups in the upper part of the Puerto Blanco Formation, associated with oolites. Important contribution of Renalcis. Cement poorly developed. Abundant regular archaeocyaths and colonial irregulars. Twenty two taxa of Archaeocyatha are recognised, two new genera and eleven new species are described.^1";
- 2419 s[2416] = "CEVALLOS-FERRIZ S., GONZALES-LION C. (1984).- Estromatoporidos Devonicos de los Cerros Caloso y Tejano de la Sierra del Tule, Sonora.- Memoria III Congreso Latinoamericano de Paleontologia 89: 88-96.- FC&P 14-2, p. 43, ID=0931^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Mexico, Sonora^[Specimens of Actinostroma and Amphipora from a Middle Devonian sequence are described and illustrated]^1";
- 2420 s[2417] = "REYEROS de CASTILLO M.M. (1976).- Corales del Permico Inferior del estado de Chiapas, Mexico.- Paleontologia Mexicana 41: 1-18.- FC&P 7-2, p. 23, ID=5651^Topic(s): corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Mexico, Chiapas^^1";
- 2421 s[2418] = "ROWETT C.L., WALPER J. (1972).- Permian Corals from near Huehuetenango, Guatemala.- Pacific geology 5: 71-80.- FC&P 2-1, p. 18, ID=4727^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography:

- Guatemala^Description of a new species of Durhamina, *D. chocalensis*, plus ?*Caninia* sp. and *Lophophyllidium* sp. from the lower Permian Chocal Limestone in western Guatemala.^1";
- 2422 s[2419] = "STANLEY G.D.jr, GONZALEZ-LEON C., SANDY M.R., SENOWBARI-DARYAN B., DOYLE P., TAMURA M., ERWIN D.H., (1994).- Upper Triassic invertebrates from the Antimonio Formation, Sonora, Mexico.- Paleont. Soc. Mem. 36 (Journal of Paleontology 68, 4, supplement): 33 pp.- FC&P 23-2.1, p. 52, ID=4394^Topic(s): ; paleontology; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: Triassic U; Geography: Mexico, Sonora^A diverse Upper Triassic tropical marine fauna from northwestern Sonora, Mexico, includes 31 taxa of tropical invertebrates including scleractinian corals, spongiomorphs, disjectoporoids, "hydrozoans", thalamid and nonthalamid sponges, spiriferid and terebratulid brachiopods, gastropods, bivalves, coleoids, and anomuran microcoprolites. They occur within the late Karnian to Norian part of the Antimonio Formation (Antimonio terrane), which is juxtaposed against a fragmented portion of the North American craton. Most of the fauna is also known from the Tethys region. Sixteen Sonoran taxa co-occur in the western Tethys and five have never been known outside this region. Four additional taxa (one identified only at genus level) are geographically widespread. Some taxa occur in displaced terranes of North America, especially in west-central Nevada (Luning Formation). A weak link exists with the California Eastern Klamath terrane but stronger ties exist with Peru. Among Sonoran sponges, *Nevadathalamia polystoma* was previously recognized only from the Luning Formation, western Nevada. Sponges *Cinnabaria expansa*, *Nevadathalamia cylindrica*, and a coral, *Astraeomorpha sonorensis* n.sp., are also known from Nevada. The corals *Distichomeandra austriaca*, *Chondrocoenia waltheri*, *Pamiroseris rectilamellosa*, and *Alpinophyllia flexuosa* co-occur in central Europe. Two new taxa, a spongiomorph hydrozoan, *Stromatoporiidium lamellatum* n.sp., and a disjectoporoid, *Pamiropora sonorensis* n.sp., have distinct affinities with the Tethys. The geographically widespread North American brachiopod, *Spondylospira lewesensis*, and *Pseudorhaetina antimoniensis* n.gen. and sp. are among the Sonoran fauna. The Sonoran coleoid (aulacocerid) *Dictyoconites* (*Dictyoconites*) cf. *D. reticulation* occurs in the Tethys realm and *Calliconites* cf. *C. drakei* is comparable with a species from the Eastern Klamath terrane. *Calliconites milleri* n.sp. is the first occurrence of the genus outside Sicily. The bivalves *Myophorigonia jaworskii*, *M. salasi*, and *Palaeocardita peruviana* are known from Sonora and Peru. Eight gastropod taxa include *Guidonia* cf. *G. intermedia* and *G. cf. G. parvula*, both previously known from Peru, and *Eucycloscala subbisertus* from the western Tethys. The gastropods are unlike those already known from other North American terranes.^1";
- 2423 s[2420] = "GOODWIN D.H., STANLEY G.D.jr (1997).- Norian sponge and coral biostromes in the Antimonio formation, Northwestern Sonora, Mexico.- Revista mexicana de Ciencias Geologicas 14, 2: 160-166.- FC&P 28-2, p. 28, ID=4021^Topic(s): reefs, biostromes; reefs; Systematics: Porifera Cnidaria; Anthozoa; Stratigraphy: Triassic Nor; Geography: Mexico, Sonora^A diverse marine invertebrate fauna has previously been documented from the Norian carbonate interval of the Antimonio terrane. However, little research has been aimed at understanding its paleoecology fine scale stratigraphy, and depositional environments. Preliminary field work by the authors represents the first attempt of the present paper have documented four sedimentary rock types: (1) argillites and mudstones, (2) lime-cemented sandstones, (3) sandy limestones, and (4) massive limestone. Each of these lithofacies contains distinct associated biofacies. The coincidence of lithofacies and biofacies indicates that these biostromes were dominated by physical processes which, to a large extent, controlled their biological development. In addition to the similarity of faunal components of these biostromes of Sonora with the

- Luning Formation in west-central Nevada, the paleoecological patterns and biotic structure are also remarkable coincident. This observation suggests that the relationship of the Antimonio Formation to units farther north in the United States requires more investigation.¹¹;
- 2424 s[2421] = "STANLEY G.D.jr, GONZALES-LEON C. (1997).- New Late Triassic scleractinian corals from the Antimonio formation, Northwestern Sonora, Mexico.- Revista mexicana de Ciencias Geologicas 14, 2: 202-207.- FC&P 28-2, p. 30, ID=4024^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Mexico, Sonora^New Late Triassic corals have been recovered from sponge, coral, and mollusk biostromes in the middle part of the Antimonio Formation, Sierra del Alamo, northwestern Sonora. Together with taxa already described from that formation, these corals contribute to our knowledge of Late Triassic faunas. Three stylophyllid corals are described: Anthostylis acanthophora (Frech), Anthostylis sp., and Meandrostylis antimoniensis new species and a cuifastraeid, Cuifastraea granulata Melnikova. These corals range from the Norian to Rhaetian stages. One species is endemic and others are known from the Pamir Mountains, Russia, and the Alps of Austria. Cuifastraea granulata is already known from the wallowa terrane of Oregon.¹¹;
- 2425 s[2422] = "STANLEY G.D.jr (1997).- Upper Triassic fossils from the Antimonio Formation, Sonora and their implications for Paleocology and Paleogeography.- Publicaciones ocasionales [???] 1: 62-65; Mexico City.- FC&P 26-2, p. 74, ID=3759^Topic(s): ecology, geography; paleontology; Systematics: ; Stratigraphy: Triassic U; Geography: Mexico, Sonora^An assemblage of shallow water, Upper Triassic marine invertebrate fossils is briefly described from the Antimonio Formation in NW Sonora (Mexico). Some coral taxa are mentioned in the text.¹¹;
- 2426 s[2423] = "FILKORN H.F. (2006).- Mesozoic corals of Mexico.- Topics in geobiology 24 [F.J. Vega-Vera, T.G. Nyborg, M.C. Perrilliat et al. (eds): Studies on Mexican Paleontology]: 47-59; Springer. ISBN 978-1-4020-3882-2.- FC&P 35, p. 73, ID=2382^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: Mexico^The majority of the Mesozoic scleractinian corals reported from Mexico, 117 species or about 80 percent, are from Cretaceous strata. Comparatively little is known of the earlier Mesozoic corals. The Jurassic corals, a total of 17 species, have been described from five localities in Mexico, all in Upper Jurassic rocks. The 10 Triassic coral species described from Mexico are from the Upper Triassic Antimonio Formation of northwestern Sonora. The majority of the Jurassic and Triassic coral species reported from Mexico have been described previously from occurrences in Europe.¹¹;
- 2427 s[2424] = "REYEROS de CASTILLO M. (1983).- Corales de algunas formaciones cretácicas del estado de Oaxaca.- Paleontologia mexicana .- FC&P 14-1, p. 61, ID=1070^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: Mexico, Oaxaca^The recent geological and paleontological studies in the Mixteca Alta region of the State of Oaxaca yielded, among other fossil material, an extensive and varied coral fossil fauna that is reported and discussed in this paper. The fauna includes 19 species, one of which is a new one (Thecosmilia oaxaquensis) and 18 species corresponding to American and European known species (Actinastrea cf. A. decaphylla madagascariensis, Thamnasteria xipei, Thamnasteria crespoi, Cyathophora haysensis, Stylosmilia gregorii, Stylina sucrensis, Stylina tehuacanensis, Myriophyllia neocomiensis, Calamophyllia sandbergeri, Baryphyllia confusa, Periseris irregularis, Brachyseris morchella, Meandrophyllia montezumae, Thecosmilia tobleri, Elasmophyllia tolmachoffana, Cladophyllia stewartae, Plesiastrea sulcatilamellosa, Diploastrea harrisi).¹¹;

- 2428 s[2425] = "SCOTT R.W., GONZALES-LEON C. (1991).- Paleontology and biostratigraphy of Cretaceous rocks, Lampazos area, Sonora, Mexico.- Spec. Pap. geol. Soc. Amer. 254: 51-67.- FC&P 21-2, p. 41, ID=3337^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: Mexico, Sonora^Lower Cretaceous marine sediments of about 2.500 m thickness in east-central Sonora (Mexico) are considered in view at their importance for paleogeography of Mexico. Four corals are described and pictured, among them the worldwide occurring Columnocenia ksiazkiewiczi Morycowa 1964.^1";
- 2429 s[2426] = "SCHAFHAUSER A., GOTZ S., BARON-SZABO R.C., STINNESBECK W. (2003).- Depositional Environment of Coral-Rudist Associations in the Upper Cretaceous Cardenas Formation (Central Mexico).- Geologica Croatica 56, 2: 187-198.- FC&P 32-2, p. 71, ID=1432^Topic(s): reefs, sedimentology; reefs; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous U; Geography: Mexico^In the Cardenas Formation (central Mexico), a 175 m thick sedimentary sequence of Maastrichtian age was analyzed with respect to its palaeontology and sedimentology. A wide variety of lithological and palaeontological features characterize this sequence comprising unfossiliferous and fossil-bearing sand-and siltstones, and diverse rudist and coral-rudist associations in carbonate or mixed carbonate/ clastic lithologies. A total of 24 rudist and coral-rudist associations are exposed in the investigated section, which are grouped into 5 limestone units. Radiolitid assemblages, coral-rudist reefs, coral-dominated reefs, and hippuritid-dominated reefs are present. The stacking pattern of these reef intervals indicates a general transgressive trend through the entire section. Smaller-scale facies trends could be distinguished within each limestone unit, comprising deepening-upward sequences, defined by a shoreface-calcareous algae-radiolitid-marl facies transition, and shallowing-upward sequences defined by a hippuritid-actaeonellid-coral/rudist facies transition. This cyclic sedimentation pattern is obscured by an episodic input of clastic sediments derived from the uplifting Sierra Madre Oriental, which in turn triggered either the development or decline of reefs.^1";
- 2430 s[2427] = "COATES A.G. (1977).- Jamaican Coral/Rudist frameworks and their Geologic setting.- Studies in Geol. Ser. Caribbean-St. Croix Vol. Amer. Assoc. Pet. Geol. - FC&P 6-1, p. 28, ID=0086^Topic(s): reefs; Anthozoa / Rudista; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous; Geography: Jamaica^The paleoecology and paleogeography of the coral/rudist'reefs' is outlined with reference to an island-arc volcaniclastic sequenced in the Cretaceous of Jamaica.^1";
- 2431 s[2428] = "COATES A.G. (1977).- Jamaican Cretaceous Coral Assemblages and their relationships to Rudist Frameworks.- Bureau Recherches Geologiques et Minieres Memoir 89: 336-341 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 28, ID=0087^Topic(s): reefs; Anthozoa / Rudista; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous; Geography: Jamaica^^1";
- 2432 s[2429] = "MITCHELL S.F. (2002).- Palaeoecology of corals and rudists in mixed volcaniclastic-carbonate small-scale rhythms (Upper Cretaceous, Jamaica).- Palaeogeography, Palaeoclimatology, Palaeoecology 186, 3-4: 237-259.- FC&P 31-2, p. 30, ID=1668^Topic(s): ecology; ecology; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous U; Geography: Jamaica^The Guinea Corn Formation (central Jamaica, west Indies) is represented by alternating platform carbonates and volcaniclastic sandstones and siltstones and represents the most landward shift of facies in an Upper Campanian ? to Maastrichtian transgressive-regressive cycle. The succession consists of 2-30-m-thick

rhythms comprising a lower volcanoclastic siltstone/sandstone division; a middle volcanoclastic siltstone/limestone with abundant corals or the rudist *Antillocaprina trellata*; and an upper division of rudist rudstones and floatstones. The lower division consists of either bioturbated sandy siltstones with lignite and abundant gastropods and infaunal bivalves (lower rhythms in the Guinea Corn Formation), or interbedded volcanoclastic siltstones and normally graded sandstones. The rudist limestones are parallel-bedded and consist of high abundance mono- to paucispecific assemblages. The boundary between the middle and upper parts of rhythms contains a concentration of oncoids with coral nuclei and a mantle of microbial laminates, red algae and serpulids. Four coral assemblages are recognised based on diversity and coral morphology. The *Paracycloseris*-*Dasmosmia* assemblage occurs in the lower division of the rhythms and is interpreted as a soft-substrate assemblage that was adapted to elevated nutrient levels. The *Ovalastrea*-*Actinacis*, *Actinacis*-*Multicolumnastrea* and *Actinacis*-*Calamophyllia*-*Gyrodendron* assemblages occur in the middle parts of the rhythms and consist of bedded rudstones, rudstone mounds and rarer platestones, pillarstones and mixstones. *Polyparia* arrangements, colony morphology and low diversity suggest the *Ovalastrea*-*Actinacis* and *Actinacis*-*Multicolumnastrea* assemblages were adapted to high sedimentation rates. The more diverse *Actinacis*-*Calamophyllia*-*Gyrodendron* assemblage is interpreted to have grown under more optimum conditions (low sedimentation rates and high light intensities). Rudists are classified on their growth orientation (elevator, clinger, recumbent) and on their communal relationships (isolated or clustered). The cluster elevator *Biradiolites mooretownensis* occurs in the lower division of rhythms and the recumbent *A. stellata* occurs in the middle part of rhythms. The upper part of rhythms contains abundant rudists including isolated elevators (*Antillocaprina occidentalis*), cluster elevators (*Bournonia* sp., *Biradiolites jamaicensis*, *Thyrastylon* spp. and *Chiapasella radiolitiformis*) and clingers (*Plagioptychus* spp.), with the topmost part contains large recumbent *Titanosarcolithes*.¹¹;

- 2433 s[2430] = "FILKORN H.F., AVENDANO GIL J., COUTINO JOSE M.A., VEGA VERA F.J. (2005).- Corals from the Upper Cretaceous (Maastrichtian) Ocozocoautla Formation, Chiapas, Mexico.- *Revista Mexicana de Ciencias Geológicas* 22, 1: 115-128.- FC&P 33-2, p. 27, ID=1144^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Mexico, Chiapas^The coral species from the Upper Cretaceous (Maastrichtian) strata of the Ocozocoautla Formation in Chiapas, Mexico, are identified, described and illustrated for the first time. This coral fauna is composed of 12 species, nine of which are colonial, presumably zooxanthellate, reef-building forms. This is the first time that six of these species have been reported from Mexico. The majority (11) of these species are endemic to the Caribbean region and known only from the Late Cretaceous.¹¹;
- 2434 s[2431] = "BARON-SZABO R.C., GONZALEZ-LEON C.M. (2003).- Late Aptian-Early Albian corals from the Mural limestone of the Bisbee Group (Tuape and Cerro de Oro Areas), Sonora, Mexico.- *Special Publication in Geology 1 [Perkins Memorial Volume (R.W. Scott, ed.)]: 187-225.- FC&P 30-2, p. 27, ID=1581^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt - Alb; Geography: Mexico, Sonora^ In the Cerro de Oro and Tuape areas in northwestern Mexico the Mural Limestone of the Bisbee Group is characterized by carbonate/clastic shallow water sequences with interbedded biohermal intervals. Scleractinian corals are reported from two limestone intervals in the Tuape area (Late Aptian-Early Albian) and a succession of massive biohermal limestones in the Cerro de Oro area (Late Aptian). They comprise 32 taxa belonging to six suborders. Two new species are described: *Dermosmia tuapensis* n.sp. and *Pleurophyllia micros* n.sp.¹¹;*

- 2435 s[2432] = "BARON-SZABO R.C., SCHAFHAUSER A., GOTZ S., STINNESBECK W. (2006).- Scleractinian corals from the Cardenas Formation (Maastrichtian), San Luis Potosi, Mexico.- Journal of Paleontology 80, 6: 1033-1046.- FC&P 35, p. 68, ID=2375^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Mexico^A detailed taxonomical description of scleractinian corals from the Maastrichtian of Mexico (Cardenas Formation) is given for the first time. The coral association comprises 16 taxa which belong to 9 families: Dictuophyllia conferticostata (Vaughan), Cladocora jamaicensis Vaughan, Cladocora gracilis (d'Orbigny), Antiguastrea cellulosa Duncan), Multicolumnastraea cyathiformis (Duncan), Placocoenia major Felix, Siderastrea vancouverensis Vaughan, Siderastrea adkinsi (Wells), Goniopora sp., Actinacis haueri Reuss, Actinacis parvistella Oppenheim, Actinohelia elegans (Goldfuss), Meandrophyllia oceani (de Fromentel), Dermosmiliopsis orbignyi Alloiteau, Trochoseris aperta Duncan, and Cyathoseris formosa d'Achiardi. The corals described herein were collected from mixed coral-rudist and coral-dominated assemblages in the Arroyo de la Atarjea, and one unnamed riverbed which lithologically correspond to the Arroyo de la Atarjea section, both of which belong to the upper member of the Cardenas Formation. On the genus level, 94% of the Mexican fauna corresponds to the Maastrichtian coral assemblages of Jamaica. Moreover, the Cardenas fauna shows close affinities to both Upper Cretaceous coral associations of central Europe and the Caribbean, as well as to Lower Tertiary faunas of Central America and the Caribbean. On the species level, 68.8% of the Cardenas corals are known from Lower Tertiary strata of Central America, the Caribbean, South America, Asia, European / Mediterranean region, and/or southeastern parts of the USA.^1";
- 2436 s[2433] = "LOSER H. (2006).- Taxonomy, stratigraphic distribution and palaeobiogeography of the Early Cretaceous coral genus Holocystis.- Revista Mexicana de ciencias geologicas 23, 3: 288-301.- FC&P 35, p. 75, ID=2387^Topic(s): revision; Scleractinia, Holocystis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Mexico, Sonora^The Early Cretaceous Scleractinian coral genus Holocystis Lonsdale, 1849 - first reported for southern England and for a long time believed to be restricted to this region - is easy to recognise but it is also rare. Abundant material from the Late Barremian to Early Albian found in Sonora (Mexico) as well as the available type material and additional material from Europe and East Africa allowed a systematic revision. Five species are distinguished. One of them - Holocystis nomikosi - is described as a new species. Three species previously described for other genera were assigned to the genus Holocystis and two species formerly assigned to Holocystis were found to belong to other genera. Two genera (Tetracoenia and Nowakocoenia) are considered junior synonyms of Holocystis. The stratigraphic extent of the genus was limited to the range from the Barremian to the Early Albian. Holocystis is not a common coral genus but occurred in a large geographic area comprising the central Tethys, the Caribbean, and even the eastern to south-eastern Tethys. It is restricted to sediments with a certain terrigenous input.^1";
- 2437 s[2434] = "LOSER H. (2006).- Barremian corals from San Antonio Texcala, Puebla, Mexico - a review of the type material of Felix 1891.- Boletin del Instituto Geologico de Mexico 114: 1-68 (CD-ROM).- FC&P 35, p. 76, ID=2388^Topic(s): type material, Felix collection; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr; Geography: Mexico, Puebla^The Barremian coral fauna from San Antonio Texcala described by the German palaeontologist Johannes Felix is revised. The material is completely recrystallized; therefore, it was not possible to study the internal structures. Studies were exclusively confined to the coral

surface. The original type locality of the material was not located in the field. Corals found in the outcrops at the presumed type locality area differ in their preservation and taxonomic composition. The nearby localities of the San Juan Raya Formation yielded corals different from those of San Antonio Texcala. The only material available for a revision is therefore the collection material at the Leipzig University (Germany). Forty-two species are assigned to 26 genera, six species more than described by Felix. Most species belong to the suborders Stylinina, Faviina, and Microsolenina, the most common genera are Cryptocoenia and Polyphyloseris. The suborders Archeocaeniina, Amphistraeina, and Rhipidogyrina, which are usually common in the Early Cretaceous, are conspicuous by their complete absence from the fauna of San Antonio Texcala. Stratigraphically, the fauna shows affinities with faunas between the very Late Jurassic and the Campanian, though the closest correlation is with early Aptian associations. Palaeobiogeographic relationships are slight and exist mainly with Barremian-Aptian faunas of the central Tethys, the Caribbean, and even Asian and Boreal provinces.¹";

2438 s[2435] = "STEMANN T.A., GUNTER G.C., MITCHELL S.F. (2007).- Reef coral diversity in the Late Maastrichtian of Jamaica.- Schriftenreihe der Erdwissenschaftlichen Kommissionen der Österreichischen Akademie der Wissenschaften 17: 455-469.- FC&P 35, p. 86, ID=2406^Topic(s): reef corals, diversity; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Jamaica¹";

2439 s[2436] = "LOSER H., STEMANN T.A., MITCHELL S.F. (2009).- Oldest Scleractinian fauna from Jamaica (Hauterivian, Benbow Inlier).- Journal of Paleontology 83, 3: 333-349.- FC&P 36, p. 98, ID=6518^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Haut; Geography: Jamaica^From the oldest Cretaceous marine sediments of Jamaica, the Copper Limestone within the Devils Racecourse Formation (Benbow Inlier, Clarendon Block), the oldest known coral fauna of the Caribbean is described. The small but diverse fauna encompasses 18 species in 17 genera of the suborders Amphistraeina, Archeocaeniina, Heterocoeniina, Faviina, Fungiina, Microsolenina, and Stylinina. The fauna contains the first representatives of the suborder Amphistraeina in the Caribbean and the Americas. One genus of the family Amphistreaeidae, Monoaulastrea, and three species - Monoaulastrea rawi, Latusastrea rubrolineata, Camptodocis corralesi - are described as new. The preoccupied coral genus Floria is replaced by the new name Floriastrea. The new fauna shows relationships to faunas from the late Berriasian to late Albian. Most species are shared with the Hauterivian faunas from Georgia in the central Tethys and the Paris Basin in the Boreal, but also with younger faunas such as the Barremian of Central Mexico, the early Aptian of Greece and the early Albian of the Bisbee Basin (Northern Mexico). [original abstract]¹";

2440 s[2437] = "BARON-SZABO R.C., GONZALES-LEON C. (1999).- Lower Cretaceous corals and stratigraphy of the Bisbee Group (Cerro de Oro and Lampazos areas), Sonora, Mexico.- Cretaceous Research 20, 4: 465-497.- FC&P 29-1, p. 38, ID=7014^Topic(s): biostratigraphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Mexico, Sonora^Stratigraphic sections of the Bisbee Group in northwestern Mexico have been studied. Several lithostratigraphic units from the Cerro de Oro and Lampazos areas, characterized by mainly carbonate / clastic shallow water sequences, are discussed in this paper. In the Lampazos area these sediments are grouped into the Agua Salada, Lampazos, Espinazo del Diablo, and Nogal Formations. In the Lower Cretaceous sections of the Cerro de Oro area, the Cerro de Oro, Morita, and Cintura Formations, as well as the Mural Limestone are distinguished. Scleractinian corals are reported from Upper Barremian to Middle Albian reefal limestone intervals within the Cerro de Oro,

Espinazo del Diablo and Nogal Formations, and within sequences of the Mural Limestone. They comprise 32 genera belonging to seven suborders. Six new species are described: *Columastrea paucipaliformis* n.sp., *Columnocoenia minima* n.sp., *Keriophyllia roniewiczze* n.sp., *Cladophyllia mexicana* n.sp., *Pleurostylina major* n.sp., and *Stiboriopsis sonoraensis* n.sp. [original abstract]^1";

2441 s[2438] = "FILKORN H.F. (2003).- The Cretaceous corals of Mexico: occurrences and history of research.- *Revista Mexicana de Ciencias Geologicas* 20, 1: 52-78.- FC&P 33-1, p. 69, ID=7217^Topic(s): distribution, research history; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: Mexico^An extensive, detailed compilation of known occurrences and described species of Cretaceous scleractinian corals in the country of Mexico, based on published scientific literature, is presented for the first time. Cretaceous corals have been reported from more than 170 localities in more than 200 published studies dating from at least as early as 1839. Unfortunately, relatively few of these 200 publications actually described coral species; the entire research history on Mexican Cretaceous coral systematic paleontology is contained in only 16 studies. A total of 116 coral species have been described from these occurrences, inclusive of unnamed coral species and with previously suggested synonymies taken into consideration. Overall the coral occurrences span nearly the entire Cretaceous Period, from the Berriasian through the Maastrichtian, but at least 60 percent of them are from the Early Cretaceous. Furthermore, the vast majority (about 90 percent) of the total number of Mexican Cretaceous coral species are known from the Early Cretaceous. Based on these data, it seems likely that many of the Cretaceous corals of Mexico are still unknown. The detailed review of the literature on Mexican Cretaceous corals [is] presented in this study establishing a modern foundation for future investigations of the paleobiography and systematic paleontology of the members of this significant group of reef-building organisms. [original abstract]^1";

2442 s[2439] = "MITCHELL S.F., STEMANN T.A., BLISSETT D., BROWN I., O'BRIEN E., BANKS W., GUNTER G., MILLER D.J., PEARSON A.G.M., WILSON B., YOUNG W.A. (2004).- Late Maastrichtian rudist and coral assemblages from the Central Inlier, Jamaica: towards an event stratigraphy for shallow-water Caribbean limestones.- *Cretaceous Research* 25, 4: 499-507.- FC&P 34, p. 67, ID=1297^Topic(s): event, stratigraphy; Scleractinia, Rudista; Systematics: Cnidaria Mollusca; Scleractinia Bivalvia; Stratigraphy: Cretaceous Maas; Geography: Jamaica^The lithological succession of the Guinea Corn Formation in the Slippery Rock River, central Jamaica, comprises 91 m of limestones and subsidiary mudstones. The biostratigraphic distribution of rudist bivalves and corals demonstrates that the succession of biostratigraphic markers is consistent with the previously documented standard Guinea Corn Formation succession in the Rio Minho between Grantham and Guinea Corn, central Jamaica. Additionally, the Slippery Rock River succession shows the boundary between the Chiapasella radiolitiformis and C. trechmanni zones that has not previously been documented. The marker horizons are also consistent with major facies changes within both sections, demonstrating that both lithological changes and biostratigraphic markers are synchronous within the limestone successions of central Jamaica. This may prove to be a valuable tool for stratigraphic correlation elsewhere in Jamaica and within the Antillean region.^1";

2443 s[2440] = "ENOS P. (1974).- Reefs, platforms and basins of Middle Cretaceous in Northeast Mexico.- *American Association of Petroleum Geologists Bulletin* 58, 5: 800-809.- FC&P 3-2, p. 44, ID=4973^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Cretaceous M; Geography: Mexico NE^The late Mesozoic depositional cycle in eastern Mexico began with red bed

deposition in the Jurassic, included deep - and shallow water marine carbonates (Late Jurassic to Late Cretaceous) - and concluded with terrigenous detritus from the deformation of the Sierra Madre Oriental (Eocene). Rudist fringed shallow water carbonate platforms attained their maximum areal extent and facies contrast with the surrounding carbonate basins in the Albian-Cenomanian. The resultant lithofacies are: (1) a suite of platform carbonates; (2) dark, cherty, pelagic, basinal limestones; (3) basin-margin carbonates consisting of platform-derived breccias and bioclastic rocks interlayered with pelagic limestones. Scale and relief of the Mexican platforms compare with those of the Capitan reef and the Bahama Banks. Steep-sided, high-relief platforms provide optimum conditions for basin-margin debris accumulations, but the necessary and sufficient combination of conditions for debris accumulation and for platform development is unsolved.¹";

- 2444 s[2441] = "SQUIRES R.L., DEMETRION R.A. (1992).- Paleontology of the Eocene Bateque Formation, Baja California Sur, Mexico.- Contrib. Sci. 434: 1-55.- FC&P 22-1, p. 40, ID=3402Topic(s): ; paleontology; Systematics: Porifera Cnidaria; Anthozoa; Stratigraphy: Eocene; Geography: Mexico, Baja CaliforniaThis study is the first detailed account of marine Eocene macrosized invertebrate fossils from Baja California Sur, Mexico. The fossils, which are locally richly abundant, are from exposures of the middle lower Eocene ("Capay Stage";) to upper middle Eocene ("Tejon Stage";) Bateque Formation along the Pacific coast from the eastern Laguna San Ignacio area to the San Juanico area about 105km to the south. Ninety-nine species were found and are one red alga, one green? alga, five large benthic foraminifers, traces of one demosponge?, one calcareous sponge, one spongiomorph? organism, one helioporid octocoral, one gorgonian, eight colonial corals, four solitary corals, two bryozoans, one polychaete worm, one scaphopod, 37 gastropods, 23 bivalves, two nautiloids, two crabs, and three types of cidaroid echinoids (based on spines), as well as two cassiduloid? and two spatangoid echinoids. [first fagment of extensive summary]^1";
- 2445 s[2442] = "FILKORN H.F., COUTINO JOSE M.A., AVENDANO GIL J., VEGA VERA F.J. (2004).- Eocene corals from Veinte de Noviembre, Chiapas, Mexico.- IX Congreso Nacional de Paleontología, Libro de Resúmenes, 13-15 de Octubre 2004, Tuxtla Gutiérrez, Chiapas, Mexico: 33.- FC&P 33-2, p. 27, ID=1145Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: Mexico, Chiapas^1";
- 2446 s[2443] = "AGUILAR T., DENYER P. (2001).- Una especie nueva de Euphyllia (Scleractinia: Caryophylliidae) en las calizas de Barra Honda (Paleógeno), Costa Rica.- Rev. Biol. Trop. 49, suppl. 2: 195-201.- FC&P 35, p. 68, ID=2374Topic(s): taxonomy; Scleractinia, Euphyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleogene; Geography: Costa RicaA new species of scleractinian coral is described: Euphyllia donatoi. This is the first report of this genus from Central America. The outcrop is located on the north-west of Costa Rica. It consists of large colonies (1.2 m high by 0.5 m in diameter), from a patch reef which had a dendroid habit. They are part of a very distinctive facies in a micritic limestones of the Barra Honda Formation (Paleogene). The finding is important because these are the only macrofossils found in Barra Honda Formation. The growth took place under unstable ecological conditions resulting in a low diversity autochthonous community. It probably developed in very shallow water with a high sedimentation rate.^1";
- 2447 s[2444] = "FISCHER R., GALLI OLIVER C., REITNER J. (1989).- Skeletal Structure, Growth, and Paleoecology of the Patch Reef-Building Polychaete Worm Diplochaetetes mexicanus wilson 1986 from the Oligocene of Baja California (Mexico).- Geobios 22, 5: 761-775.- FC&P 20-1.1, p. 66, ID=2846Topic(s): reefs, patch reefs; reefs; Systematics: Annelida; Stratigraphy: Oligocene;

Geography: Mexico, Baja California^Worm reeflets described here are composed of parallel and straight, curved, or bifurcated tubes, which are up to 10 cm long and have an average diameter of 1.4 mm. Their walls are composed of microgranular calcite and are multilamellar. The reef-builders settled on soft bottoms within the tidal or uppermost zone. They tolerated high water turbulence and a certain rate of sedimentation. Dead parts of the reef were recolonized by a new population. The reefs stabilized the sediment, produced biogenic debris, and offered new ecological niches for endo- and epilithic organisms. They mark a regional ecological event at the Oligocene / Miocene boundary. *Diplochaetetes mexicanus* as well *D. longitubus* demonstrate close relationships to a modern skeletal-forming polychaete worm, *Dodecaria*. *Diplochaetetes* is definitely not a sclerosponge and demonstrates a convergence with the chaetetid basal skeletons of sponges and favositid corals. ^1";

2448 s[2445] = "SQUIRES R.L., DEMETRION R. (1989).- An Early Eocene Pharetronid Sponge from the Bateque Formation, Baja California Sur, Mexico.- *Journal of Paleontology* 63, 4: 440-442.<http://www.jstor.org/pss/1305437>.- **FC**;P 18-2, p. 47, ID=2511^**Topic(s):** Porifera, Pharetronida; **Systematics:** Porifera; **Stratigraphy:** Eocene L; **Geography:** Mexico, Baja California^*Elasmostoma bajaensis* n.sp., a pharetronid calcareous sponge, is described from the lower Eocene (P8 or P9 Zone) portion of the Bateque Formation, Baja California Sur, Mexico. This is the first Tertiary record of this genus and its first western Hemisphere occurrence. *Elasmostoma* has been previously reported only from Jurassic and Cretaceous strata of Western Europe.^1";

2449 s[2446] = "WILSON E.C. (1986).- The first Tertiary sclerosponge from the Americas.- *Palaeontology* 29: 577-583.- **FC**;P 16-1, p. 77, ID=2022^**Topic(s):** new taxa; Chaetetida; **Systematics:** Porifera; Chaetetida; **Stratigraphy:** Oligocene U - Miocene L; **Geography:** Mexico, Baja California^[*Diplochaetetes mexicanus* n.sp. is described from late Oligocene to early Miocene beds of Baja California, Mexico]^1";

2450 s[2447] = "STEMANN T.A. (2004).- Reef corals of the white Limestone Group of Jamaica.- *Cainozoic Research* 3 (1-2): 83-107.- **FC**;P 33-2, p. 38, ID=1177^**Topic(s):** reef corals; Scleractinia; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Eocene - Miocene; **Geography:** Jamaica^Sedimentary rocks of the white Limestone Group of Jamaica were deposited in the range of shallow to deep-water marine settings from the Middle Eocene to Middle Miocene. Horizons rich in scleractinian corals occur throughout this lithologic unit. The present study, using large, new collections (>2.000 specimens) and museum specimens, recognises 98 scleractinian species in 42 genera in the white Limestone Group. Thirty-six of these species have not been previously described in the literature. From the Middle to Upper Eocene, eleven species are reported from the Troy Formation, twelve from the upper Middle Eocene Swanswick Formation and eleven species from the Late Eocene Somerset Formation. In the Moneague Formation, fifty-two species are recorded from the lower part of the Upper Oligocene succession in units formerly mapped as the Browns Town Formation. Also, in the uppermost Oligocene of the Moneague Formation, sixty-four coral species are reported from rocks formerly mapped as the Newport Formation. An additional fifteen species are reported from the Early Miocene portions of the Montpelier Formation. In addition to scleractinian corals, a stony octocoral species (*Parapolytremacis* sp.) is found in the Upper Oligocene of the Moneague Formation, and at least two species of *Millepora* (class Hydrozoa) are recorded from the Eocene and Oligocene portions of the white Limestone Group. Coral assemblages from the Eocene of the white Limestone group are largely dominated by scattered, thinly branched and free-living corals, while Late Oligocene assemblages contain a diverse group of large massive, plate-shaped and branched corals in a system of patch reefs and coral carpets. The Early

- Miocene assemblages represent a possible deeper fore-reef community transported into deep water sediments in a olistostromic block. The total number of species found exceeds that known from any other single region or lithologic unit in the Caribbean Eocene through Miocene.^1";
- 2451 s[2448] = "FROST S.H. (1971).- Tertiary larger Foraminifera and Coral successions, Northern Central America.- Trans. Fifth Carib. Geol. Conf. Geol. 5: 133-136; Queens College Press.- FC&P 2-2, p. 23, ID=4823^Topic(s): biozonation; stratigraphy; Systematics: Foraminifera Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: America, central N^^1";
- 2452 s[2449] = "FROST S.H., LANGENHEIM R.L. (1975).- Cenozoic Reef Biofacies: Tertiary Larger Foraminifera and Scleractinian Corals from Chiapas, Mexico.- Northern Illinois University Press: 390 pp., 36 figs, 123 pls.- FC&P 4-1, p. 43, ID=5166^Topic(s): reefs facies; reefs; Systematics: Foraminifera Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: Mexico, Chiapas^This book treats the systematics, biostratigraphic distribution and paleoecology of 40 species of larger foraminifera and 80 species of corals from an 8000m thick sequence of Eocene, Oligocene and Lower Miocene shallow marine sediments in central Chiapas, Mexico.^1";
- 2453 s[2450] = "FOSTER A.B. (1987).- The Genus Stephanocoenia (Anthozoa: Scleractinia: Astrocoeniidae).- Bulletins of American Paleontology 93, 328: 05-22.- FC&P 17-1, p. 35, ID=2146^Topic(s): numerical taxonomy; Scleractinia, Stephanocoenia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Neogene; Geography: Dominican Republic^Multivariate statistical procedures are used to distinguish species in the reef-coral genus Stephanocoenia through a continuous Neogene sequence (five-million year time interval) in the Cibao Valley of the Northern Dominican Republic. This genus is the only member of the family Astrocoeniidae that occurs in the sequence. The material consists of 56 colonies (17 of which are measured) from 24 localities in four river sections, the most important being Rio Gurabo and Rio Cana. Ten characters are measured on each of 10 corallites per colony. The data are analyzed using cluster and canonical discriminant analysis to group colonies into clusters representing species. Identical measurements on modern colonies collected near Discovery Bay, Jamaica are included for comparison. Two fossil species are defined in the analysis, one of which is new (Stephanocoenia duncani, n.sp.). Both species are significantly distinct from the single modern species (S. intersepta) that is the sole living representative of the genus. Study of collections from other reef localities shows that both fossil species occur only during Neogene time and only at a limited number of localities. Patterns within each species are traced up a composite stratigraphic section using nonparametric statistical analyses. One of the two fossil species (S. spongiformis) is found to remain stable through time, whereas the other (S. duncani) changes its morphology in a direction approaching the cluster for the modern species. Further study of patterns of variation within the one modern and two fossil clusters shows that intraspecific variation is unusually complicated in this genus. The clusters overlap, and colonies within each cluster differ widely. Variation between populations within the modern species occurs in the same characters as those which distinguish the modern species from the fossil species converging with it (S. duncani). However, these two species form a morphologic continuum that cannot be explained by environment alone. Therefore, they may represent two gradually intergrading chronospecies within one lineage. [part of extensive summary]^1";
- 2454 s[2451] = "JOHNSON K.G., KIRBY M.X. (2006).- The Emperador limestone rediscovered: Early Miocene corals from the Culebra Formation, Panama.- Journal of Paleontology 80, 2: 283-293.- FC&P 35, p. 74, ID=2384^Topic(s): new records; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Panama^Caribbean reefs underwent significant biotic change during

the Late Oligocene and Early Miocene. This was a critical time in the evolution of the modern Caribbean fauna characterized by increasing endemism resulting from regional extinction of lineages that survive in the modern Indo-Pacific. An understanding of the dynamics and potential causes of the Oligocene/Miocene transition, however, is hampered by the relative lack of well-preserved Oligocene to early Miocene coral faunas in the Caribbean. Here we examine new exposures in the Culebra Formation of Panama that contain a well-preserved coral fauna of Early Miocene age. Taxonomic, stratigraphic, and paleoecologic study of the Culebra Formation exposed along the Gaillard Cut of the Panama Canal allows us to infer the paleoenvironments and reef coral communities from the Panama Canal Basin during this critical interval. The Culebra Formation consists of a deepening upward sequence with shallow-lagoon sediments at the base, overlain by fringing reef facies in the middle of the section, and open-shelf to bathyal facies at the top of the section. We recovered 31 species of reef corals from a combination of new and old collections. Comparison of our collections with other Late Oligocene to Middle Miocene reef coral assemblages confirms that there was a major faunal turnover after deposition of the Upper Oligocene Antigua Formation. This turnover consisted of a large number of extinctions followed by an increased rate of first occurrences so that regional diversity did not change appreciably. Improved stratigraphic resolution at this and other Caribbean localities is required to understand fully the dynamics of change during the Oligocene-Miocene transition.

2455 s[2452] = "FOSTER A.B. (1986).- Neogene Paleontology in the Northern Dominican Republic. 3. The Family Poritidae (Anthozoa: Scleractinia).- *Bulletins of American Paleontology* 90, 325: 1-123.- **FC#038;P 15-2**, p. 37, ID=6747^**Topic(s):** Scleractinia; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Neogene; **Geography:** Dominican Republic^Various multivariate statistical procedures are used to distinguish species in the reef-coral family Poritidae through a continuous Neogene sequence (5myr time interval) in the Cibao Valley of the Northern Dominican Republic. Some older (by approximately 10 myr) material from the same region is also included in the analyses. The material consists of approximately 450 colonies (120 of which are measured) from 92 localities in four river sections. The colonies are first sorted into three genera, and approximately 30 characters measured on five calices per colony. The data are analyzed using cluster and canonical discriminant analyses to group the colonies into clusters representing species. Five species are so defined in *Porites* and three in *Goniopora*. These groupings are then used statistically to reclassify type specimens for 22 of the 25 described species of Neogene Caribbean poritids. Eight described species are thereby synonymized with four previously-described species in *Porites* and one new species of *Porites*, *Porites convivatoris* n.sp., is discovered. Five described species are synonymized with two previously-described species in *Goniopora*. The stratigraphic range of three species of *Porites* and three species of *Goniopora* is also shown to extend back to the late Oligocene, thereby diminishing the significance of any presumed early Miocene adaptive radiation. Only one species was found to be endemic to the Dominican Republic and only one confined to the northern Caribbean. The rest are widely distributed throughout the Caribbean. Thus, the endemism previously believed common during the Neogene is shown to be far less extensive. Evolutionary trends within each species are preliminarily analyzed for various characters using nonparametric statistical procedures. In general, the results show that seven species experienced little or no evolutionary change (= stasis) through the sequence. Slight increases in corallite size are detected in two species, an increase in colony height in one species, and a more rounded colony shape in one species. These trends may be related to the general deepening of the environment; however, little correlation is found between lithology and morphology within

- species. Preliminary analyses of the relationship between intraspecific variation and poritid abundance and diversity yield significant results, suggesting that intraspecific trends may be environmental and that future study of coral species associations may offer insight into paleoenvironmental interpretations. * Statistical comparisons with the Miocene Mediterranean show that no species co-occur in the two provinces during the Neogene. Similarly, none of the studied Neogene species of *Porites* resemble modern Caribbean species of *Porites*, signifying that all nine poritid species studied must have become extinct and that the modern Caribbean species of *Porites* radiated during the late Pliocene or early Pleistocene. [original summary]^1";
- 2456 s[2453] = "BUDD A.F., JOHNSON K.G. (1999).- Neogene Paleontology in the Northern Dominican Republic 19. The family Faviidae (Anthozoa: Scleractinia). Part II. The Genera *Caulastraea*, *Favia*, *Diploria*, *Thysanus*, *Hadrophyllia*, *Manicina*, and *Colpophyllia*.- *Bulletins of American Paleontology* ???, 356: 1-83.- FC&P 28-2, p. 32, ID=4028^Topic(s): taxonomy; Scleractinia, Faviidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Neogene; Geography: Dominican Republic^Seventeen species and seven genera of the family Faviidae that bud intramurally are described in collection from the Neogene sequence in the Cibao Valley of the northern Dominican Republic. The material consists of 220 colonies from 85 localities along five river sections that range in age from Late Oligocene to Early Pliocene. Most of the specimens were collected along two river sections (39 localities in Rio Gurabo, 37 localities in Rio Cana) that expose an exceptionally continuous sequence extending from Late Miocene to Early Pliocene time. [first part of extensive summary]^1";
- 2457 s[2454] = "GEISTER J. (1982).- Pleistocene reef terraces and coral environments at Sto. Domingo and near Boca Chica, southern coast of the Dominican Republic.- *Transactions 9th Caribbean geological Conference* 2: 689-703.- FC&P 13-1, p. 13, ID=0382^Topic(s): reefs, terraces, ecology; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Haiti^1";
- 2458 s[2455] = "MITCHELL S.F., PICKERILL R.K., STEMANN T.A. (2001).- The Port Morant Formation (Upper Pleistocene, Jamaica): high resolution sedimentology and paleoenvironmental analysis of a mixed carbonate clastic lagoonal succession.- *Sedimentary Geology* 144, 3-4: 291-306.- FC&P 34, p. 97, ID=1361^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Pleistocene; Geography: Jamaica^The Port Morant Formation consists of a mixed clastic-carbonate sedimentary sequence that was deposited as a lagoon fill during the Sangamonian interglacial. Ten sedimentary facies are recognised and sequence stratigraphic analysis indicates the presence of transgressive and highstand systems tracts. The transgressive systems tract consists of a basal transgressive conglomerate (facies I), crustose coralline algal bindstones-boundstones (II) and 2 m high *Solenastrea* coral heads (III). The highstand systems tract is represented by sediments of a braided delta/fan-delta prograding into the lagoon (IV and V), marine pebbly sandstones deposited adjacent to mangrove swamps (VII), more distal algal mudstones (VIII), and sheet-like (VI) and channelized (IX) conglomerates filling delta-top distributary channels. A barrier and/or fringing reef is present (X), but its relationship with the lagoon-fill sediments is obscure due to poor exposure. Carbonates are restricted to the transgressive systems tract and the barrier/fringing reef (transgressive and/or highstand systems tract). Two transgressive events are recognized, the transgressive systems tract (facies I to III) and facies VII, the latter either a second sea-level rise or due to delta abandonment. A single coral date from facies VII gave an age of 132 ± 7 kyr. This indicates that the upper transgressive event (facies VII) belongs to the early highstand that has been recognized in isotope substage 5e. The lower transgressive event (facies I to III) in the Fort Morant Formation is

- therefore either also of this age, or older.^1";
- 2459 s[2456] = "DONOVAN S.K., HARPER D.A.T. (1998).- Diving deep on a Pleistocene reef in eastern Jamaica.- *Geology Today* 14, 1: 26-30.- FC&P 27-2, p. 71, ID=3941^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Jamaica^Exhumed early Pleistocene reefs along the eastern coast of Jamaica expose deep-water environments downslope from the more familiar, shallow-water reef frameworks. Such environments have quite different faunas from the shallow parts of the reefs, including common'Palaeozoic-type' biotas like the brachiopods and crinoids. These animals are found in deeper-water settings around the Caribbean today; however, these biotas are not readily available nor easily studied. The slightly older Pleistocene faunas are much more accessible and informative. Here the past may be the key to the present.^1";
- 2460 s[2457] = "BOSS S.K., LIDDELL W.D. (1987).- Back-reef and fore-reef analogs in the Pleistocene of North Jamaica: implications for facies recognition and sediment flux in fossil reefs.- *Palaios* 02: 219-228.- FC&P 23-2.1, p. 64, ID=4424^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Jamaica^The 125,000 y.b.p. (Sangamon) Falmouth Formation is an emergent fringing-reef complex exposed along the north coast of Jamaica. Q-mode cluster analysis using constituent composition of Falmouth Formation rocks collected near Discovery Bay was employed to differentiate two distinctive facies. These are a dense, well-lithified skeletal packstone containing abundant calcareous algae (*Halimeda* and coralline algae) and molluscs, and a poorly lithified skeletal grainstone composed primarily of sand-sized coral fragments and coralline algae with only minor amounts of *Halimeda*. The composition of sediments within these facies is comparable to the composition of back-reef and shallow (5-8m deep) fore-reef sediments of the Holocene Jamaican fringing-reef system. These results contradict the pervasive idea that sand-sized, reef-derived sediments are ineffective as environmental indicators owing to post-depositional transport away from the reef system. Petrographic and X-ray analyses of the mineralogy of Falmouth Formation limestones reveal that back-reef packstones retain much of their original aragonite and high-Mg calcite. In fore-reef grainstones, however, better soiling (increased permeability) results in dissolution and leaching of these metastable phases and reprecipitation of low-Mg calcite. Thus, variability in original sediment texture may create a preservational bias in the fossil record against the more permeable fore-reef deposits.^1";
- 2461 s[2458] = "MANN P., TAYLOR F.W., BURKE K., KULSTAD R. (1984).- Subaerially exposed Holocene coral reef, Enriquillo Valley, Dominican Republic.- *Bulletin Geological Society of America* 95: 1084-1092.- FC&P 14-1, p. 67, ID=1081^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Dominican Republic^An extremely well-preserved Holocene fringing coral reef occurs at an average elevation of 5 m below sea level around the margins of the central Enriquillo Valley, Dominican Republic. The reef records the latest marine incursion from the east into an 85-km-long, 12-km-wide tectonic depression and appears to represent a unique preservation. Excellent cross sections of the reef exposed in erosional gullies reveal the composition and zonation typical of modern Caribbean reefs that are found in offshore low-energy environments. Radiocarbon age determinations (2) indicate that reef growth coincided with sea-level rise following the last ice age (5,930 + 100 to 4,760 ± 90 yr B.P.). Deltaic deposition and possible vertical movements on active fault scarps dammed the eastern mouth of the valley and created Lago Enriquillo, the level of which was then rapidly lowered by evaporation in an arid climate to produce a saline lake ca. 40m below sea level. Stratigraphic studies of rocks along the valley edge and data from drill holes in the basin center indicate that there were

earlier post-Miocene marine incursions similar to that described here.¹";

- 2462 s[2459] = "GUNTHER A. (1990).- Distribution and Bathymetric Zonation of Shell-boring Endoliths in Recent Reef and Shelf Environments: Cozumel, Yucatan (Mexico).- Facies 22: 233-262.- FC&P 19-2.1, p. 37, ID=2758Topic(s): endobionts boring; Systematics: ; Stratigraphy: Recent; Geography: Mexico, CozumelPelecypod shells from bottom sediments of the shelf and upper slope off Cozumel (Mexico), at depths ranging from 1 to 47m, were studied with regard to the taxonomy, frequency and distribution of microboring produced by endolithic organisms. Scanning electron microscopy of plastic casts of the borings reveals the existence of 29 microboring types, distinguished on the base of shape, size, mode of branching, overall boring pattern and sporangia. The endoliths include cyanobacteria, chlorophycean algae, rhodophycean algae, fungi, sponges and several microborers of uncertain taxonomic affinities. Although most of the borings exhibit a wide bathymetrical range, a subdivision of the photic zone is indicated by the abundance and vertical distribution of some species. The upper part of the photic zone (1-30m) is characterized by higher species diversity, by the green algae Phaeophila engleri and Entocladia testarum, and by the abundance of the cyanobacteria Hyella gigas. Fungi occur at all depths but are more common in the lower photic zone (30-47m). The bathymetrical position of the boundary might be influenced by the vertical sampling distance. Generally, there is a good agreement with other bathymetrical patterns of recent endoliths, especially with those from the Puerto Rican carbonate shelf. There is no distinct difference in the frequency or taxonomic composition of shell-boring endoliths from reefs and interreef areas (platforms covered by bioclastic sands). Boring intensity, measured by point-counting of SEM photographs, is generally high; in 58% of the samples 60 to 99% of the outer shell surface is bored, predominantly by fungi and by the green alga Phaeophila engleri. Mean boring intensities show no relationship with water depths.¹";
- 2463 s[2460] = "MUCKELBAUER G. (1990).- The Shelf of Cozumel, Mexico: Topography and Organisms.- Facies 23: 185-240.- FC&P 20-1.1, p. 69, ID=2853Topic(s): eustacy, shelf geomorphology; eustacy, terraces; Systematics: ; Stratigraphy: Holocene; Geography: Mexico, YucatanThe Caribbean Island of Cozumel lies 18 km off the north-eastern coast of the Mexican Peninsula of Yucatan. A relatively narrow shelf is developed on both sides of the roughly NS striking island, whereby terraces and marked steps are evident. On the western shelf 3 terraces can be found at 5m, 10m and 20m below sea level. The shelf edge lies at approximately 20m. On the eastern side 5 distinct terraces are developed (3m, 10m, 20m, 30m and 50m) and the shelf edge lies about 50m deep. These terraces are interpreted as abrasion platforms of the rising sea level in the Holocene. In the W the insular slope drops almost vertically to a depth of about 400m. In the E it drops even further, with interruptions to over 1000m. The northern shelf area remains flat (20-30m) and ends at the Banco Arrowsmith, about 50km NNE of Cozumel. [first part of extensive summary]¹";
- 2464 s[2461] = "STODDART D.R. (1974).- Post-hurricane changes on the British Honduras reefs; re-survey of 1972.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 473-483.- FC&P 4-1, p. 19, ID=5041Topic(s): reefs, hurricane impact; reefs; Systematics: ; Stratigraphy: Recent; Geography: British Honduras¹";
- 2465 s[2462] = "PURDY E.G. (1974).- Karst-Determined Facies Patterns in British Honduras: Holocene Carbonate Sedimentation Model.- Bulletin of the American Association of Petroleum Geologists 58, 5: 825-855.- FC&P 4-1, p. 24, ID=5078Topic(s): reef morphologies, karst induced; reef morphologies; Systematics: ;

- Stratigraphy: Holocene; Geography: British Honduras^The distribution of Holocene sediment types on the British Honduras shelf is correlated broadly with bathymetry as a result of the modifications in water circulation and turbulence imposed by bathymétrie relief. Subsurface information demonstrates that this relief has been inherited in large part from an underlying, pre-Holocene limestone erosion surface. * On the northern shelf the relatively subdued pre-Holocene relief is symptomatic of temperate or doline karst; on the southern shelf the considerable relief on the same surface is suggestive of tropical or conical karst. This difference in offshore-relief expression is consistent with parallel changes in the mainland limestone topography and with differences in the presumably causal factor of rainfall distribution. In both karst regimes, however, solution morphology has been directed in its expression by underlying structure. * Significantly, Holocene carbonate sedimentation has accentuated the drowned topographic relief through an accelerated rate of carbonate deposition on the highs. Thus the climatically and structurally determined variations in karst topography not only control the distribution of Holocene sediments but also their three-dimensional geometry. The same relation should apply to the geologic record.^1";
- 2466 s[2463] = "KUHLMANN D.H.H. (1975).- Charakterisierung der Korallenriffe vor Veracruz / Mexiko.- [journal?] [in German, with English and Spanish summaries].- FC&P 5-1, p. 26, ID=5343^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Mexico, Veracruz^[ecological and geomorphological description of the Veracruz coral reefs with a check-list of stony corals and a discussion of growth forms of Acropora palmata]^1";
- 2467 s[2464] = "ZLATARSKI V. (1981).- Publications on the Cuban Fossil Corals (Quaternary excluded).- FC&P 10, 2: 31-32.- FC&P 10-2, p. 31, ID=6073^Topic(s): bibliography; corals bibliography; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Cuba^^1";
- 2468 s[2465] = "TURNSEK D., LEMONE D.V., SCOTT R.W. (2003).- Tethyan Albian corals, Cerro de Cristo Rey uplift, Chihuahua and New Mexico.- Gulf Coast Section SEPM Foundation, Special Publications in Geology 1 [R.W. Scott (ed.): Cretaceous Stratigraphy and Paleoecology, Texas and Mexico]: 147-185.- FC&P 33-2, p. 39, ID=1180^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Alb; Geography: Mexico, USA^^1";
- 2469 s[2466] = "LOSER H., MINOR K. (2007).- Palaeobiogeographic aspects of Late Barremian to Late Albian coral faunas from Northern Mexico (Sonora) and the southern USA (Arizona, Texas).- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 245, 2: 193-218.- FC&P 35, p. 78, ID=2392^Topic(s): biogeography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Mexico, USA ^The taxonomy of Early Cretaceous shallow marine coral faunas from the Bisbee Basin (northwestern Mexico and Arizona, southwestern USA) and the Comanche Platform (Texas, USA) are compared to each other and to coral associations of the same age around the world. The analysis here employs a large, comprehensive computer database on Mesozoic corals. The database is used to develop a uniform palaeogeographic framework for the comparisons (300 palaeo-provinces are distinguished worldwide for the Cretaceous), and a distance matrix cluster analysis of shared presence is performed on the data to correlate coral faunas both within and outside of the study area. The study is based entirely on coral material recently collected in the field and studied in museum collections. Of the 754 coral samples examined, a total of 160 species is identified from 54 sample locations. This large total number is in contrast to the low to moderate number of species found in each locality, with a maximum number of 28 species from one locality in northwestern Mexico. This demonstrates that coral distribution was controlled by regional (even local) factors. Outside of the sample

area, the coral faunas show a strong correlation to central Tethyan faunas, with strongest affinities to that of the Iberian Peninsula, and also to eastern Tethys and western Pacific faunas. This argues against the commonly held concept of a distinct New World coral faunal realm, and is explained by a west-to-east orientation of warm oceanic connections and the close proximity of the land masses during the Early Cretaceous.^1";

2470 s[2467] = "HAHN G., HAHN G., LEONARDOS O.H., PFLUG H.D., WALDE D.H.G. (1982).- Körperlich erhaltene Scyphozoen-Reste aus dem Jungpräkambrium Brasiliens.- *Geologica et Palaeontologica* 16: 1-18.- FC&P 14-1, p. 62, ID=1072^Topic(s): Scyphozoa, Corumbellata; Systematics: Cnidaria; Scyphozoa; Stratigraphy: Neoproterozoic; Geography: Brazil^From the Young-Precambrian (Vendian) Corumba-Group of Mate Grosso, Brazil, *Corumbella wernerii* n.gen. n.sp. is described, preserved by the chitinous periderm of several specimens. The body consists of a basal "stalk" with 4 sclero-septa and a branched upper part containing many small tubes, arranged biserially. With this, *Corumbella* superficially resembles the Charniidae and the Pennatularia, but both these groups have no chitinous periderm. A new subclass of Scyphozoa, Corumbellata, is erected for *Corumbella*.^1";

2471 s[2468] = "BERESI M.S., RIGBY J.K. (1994).- Sponges and chancellorids from the Cambrian of Argentina.- *Journal of Paleontology* 68, 2: 208-217.<http://www.jstor.org/pss/1306062>.- FC&P 23-2.1, p. 57, ID=4407^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Cambrian; Geography: Argentina^Anthaspidellid sponges are reported from the La Laja Formation in the Chica de Zonda Range in the Precordillera Oriental, Argentina. These are generically unidentifiable fragments of trabs and more or less well-defined dendroclone spicules. They occur as skeletal elements in small transported fragments and are the only Cambrian occurrence of anthaspidellids known thus far from South America. Walcott (1920) proposed to include an array of dissociated spicules, including triradiate prodiaenes, hexactines, and probable monactine spicules, in the genus *Kiwetinokia*. Assemblages tentatively identified as *Kiwetinokia utahensis*? Walcott, 1920, are reported from the Estancia San Martin Formation, of latest Early Cambrian and early Middle Cambrian age from San Isidro Gulch near Mendoza. Similar spicule assemblages occur in the La Laja Formation from the Chica de Zonda Range, in the Precordillera Oriental near San Juan, and in the Los Sombreros Formation in the Tontal Range of the Precordillera Occidental. Sclerites of the sponge-like *Chancelloria eros* Walcott, 1920, are described from the upper Lower to lower Middle Cambrian La Laja Formation. *Chancelloria* sclerites are also reported here from rocks of the Middle Cambrian Glossopleura Zone in the San Isidro Formation in Empozada Gulch in the San Isidro area of the Precordillera Austral, west of Mendoza, in Mendoza Province. Sponges and chancelloriids from the Cambrian of Argentina are known basically from dissociated skeletal elements. [original abstract]^1";

2472 s[2469] = "MEHL D., LEHNERT O. (1997).- Cambro-Ordovician sponge spicule assemblages in the Ordovician of the Argentine Precordillera and paleoenvironmental ties.- *N. Jb. Geol. Palaont. Abh.* 204, 2: 221-246.- FC&P 26-2, p. 75, ID=3763^Topic(s): spicules, ecology; Porifera spicules; Systematics: Porifera; Stratigraphy: Cambrian, Ordovician; Geography: Argentina, Precordillera^Well preserved silicified sponge spicule assemblages are described from residues of conodont samples from Ordovician strata in the Precordillera of western Argentina. The material has been recovered from Cambrian olistoliths in the Los Sombreros Formation (Llanvirn-Caradoc) and from autochthonous limestones of the San Juan, Gualcamayo and Las Aguaditas formations. The poriferan taxa include Polyactinellidae and Heteractinellidae (Calcarea) as well as hexactinellid and demospongian spicules. Associations of exclusively

- hexactine spicules are restricted to outer platform and slope deposits, whereas on the shallow platform a relatively high diversity of different types of polyactinellid and heteractinellid spicules may be observed in the upper part the San Juan Formation. There, these assemblages are related to reef-mound horizons and biostromes with sponges, stromatoporoids, receptaculitids and some autotrophic organisms. The restriction of spicule associations to distinct environments is discussed with respect to previous studies treating the distribution of Early Paleozoic sponge faunas in different facies, and 3 different sponge biofacies zones for the Cambro-Ordovician platform and slope settings in the Precordillera are described.¹";
- 2473 s[2470] = "KELLER M., FLUGEL E. (1996).- Early Ordovician Reefs from Argentina: Stromatoporoid vs Stromatolite Origin.- Facies 34, 1: 177-192.- FC&P 25-2, p. 70, ID=3175^Topic(s): reefs; reefs; Systematics: Cyanophyta Porifera; Stromatoporoidea; Stratigraphy: Ordovician L; Geography: Argentina^Late Arenigian biohermal reef mounds and biostromes within the shallow-marine platform facies of the upper San Juan Formation of the Precordillera (western Argentina) represent a new Early Ordovician reef type. The meter-sized reefs are dominated by Zondarella communis n.g. n.sp. The new taxon is characterized by domical, bulbous and laminar morphotypes exhibiting growth layers and thin horizontal and vertical as well as intermingled skeletal elements included within different sets. The fossil may be compared with stromatolites and stromatoporoids but an interpretation as primitive stromatoporoids is favored.¹";
- 2474 s[2471] = "CARRERA M.G. (2001).- Analisis de la distribucion y composicion de las biofacies de la Formacion San Juan (Ordovicio Temprano), PreCordillera Argentina.- Ameghiniana 38, 2: 169-184.- FC&P 31-1, p. 70, ID=1648^Topic(s): ; stroms, ecology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Argentina^One of the 7 major biofacies recognized is the stromatoporoid biofacies.¹";
- 2475 s[2472] = "CARRERA M.G. (1994).- An Ordovician sponge fauna from San Juan Formation, Precordillera basin, western Argentina.- N. Jb. Geol. Palaont, Abh. 191, 2: 201-210.- FC&P 24-1, p. 12, ID=4447^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Argentina, Precordillera^^1";
- 2476 s[2473] = "CARRERA M.G. (1997).- Significado paleoambiental de los poriferos y briozoos de la Formacion San Juan (Ordovicio), Precordillera Argentina.- Ameghiniana 34, ??: 179-199.- FC&P 28-1, p. 52, ID=3988^Topic(s): ; Porifera, Bryozoa; Systematics: Porifera Bryozoa; Stratigraphy: Ordovician; Geography: Argentina, Precordillera^[association III (stromatoporoid biofacies) is found in the reefal and biostromal area in the inner and middle ramp respectively during regressive stages]^1";
- 2477 s[2474] = "CANAS F.L., CARRERA M.G. (1993).- Early Ordovician microbial-sponge-receptaculitid bioherms of the Precordillera, western Argentina.- Facies 29, 1-2: 169-178.- FC&P 24-1, p. 12, ID=4446^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Ordovician L; Geography: Argentina, Precordillera^^1";
- 2478 s[2475] = "BABCOCK L.E., GRAY J., BOUCOT A.J., HIMES G.T., SIEGELE P.K. (1990).- First Silurian conulariids from Paraguay.- Journal of Paleontology 64, 6: 897-902.- FC&P 20-1.1, p. 65, ID=2841^Topic(s): taxonomy; Hydrozoa, Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Silurian Llan; Geography: Paraguay^Two new conulariid species, Conularia clarkei Babcock and C. paraguayensis Babcock from the Vargasa Shale, are the first Silurian conulariids to be described from Paraguay. They increase to three the number of Silurian species to be described from South America. The concept of Conularia Miller in Sowerby 1820, is emended. It includes as junior synonyms Conularia

(Plectoconularia) Boucek 1919, Diconularia Sinclair 1952, and Yangoconularia Xu and Li 1985. The age of the Vargas Pena Shale has long been disputed, but conclusions based on organic-walled microfossils indicate an Early Silurian (Llandoveryan) age for the unit.¹";

- 2479 s[2476] = "RODRIGUEZ S., CARRERA M.G., FERNANDEZ-MARTINEZ E. (2002).- Corales de la transición siluro-devónica en la precordillera argentina.- Ameghiniana 39, 4: 479-490.- FC&P 32-2, p. 13, ID=7151Topic(s): taxonomy, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian / Devonian; Geography: Argentina, PrecordilleraVery few coral species have been described to date from the Silurian and Devonian rocks of Argentina . An important association of rugose and tabulate corals was collected from the Silurian and Devonian siliciclastic rocks in western Argentina . The coral assemblage was recovered from the Pridolian and Lockovian transition in the Cerro del Fuerte and Talacasto sections in the Argentine Precordillera. The tabulate Argentinella argentina (Thomas) is described and figured, building thick accumulations of gregarious colonies in a shallow, near shore environment associated with a sea level fall in the base of the Lochkovian. From the same levels an indeterminate favositid is also described. In the subjacent Pridolian rocks the solitary rugose Enterolasma sp. and a tabulate, pleurodictyform indet. were recovered from fossil-rich beds associated with tempestites. This is the first record of the genus Enterolasma and the Family Pleurodictidae in South America. [original abstract]^1";
- 2480 s[2477] = "FERNANDEZ-MARTINEZ E., PLUSQUELLEC Y., TOURNEUR F. (2002).- Revisión de Favosites argentinus Thomas, 1905, especie tipo de Argentinella nov. gen., coral tabulado del Devónico inferior de Argentina.- Revista Española de Paleontología 17, 1: 101-116.- FC&P 34, p. 44, ID=1249Topic(s): revision; Tabulata, Argentinella; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: ArgentinaThe type material of Favosites argentinus Thomas, 1905, from the Lochkovian of Cerro del Fuerte (Argentine Precordillera), along with various topotypical material belonging to the same collection, is described and figured. The study of this material serves as a basis for establishing the new genus Argentinella. This genus is characterized by branching colonies, with a marked development of the septal elements, especially pronounced in the calices which present 12 spiny septa ridges, peripheral thickening of the walls and tabulae, and a wall microstructure where microlamellae prevail but coexist with lamellae.^1";
- 2481 s[2478] = "FERNANDEZ-MARTINEZ E., PLUSQUELLEC Y., TOURNEUR F., HERRERA Z. (1999).- Nueva especie de Tabulado del Devónico inferior de Argentina.- Revista Española de Paleontología 14, 1: 37-57.- FC&P 28-2, p. 26, ID=1459Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: ArgentinaA new species of Tabulate coral, Parastriatopora sanjuanina, coming from two localities sited in the southern part of the Argentinian Precordillera is described. The studied material was collected in some calcareous levels near the base of the Talacasto Fm., lower Lochkovian in age. This species is assigned to the genus Parastriatopora and is characterized by a small axial zone made up of some few corallites and by the main development of a compact peripheral rim in the mature branches. The outer surface of these branches shows the calices bearing between eight and twelve ridges separated by eight rounded hollows.^1";
- 2482 s[2479] = "GARCIA-LOPEZ S., FERNANDEZ-MARTINEZ E. (1995).- The genus Parastriatopora Sokolov, 1949 (Tabulata) in the Lower Devonian of Argentina: palaeobiogeographic implications.- Geobios 28, 2: 175-183.- FC&P 24-2, p. 87, ID=1460Topic(s): ; Tabulata, Parastriatopora; Systematics: Cnidaria; Tabulata;

- Stratigraphy: Devonian L; Geography: Argentina^Some specimens of tabulate corals from Lower Devonian of the Precordillera Central in San Juan province (Argentina) are described. These branches are assigned to the genus Parastriatopora Sokolov 1949 and they are found close to Parastriatopora gigantea Knod 1908. Other material, probably conspecific with this, has been reported in the bibliography such as Favosites argentina Thomas 1905. The age of this finding is discussed and some palaeobiogeographic considerations on their occurrence in South America are proposed.^1";
- 2483 s[2480] = "VASCONCELLOS A.C.de (1992).- Amazon basin an unsuitable place for coral development during Middle Carboniferous? .- FC&P 20, 2: 37.- FC&P 23-2.1, p. 47, ID=4277^Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Amazon Basin^^1";
- 2484 s[2481] = "VASCONCELLOS A.C.de (1992).- Corais da Formacao Itaituba: Aspectos paleoecologicos.- Boletim do Museu Paraense Emilio Goeldi, Ciencias Terra 04: 35-43.- FC&P 24-2, p. 85, ID=4578^Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Amazon Basin^A paleoecological study was done based on the Middle Carboniferous coral fauna cited for the Amazon Basin in an attempt to characterize a relationship among those individuals and the environment during that time. Coral species used in this work are those present in the Itaituba Formation (Morrowan-Atokan) in the State of Para, northern Brazil. Amplexizaphrentis petrii Pinto, Dibunophylloides duncanae Pinto, D. geiseli Pinto, Lophamplexus sp., Stereostylus leinzi Pinto and S. mendesi Pinto represent the Rugosa; being Multithecopora milani Pinto the only one Tabulata coral species noticed for the region. Those individuals are characteristic of a coral fauna related to inner seas, being accustomed with shallow waters of high turbidity. The absence of organic reefs in the region can be related with a low capability of individuals to settle down in a poorly consolidated shelf.^1";
- 2485 s[2482] = "VASCONCELLOS A.C.de (1991).- Amazon Basin - an unsuitable place for coral development during Middle Carboniferous?.- FC&P 20, 2: 37. [short note] - FC&P 20-2, p. 37, ID=6803^Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: Amazon Basin^According to Mendes (1971) shallow seas with warm waters are expected for the region, which double the chances for coral development. In addition, almost all the representatives of late Palaeozoic reefs are present in the area as coralline algae, brachiopods, crinoids, echinoderms, gastropods. [Vasconcellos expects there is a good chance of discovery of corals in this poorly accessible area]^1";
- 2486 s[2483] = "VASCONCELLOS A.C.de (1993).- Carboniferous Coral Collections housed at Museu Nacional/ UFRJ and Departamento Nacional de Producao Mineral at Rio de Janeiro, Brazil.- FC&P 22, 2: 101-107.- FC&P 22-2, p. 101, ID=6832^Topic(s): collections of fossils; coral collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Bashk; Geography: Brazil^A catalog of the Middle Carboniferous (Bashkirian) corals of the Amazon Basin housed at Museu Nacional/UFRJ and Departamento Nacional de Producao Mineral (DNPM), both Rio de Janeiro, is presented.^1";
- 2487 s[2484] = "VASCONCELLOS A.C.de (2000).- Bacia Amazonas - uma via marítima durante o Carbonífero Médio.- Boletim do Museu Paraense Emilio Goeldi, Ciencias Terra 12: 1-61.- FC&P 30-1, p. 21, ID=1544^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Carboniferous Bashk; Geography: Brazil, Amazon Basin^A vicariant model is proposed to evaluate the distribution pattern of thirty-nine Bashkirian rugose coral genera cited for both the Amazon basin and selected western Laurasian regions. Laurasian regions embrace the Western Interior, Eastern Interior and Midcontinent region in the USA, part of the Mediterranean Province

- (Northern Spain) and Donets basin in Europe; Amazon basin is included in the western Gondwana. The selected rugose coral genera were grouped into seven suborders and a phylogenetic study was carried out in an attempt to produce area cladograms. A reduced area cladogram was produced using BPA (sensu Wiley 1988), which shows area relationships and ancestor-groups distribution. The results attest to a close relationship of the Amazon basin to the Midcontinent region. A possible sea-way linking western Laurasian regions during Early Bashkirian is also suggested via the Canadian Arctic Archipelago. Previous suggestions about a sea connection running from North Africa to the Amazon basin is rejected. The biogeographic model proposed is in agreement with that of Rodriguez et al. (1996) for the Bashkirian interval.¹¹;
- 2488 s[2485] = "SABATTINI N. (1986).- Distribucion geografica y estratigrafica de los Cnidaria y Bryozoa del Carbonifero y Permico de la Argentina.- Rev. Mus. de la Plata, n. ser. 9 Paleont. 51: 1-17 [in Spanish, with English summary].- FC&P 16-2, p. 25, ID=2055Topic(s): paleontology; Systematics: Cnidaria Porifera; Hydrozoa Tabulata Chaetetida; Stratigraphy: Carboniferous, Permian; Geography: ArgentinaMentioned are: Conulariida: Paraconularia tepuelensis Marinelarena 1970, P. acuminata Marinelarena 1970, P. sueroi Marinelarena 1970, P. pulcheria Marinelarena 1970; Tabulata: Cladochonus amosi Sabattini et Nolrat 1967, C. harringtoni Sabattini 1980 and Chaetetes sp.";
- 2489 s[2486] = "MORSCH S. (1986).- Corales mesozoicos de Mendoza.- In: Volkheimer E. (ed.): Fossiles de Mendoza: 65-71; Mendoza. [in Spanish].- FC&P 25-1, p. 42, ID=3034Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Argentina, MendozaSome Jurassic corals from Mendoza (Northern Argentina) are briefly described and depicted: Anabacia andina (Gerth), Stylophyllopsis cf. haimei Chap. & Dew., Andenipora liasica Gerth, Isastrea jaworskii Gerth, Latomeandra cf. sinuosa Koby, Montlivaltia victorias Duncan.";
- 2490 s[2487] = "MATHEOS S.D., MORSCH S. (1990).- Geochemistry and paleoecological aspects of coral-bearing limestone from the Late Jurassic at the southern end of the Sierra de la Vaca Muerta, Neuquen Basin, Argentina.- N. Jb. Geol. Palaeont. Abh. 181, 1/3: 159-169.- FC&P 25-2, p. 54, ID=3150Topic(s): geochemistry, ecology; geochemistry; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Argentina, NeuquenCoralliferous algal framestones are reported from the La Manga Formation (Upper Jurassic) in the Sierra de la Vaca Muerta (Neuquen, Argentina). The geological and palaeoecological characteristics are described and the results of a trace element analysis presented.";
- 2491 s[2488] = "MORSCH S.M. (1989).- scleractinian corals from the Oxfordian La Manga Formation in the Neuquen Basin, Argentina.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. w. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 303-306.- FC&P 19-1.1, p. 14, ID=2548Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Oxf; Geography: Argentina, Neuquen";
- 2492 s[2489] = "MORSCH S. (1990).- Corales (Scleractinia) de la extremidad sur de la Sierra de La Vaca Muerta, Formation la Manga (Oxfordiano), provincia del Neuquen, Argentina.- Ameghiniana 27, 1/2: 19-28.- FC&P 22-2, p. 89, ID=3529Topic(s): Scleractinia; Systematics: Cnidaria; scleractinia; Stratigraphy: Jurassic Oxf; Geography: Argentina, NeuquenCorals from the limestones of La Manga Formation (Oxfordian) are described for the first time. The outcrop is localized at the southern end of Sierra de la Vaca Muerta, Neuquen Province. Specimens are abundant but they

- belong to only two species: Australoseris gen.n., sp.n. Stylinidae, and Actinastraea cf. piveteaui, Actinastraeidae.¹";
- 2493 s[2490] = "MORSCH S. (1991).- Un nouvel agencement trabeculaire chez un Scleractinia jurassique d'Argentine: Neuquinosmilia lospozenensis gen.n., sp.n.- Bulletin du Museum national d'histoire naturelle, serie 4, C13, 3/4:139-155.- FC;P 22-2, p. 89, ID=3530Topic(s): trabeculae, new type; Scleractinia, Neuquinosmilia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Argentina^A new trabecular structure which consists of trabeculae comprised of many fibre sheaves arranged alternately or without any particular order along a trabecular axis is described from material of the Jurassic of Argentina. The new described genus has been assigned to the family Montlivaltiidae.¹";
- 2494 s[2491] = "MORSCH S. (1996).- Les Scleractiniaires jurassiques (Bajocien) d'Argentine (Bassin de Neuquen). Systematique.- Geobios 29, 6: 671-706.- FC;P 26-1, p. 71, ID=3643Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj; Geography: Argentina, Neuquen^In this paper the scleractinian corals from Lajas Formation outcrops (Lower Bajocian) - Neuquen Basin, western central Argentina - are described. The Lajas Formation is mainly constituted by shore-face arenaceous sediments, and not one of the studied outcrops presents a reef facies. At the moment, this kind of facies is unknown in the Argentinean Middle Jurassic. The coral fauna is comprised of 15 species among which 6 are new ones. They are distributed in 11 genera, three of which are new. The new taxa described are Araucanastrea mimiscula nov. gen. nov. sp., Araucanastrea majuscula nov. gen. nov. sp., Garateastrea bardanegrensis nov. gen. nov. sp., Kobyastraea louisae nov. sp., Neuquinosmilia gerthi nov. sp. and Mapucheastrea andina nov. gen. nov. sp. The specimens possess a similar morphology to those having the same age and belonging to the rich Tethys coral fauna, but the microstructure observed in same species appears to be closer to that of more ancient forms. However the exactness of the identification is somehow limited by the parallelisms existing in scleractinian systematics. This parallelism is originated by the determinations of scleractinians founded only on well preserved microstructures, but which are not observable in all specimens. It can too induce inaccuracy in the paleobiogeographical reconstruction and in the phylogenetic interpretations.¹";
- 2495 s[2492] = "MORSCH S.M. (2001).- Scleractinian corals of the Neuquen Basin (Lower Jurassic), Argentina.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 320-332.- FC;P 30-1, p. 21, ID=7076Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic L; Geography: Argentina, Neuquen^Lower Jurassic scleractinians from the Neuquen Basin (Argentina) are newly described. Inferred paleoenvironmental conditions are based on coral life positions and sedimentology for corals of the Puesto Araya and Piedra Pintada Formations. Coral bearing levels are placed in a precise chronostratigraphic sequence according to ammonoid faunas, which indicate a Pliensbachian age. These units belong to the transgressive phase of a depositional sequence. In one outcrop, coral bearing levels are classed as autobiostromes. In the other outcrops, the corals do not form any biologically constructed structures. Taxa are regarded as eight species, among which six are noted for the first time in Argentina. Species are as follows: Stylophyllopsis? sp. cf. S. victoriae, Phacelostylophyllum sp. cf. P. peruvianum, Meandrostylis? jaworskii, Distichomeandra sp. cf. D. austriaca, Retiophyllia? sp., Microphyllia sp. cf. M. flemingi, Myriophyllum sp. and Goldfussastraea? toarciensis. Some specimens are similar morphologically to those of the rich coral faunas of Tethys of the same age, but others appear to be closer to older forms. However,

- the exactness of identifications is limited by the state of preservation of specimens, and somewhat, by differing diagnostic criteria (microstructure vs macrostructure) used in the systematic classification of Scleractinia. [original abstract]^1";
- 2496 s[2493] = "BARON-SZABO R.C., CASADIO S., PARRAS A. (2004).- First shallow water scleractinian coral reef from the Danian, northern Patagonia, Argentina.- Ameghiniana, Suplemento 40, 4: 79R.- FC&P 33-1, p. 28, ID=7182^Topic(s): reefs, shallow marine; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Dan; Geography: Argentina, Patagonia^Hermatypic coral reefs have not been reported from the earliest Paleocene with a few exceptions of the unverified records (e.g. Paris Basin). On the other hand azooxanthellate coral reefs from the early Paleocene of Greenland and Faxe, Denmark are well-documented. We describe the first Danian hermatypic coral reef from the Roca Formation at Lomita Baya, La Pampa, Argentina. The coral reef is primarily formed by the colonial taxa *Siderastrea adkinsi* (Wells, 1934) and *Haimesastraea conferta* Vaughan, 1900, and is distinctly dominated by *S. adkinsi* (62%-88% in shallowest parts of the reef, 82%-100% in adjacent areas). In the shallowest parts of the reef colonies of *S. adkinsi* are massive-foliosus or encrusting, ranging between a few centimeters to over 1m in diameter. Specimens of *H. conferta* are distinctly smaller, generally knobby, and range between a few millimeters and 15cm in diameter. Frequently, corals of the 'rolling stone type' occur which, in addition to the presence of foliosus-encrusting morphotypes and the microfacies images, indicate that the reef developed in a highly wave-agitated environment of 0-10m depth. Sponges and coralline algae played an important role in the reef frame. Other members of the coral reef community are the branching coral *Cladocora* cf. *C. gracilis* (d'Orbigny, 1850), the solitary coral *Sideroseris durhami* Wells, 1945, the echinoid *Micropsis desori* (Cotteau, 1856), which is an inhabitant of hard substrates, the bivalves *Acesta* cf. *A. latens* (Feruglio, 1935), and *Venericardia iheringi* (Böhm, 1903), as well as several species of warm water gastropods. [short communication, full text]^1";
- 2497 s[2494] = "FERNANDES A.C.S. (1978).- Corais hermatipicos da formacao Maria Farinha, Paleoceno do Estado de Pernambuco.- Anais do XXX Congresso Brasileiro de Geologia, Recife 1978, vol. 2: 960-964.- FC&P 10-1, p. 19, ID=5880^Topic(s): hermatypic; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleocene; Geography: Brazil^[description of *Stephanocoenia pernambucensis* sp.nov. and of *Paracyathus* cf. *P. rugosus* Vaughan from the Paleocene]^1";
- 2498 s[2495] = "KIESSLING W., ARAGON E., SCASSO R., ABERHAN M., KRIWET J., MEDINA F., FRACCIA D. (2005).- Massive corals in Paleocene siliciclastic sediments of Chubut (Argentina).- Facies 51, 1-4: 233-241.- FC&P 34, p. 61, ID=1283^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleocene; Geography: Argentina^A horizon with large, massive corals in growth position was discovered in the Paleocene, probably upper Danian, part of the Maastrichtian-Paleocene Lefipán Formation of Chubut (Patagonia, Argentina). All corals belong to one species, the cosmopolitan *Haimesastraea conferta* Vaughan, which survived the end-Cretaceous mass extinction. The occurrence of massive corals at this site is exceptional both because of the siliciclastic depositional regime and because of the high palaeolatitude setting. An unusual autecology of this coral and strongly reduced sedimentation rates, were probably the prerequisites for coral growth, but a link to palaeoclimate is less likely.^1";
- 2499 s[2496] = "ERDMANN S., BELLOSI E.S., MORRA G.A. (2008).- Una nueva especie de coral solitario (Scleractinia, Turbinoliidae) de la Formación San Julián (Oligoceno superior; Santa Cruz) en su contexto estratigráfico y paleoambiental.- Revista del Museu Argentino de

- Ciencias Naturales n.s. 10, 2: 255-262.- FC&P 36, p. 90, ID=6500^Topic(s): new species; Scleractinia Turbinoliidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene U; Geography: Argentina^Small scleractinian corals (Family Turbinoliidae) were collected from the Late Oligocene San Julian Formation, in Santa Cruz province (southern Patagonia, Argentina). The specimens were assigned to Sphenotrochus aff. gardineri and to Bothrophoria compressa n.sp., the second record of the genus. According to the lithofacies association and the remaining fossil invertebrates, these free-living and ahermatypic turbinoliids would have lived in temperate to warm waters (Juliense sea) and in sandy substrates of the inner shelf-upper shoreface. [original English abstract]^1";
- 2500 s[2497] = "FERNANDES A.C.S. (1979).- Contribuicao a Paleontologia do Estado do Para. Scleractinia da formacao Pirabas (Miocene inferior) e suas implicacoes paleoecologicas (Coelenterata - Anthozoa).- Boletim do Museu Paraense Emilio Goeldi (N.S.) Geologia 22: 1-33.- FC&P 10-1, p. 19, ID=5881^Topic(s): ; corals; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene L; Geography: Brazil, Para^[description of Stylophora cf. S. silicensis, Discotrochus sp., Cladocora (?) sp., Flabellum walesi, Balanophyllia sp., Dendrophyllia sp. and corals incertae sedis from the Lower Miocene]^1";
- 2501 s[2498] = "FERNANDES A.C.S. (1981).- Contribuicao a Paleontologia do Estado do Para. Um novo Flabellum (Anthozoa - Scleractinia) na Formacao Pirabas.- Boletim do Museu Paraense Emilio Goeldi (N.S.) Geologia 24: 1-7.- FC&P 10-1, p. 19, ID=5882^Topic(s): ; Scleractinia, Flabellum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene L; Geography: Brazil, Para^[description of Flabellum lyricum sp.nov. from the Lower Miocene]^1";
- 2502 s[2499] = "BERESI M.S. (1990).- Las esponjas coma indicadores paleoecologicos de la formacion San Juan, Precordillera.- V Congr. Argentine de Paleontologia y Bioestratigrafia, Tucuman, Serie correlacion Geologica 7, Actas I: 19-24.- FC&P 21-2, p. 20, ID=3308^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: Argentina, Precordillera^Sponge morphology adapts itself to marine conditions. Due to their changeableness, sponges have been selected as paleoenvironmental indicators of the San Juan formation. Two morphotypes are : 1) Column and glass shaped and 2) Rounded and plate shaped. The first one reveals an open subtidal environment, showing no waves or currents, whereas the second one indicates a more shallow environment, showing greater energy and dominant currents. There are also sponges in vital position, interstratified with micritic layers in the platform external edge (buildup).^1";
- 2503 s[2500] = "SCRUTTON C.T. (1971).- Palaeozoic coral faunas from Venezuela I. Silurian and Permo-Carboniferous corals from the Merida Andes.- Bulletin Brit. Mus. (Nat. Hist.), Geology 20, 5: 183-227.- FC&P 1-2, p. 18, ID=4663^Topic(s): taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Silurian Carboniferous - Permian; Geography: Venezuela^Rugose and tabulate corals of Lower Llandoverly, Ludlow and Permo-Carboniferous ages are described from localities in the southern part of the Merida Andes of western Venezuela. The Palaeozoic stratigraphy of the area is briefly reviewed and the ages and relationships of the coral faunas are discussed. The new taxa Columnaxon angelae gen. and sp.nov., Syringaxon arnoldi sp.nov., S. suripaense sp.nov., Streptelasma shagami sp.nov., Leolasma kaljoi sp.nov. and Cymatelasma aricaguaense sp.nov. as well as species of Lophophyllidium, Lophamplexus, Tryplasma, Coenites, Cystihalysites and Acanthohalysites are described. Observations are made on the concepts of some genera and families, particularly Syringaxon and the

- Lindstroemiidae.^1";
- 2504 s[2501] = "TOURNEUR F., PLUSQUELLEC Y., FERNANDEZ-MARTINEZ E., DIAZ MARTINEZ E. (2000).- Revision of Parastriatopora gigantea (Knod 1908) (Anthozoa, Tabulata) from the Devonian of Bolivia.- Geobios 33, 6: 709-724.- FC&P 31-1, p. 67, ID=1640^Topic(s): revision; Tabulata, Parastriatopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Bolivia^The revision and detailed description of the original material and several topotypic specimens of Parastriatopora gigantea (KNOD, 1908) from the Lower Devonian of Yaco (Bolivia) allow the selection of a lectotype and its diagnosis. A more precise geographic and stratigraphic location of the type locality is provided, together with a reassessment of its most probable age (Pragian-Emsian). Present knowledge of South American Devonian tabulate corals has important implications on their paleobiogeography. Data from Bolivia and Argentina suggest an earlier age for the extinction of Malvinokaffric taxa and reveal a greater abundance and specific diversity.^1";
- 2505 s[2502] = "PLUSQUELLEC Y. (1987).- Revision de Michelinia transitoria Knod 1908 (Tabulata, Devonian de Bolivie).- Annales de la Societe geologique du Nord CV: 249-254.- FC&P 17-1, p. 10, ID=2095^Topic(s): revision; Tabulata, Michelinia; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Bolivia^The microstructural study of the wall of the type of Michelinia transitoria Knod 1908, shows that this species belongs to the genus Praemichelinia Lafuste et Plusquellec 1980; the median dark line exhibits an unusual nature which is carefully figured. The paleogeographic distribution of the genus Praemichelinia is extended from the ibero-armoricano-maghrebien area to the malvinokaffric province.^1";
- 2506 s[2503] = "SCRUTTON C.T. (1973).- Palaeozoic Coral faunas from Venezuela II. Devonian and Carboniferous Corals from the Sierra de Perija.- Bulletin Brit. Mus. (Nat. Hist.), Geology 23, 4: 223-281.- FC&P 2-2, p. 20, ID=4813^Topic(s): taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian, Carboniferous; Geography: Venezuela^Rugose and tabulate corals of Middle Devonian, and Lower Pennsylvanian age are described from localities in the northern part of the Sierra de Perija, western Venezuela. The Palaeozoic stratigraphy of the area is briefly reviewed and the ages and relationships of the coral faunas are discussed. The new taxa Bowenelasma typa gen. & sp.nov., B. brevisseptata sp.nov., Amplexizaphrentis sutherlandi sp.nov., Briantelasma oliveri sp.nov. and Heliophyllum wellsii sp.nov., as well as species of Stereolasma, ?Stewartophyllum, Syringaxon, Heterophrentis (H.), Cyliandrophyllum, Durhamina, Plasmophyllum and Favosites are described.^1";
- 2507 s[2504] = "SCRUTTON C.T. (1973).- Nuevas faunas de corales del Paleozoico de los Andes de Merida y de la Sierra de Perija.- Boletin de Geologia 12, 22: 281-285; Venezuela Ministerio de Minas e Hidrocarburos, Direccion de Geologia.- FC&P 5-1, p. 30, ID=5368^Topic(s): new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: Venezuela^[summary of new reports of Pennsylvanian corals from Venezuela]^1";
- 2508 s[2505] = "YAMAGIWA N., ISHII K., VILLAVICIENCIO de DAVILA E. (1982).- Carboniferous coral and foraminifers from Huancavelica, central Peru.- Bulletin of National Science Museum Tokyo, Ser. C, 8, 2: 59-66.- FC&P 13-1, p. 41, ID=0488^Topic(s): ; corals forams; Systematics: Cnidaria Foraminifera; Anthozoa; Stratigraphy: Carboniferous; Geography: Peru^^1";
- 2509 s[2506] = "YAMAGIWA N., RANGEL C.Z. (1979).- Some interesting fossils from the Upper Paleozoic in Chaparra area, southwest Peru.- Paleontological Society of Japan Transactions and Proceedings NS 115: 135-142.- FC&P 11-1, p. 54, ID=1799^Topic(s): ;

- paleontology; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: Peru SW^^1";
- 2510 s[2507] = "WILSON E.C. (1990).- Permian corals of Bolivia.- Journal of Paleontology 64, 1: 60-78.- FC&P 19-1.1, p. 49, ID=2660^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Bolivia^Permian corals of Bolivia are confined to the Lower Permian (Wolfcampian, Leonardian) Co-pacabana Limestone. The coral fauna of the formation in the Lake Titicaca to the central altiplano areas of the Department of La Paz consists of two solitary rugose coral species, two colonial rugose coral species (one each of fasciculate and cerioid), and two tabulate coral species. New taxa are *Stylastraea branisai* n.sp., *Durhamina pandolfi* n.sp., *Michelinia escobari* n.sp., and *Cladochonus carrascoi* n.sp. *Lophophyllidium striatum* (d'Orbigny 1839), based on Bolivian specimens, is redescribed, a lectotype designated, and the range extended to North America. Although the fauna is small, its taxonomic composition shows clear affinity with faunas of similar age northward through South and Central America to Mexico and the USA Texas-Oklahoma-Midcontinent region. The Bolivian fauna thus is confirmed as belonging to the Cyathaxonid Coral Province, which is restricted to the above areas. A species of *Durhamina* previously erected for Guatemalan specimens occurs in the Copacabana Limestone of Peru strengthens the province assignment of the formation.^1";
- 2511 s[2508] = "YAMAGIWA N., MAEDA S., TORREZ J.G., URDININEA M. (1974).- A Lower Permian coral species from the Copacabana Group at Peninsula of Copacabana, Lake Titicaca, Bolivia.- In S. Maeda (ed.): Palaeontological study to the Andes: 17-21; Geol. Lab., Fac. Sci., Chiba University.- FC&P 5-2, p. 9, ID=5436^Topic(s): corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Bolivia, Titicaca lake^^1";
- 2512 s[2509] = "MAEDA S., YAMAGIWA N., BRANISA L. (1974).- Some late paleozoic Corals from Bolivia.- Bulletin of the National Science Museum (Japan), 1973, 16, 1: 93-97; Tokyo.- FC&P 3-2, p. 40, ID=4959^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: Bolivia^The coral fossils described were collected from the Copacabana Group in Colquencha, Bolivia, South America. This group is correlative with the Lower Permian (Wolfcampian). The following coral species are found: *Lophophyllidium* cf. *spinosum* Jeffords, *Stereostylus* sp., *Caninia* sp.^1";
- 2513 s[2510] = "STANLEY G.D.jr (1994).- Upper Triassic corals from Peru.- Palaeontographica A233, 1-6: 75-98.- FC&P 24-1, p. 71, ID=4500^Topic(s): taxonomy, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic U; Geography: Peru^Seventeen coral and one spongiomorph taxa are described from the Upper Triassic silicified specimens of the Pucara Group in central Peru. Among these, three new species are distinguished: *Stylophylloopsis gracilis* n.sp., *Pinacophyllum peruvianum* n.sp., and *Retiophyllia pascoensis* n.sp. In situ paleoecological associations of biostromes 1-10m thick occurring within bedded carbonate rocks of the Chambara Formation, reveal no evidence of reef development. The growth types of the corals and the fine-grained lithofacies of the enclosing rock types suggest shallow-water, low-energy settings on an extensive carbonate ramp. The composition of the fauna reveals some links to Cordilleran terranes of North America. Similarities exist with northeastern Oregon and western Idaho, Nevada, and northern California. Despite a degree of endemism, Tethyan relationships are indicated for 11 of the taxa. Of these, six coral species are restricted to the western Tethys. It is the first occurrence of the Alpine corals, *Margarosmia charlyana* (Frech) and *Retiophyllia frechi* (Roniewicz) in the Americas.^1";
- 2514 s[2511] = "PRINZ-GRIMM P. (1995).- Triassische Korallen der sudlichen Zentral-Anden.- Geologica et Palaeontologica 29: 233-243. [in German, with English abstract].- FC&P 24-2, p. 90,

ID=4589^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic U; Geography: Andes central^17 species of 11 genera of Upper Triassic corals are presented. 7 of the species are described for the first time from South America. In the second part, biogeographic problems in relation to the extraordinary position of the occurrences and the Pacific terranes are discussed.^1";

2515 s[2512] = "SENOWBARI-DARYAN B. (1994).- Mesozoic sponges of the Pucara group, Peru.- Palaeontographica A233, 1-6: 57-74.- FC&P 24-1, p. 75, ID=4508^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Triassic U - Jurassic M; Geography: Peru^The Pucara Group of central Peru represents nearly 3,000 m of shallow-water carbonate deposition spanning from the Late Triassic to Middle Jurassic in time. The Upper Triassic carbonate rocks, the Chambara Formation, and the Jurassic units, the Aramachay and Condorsinga Formations, exhibit distinctive associations of sponges, which are described in this paper. From the Triassic succession of Huanincocha near the Lake Junin in central Peru three genera of inozoan sponges, including Eusiphonella, Corynella and Peronidella and two genera of sphinctozoan sponges, Amblysiphonella and Colospongia have been found. Amblysiphonella tubifera is described as a new species. A specimen of Colospongia was observed in the field but not collected. Jurassic sponges were collected from several localities southeast of the town of Cerro de Pasco in central Peru. The Carhuazcocha locality south of the town of Junin contains the most diverse sponge fauna including the following described taxa: Stellispongiella ? juninensis n.sp. Stellispongiella ? ramosa n.sp. Stellispongiella ? minor n.sp. Trammeria dendroidea n.gen., n.sp. Cornuaspongia longidepressa n.gen., n.sp. Cornuaspongia reticulata n.gen., n.sp. Neither the Triassic nor the Jurassic sponge associations of Peru, are known from other Triassic or Jurassic localities of the world.^1";

2516 s[2513] = "STANLEY G.D.jr (1994).- Early Mesozoic carbonate rocks of the Pucara group in northern and central Peru.- Palaeontographica A233, 1-6: 1-32.- FC&P 24-1, p. 58, ID=4468^Topic(s): carbonates; carbonates fossils; Systematics: ; Stratigraphy: Triassic Jurassic; Geography: Peru^From northern and central Peru 19 Triassic and Jurassic localities were investigated. Measured sections and collection sites yielded abundant and diverse groups of silicified fossils and carbonate microfacies from the Pucara Group, a carbonate rock unit exceeding 2,000 m in thickness which is well-exposed in the Peruvian Andes. Over eighty years of geologic investigation on the stratigraphy, ore deposits, and paleontology of the Pucara have resulted in biostratigraphic classifications, recognition of depositional environments, correlations, age and stratigraphic framework, but study of many fossil groups has tagged behind. Fossils from previous investigations have not been precisely located and age-diagnostic fossils are usually scarce in the carbonate rock sequence of the Pucara. New fossils described from the 19 localities have helped in refining dating and correlations. The thick Pucara succession in Peru is important because relative to many other regions of the world, it records a fairly complete history of late Triassic to Early Jurassic rocks and fossils, including the Triassic-Jurassic systematic boundary. It also includes an extensive record of marine sedimentation along the Pacific Cordillera of South America. Abundant and diverse marine fossils of the Pucara Group include Upper Triassic (Norian) and Lower Jurassic (Hettangian - Sinemurian) tropical, shallow-water sponges, corals, spongiomorphs, calcareous sponges, gastropods, bivalves, ammonites, crinoids and echinoderms. Conodonts also occur in the Late Triassic portion of the sequence. Abundant shallow-water depositional environments, including small-scale coral, sponge and oyster biostromes characterize the sequence. The 19 localities and the measured sections described in this

- paper are utilized by most authors in this volume [to] designate their fossil material.¹";
- 2517 s[2514] = "PRINZ P. (1991).- Mesozoische Korallen aus Nordchile.- Palaeontographica A216, 4-6: 147-209.- FC&P 21-2, p. 41, ID=3335^Topic(s): monograph; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: Chile N^For the first time Mesozoic corals from northern Chile are presented in a monograph. They occur, with interruptions, from the late Triassic to Lower Cretaceous. 68 hermatypic coral species are described, one species (Microphyllia jaspensis) as new.¹";
- 2518 s[2515] = "PRINZ P. (1986).- Mitteljurassische Korallen aus Nordchile. [Middle Jurassic corals from Northern Chile; in German, with English and Spanish summaries].- N. Jb. Palaeont. Mh. 1986, 12: 736-750.- FC&P 16-1, p. 68, ID=1982^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Chile N^Five hermatypic coral genera from the north Chilean Pre-Cordillera are presented; one of the species is probably new. The coral limestones mark the beginning of a transgression in the Bajocian. Except in boreal regions, the occurrence of hermatypic corals is world-wide in this period and indicates a warm and balanced climate. An unusual biogeographic phenomenon is the abundance of meandroid forms in N-Chile. The following genera and species are described: Actinastrea cf. ramulifera, A. pentagonalis, A. ssp., Dendrastrea langrunensis, Isastrea richardsoni, Microphyllia cf. pulchella, M. sp., Latomeandra sp.¹";
- 2519 s[2516] = "SENOWBARI-DARYAN B., STANLEY G.D.jr (1994).- Lower Jurassic marine carbonate deposits in Central Peru: Stratigraphy and paleontology.- Palaeontographica A233, 1-6: 43-56.- FC&P 24-1, p. 58, ID=4467^Topic(s): carbonates; carbonates paleontology; Systematics: ; Stratigraphy: Jurassic L; Geography: Peru^Field investigation of Lower Jurassic rocks of central Peru belonging to the Condorsinga Formation near Manzanares, yielded a rich variety of carbonate microfacies with diverse invertebrate fossils including sponges, corals, brachiopods, echinoderms, molluscs, foraminifers, serpulid tubes, microcoprolites of crustaceans, and the probable crustacean trace fossils of Thalassinoides. Organic constructional microfacies were lacking and coarse to fine-grained, bedded carbonate rocks predominate. Locally five biofacies were delineated: 1) coral wackestone with solitary and colonial corals stylophylloids, cf. S. victoriae, Stylophylloids sp. and Hispaniastraea ramosa, 2) thalamid sponge pelleted wackestone, characterized by large in situ "Stylothalamia"; 3) serpulid wackestone with in situ clusters of tubes, 4) bioturbated bioclastic pellet packstone, and 5) brachiopod packstone coquina. The microfacies types, fauna and flora indicate the presence of a broad carbonate platform (ramp) with much of the carbonate sediment deposited on the outer slope. Based on the Manzanares section, this platform was differentiated into subenvironments of low-energy, deeper water protected and more open, fairly agitated environments. Reef structures are absent The invertebrate fauna bear similarities with taxa known from both the western Tethys and North America.¹";
- 2520 s[2517] = "YAMAGIWA N., RANGEL ZAVALA C., VILLAVICENCIO de DAVILLA E., KAWABE T. (1981).- A New Hexacoral Species from the Upper Jurassic to Lower Cretaceous Yura Group at Cailloma, Arequipa Department, South Peru.- Palaeon. Study on the Andes (II), Geol. Lab., Faculty of Science, Chiba Univ., p. 41-46.- FC&P 11-2, p. 20, ID=1815^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; scleractinia; Stratigraphy: Jurassic U, Cretaceous L; Geography: Peru S^^1";
- 2521 s[2518] = "SCOTT R.W., ALEMAM A. (1984).- Styliina columbaris n.sp. in a Lower Cretaceous coral biostrome, Peru.- Journal of Paleontology 58, 4: 1136-1142.- FC&P 13-2, p. 46, ID=0564^Topic(s): coral biostromes; Scleractinia, Styliina; Systematics:

- Cnidaria; Scleractinia; Stratigraphy: Cretaceous Haut - Barr; Geography: Peru^During the Hauterivian-Barremian local coral biostromes, possibly patch reefs, developed within shallow marine lagoons fringing Early Cretaceous volcanoes in Peru. The dominant coral is *Stylina columbaris* n.sp., which is similar to European stylinid species of Late Jurassic and Early Cretaceous age having sixfold septal plans. The biostrome is part of the Atocongo Formation, Lima Group, exposed at Perico Hill (Cerros Perico) about 95 km south of Lima. Only two other Lower Cretaceous stylinid corals have been described from South America.^1";
- 2522 s[2519] = "CAIRNS S.D. (2003).- A new species of *Sphenotrochus* (Scleractinia: Turbinoliidae) from the Late Miocene (Tortonian) of Chile.- *Zoologische verhandelingen* 345: 79-84.<http://www.repository.naturalis.nl/record/220295>.- FC&P 35, p. 71, ID=2378^Topic(s): taxonomy; Scleractinia, *Sphenotrochus*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Tort; Geography: Chile^A new species of azooxanthellate Scleractinia, *Sphenotrochus denhartogi*, is described from the Late Miocene (Tortonian, Navidad Formation) of Chile. Comparisons are made to three other closely related species which, based on their distinctive costal morphology, form a species complex: *S. claibornensis*, *S. senni*, *S. denhartogi*, and *S. auritus*. This is the first record of *Sphenotrochus* from the west coast of South America.^1";
- 2523 s[2520] = "SUGIYAMA T. (1984).- Corals from the Tarma Group.- Department of Earth Sciences, Faculty of Science, Chiba University [Sakagami S. (ed.), *Biostratigraphic study of Paleozoic and Mesozoic Groups in central Andes - an interim report*]: 42.- FC&P 18-1, p. 39, ID=2262^Topic(s): taxonomy, stratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Andes central^^1";
- 2524 s[2521] = "MAC SOTAY O. (1971).- Algunos antozoarios (celenterados) fosiles de Venezuela con description de una especie nueva.- *Boletin Inst. Oceanogr. Univ. Oriente* 10, 1: 17-24; Cumana.- FC&P 3-1, p. 34, ID=4911^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Venezuela^^1";
- 2525 s[2522] = "TALENT J.A., GRATSYANOVA R.T., YOLKIN E.A. (1986).- Prototethys: Fact or phantom? Palaeobiogeography in relation to the crustal mosaic for the Asia-Australia hemisphere in Devonian-Early Carboniferous times.- *International Symposium Shallow Tethys* 2: 87-111.- FC&P 19-2.1, p. 24, ID=2738^Topic(s): geology, geography; geography, Prototethys; Systematics: ; Stratigraphy: Devonian, Carboniferous L; Geography: Asia, Australia^More than 40 discrete crustal blocks (micro/mini continents, minor "suspect terranes"; excepted) delineated by ophiolite belts, major geosutures, flysch wedges and radiolarites can be identified in the Asia-Australia region. For the Palaeozoic, analysis has suffered from inadequacy of longitudinal constraints; this has led to important differences in models previously proposed for the dispositions and motions of island arcs and continental fragments, especially for pre-Permian reconstructions - the era of "Prototethys"; or the "Prehercynian Ocean". The age of suturing of successive blocks can be shown to decrease in a general way from the Siberian Block towards the east, southeast and south. Prototethys (and its successor, Tethys) and the northern margin of East Gondwana changed markedly in configuration through Palaeozoic and early Mesozoic times as block after block moved northwards and then sutured with the enlarging Asian Block (Eurasian Block from Bashkirian times onwards). It is against this background that preliminary results for the biogeography of Devonian and Lower Carboniferous brachiopod faunas are presented. Not all blocks have adequate faunas for useful analysis. Those which do, show a greater level of provincialism, consistent with greater dispersion of blocks relative to one another, than might have

- been anticipated, especially if they are construed as having formed part of a single land-mass with open seaways which should have facilitated ease of interplay between shallow marine faunas.¹¹;
- 2526 s[2523] = "ZHURAVLEVA I.T., MESHKOVA N.P. (1979).- Biostratigrafiya i Paleontologiya nizhnego Kembriya Sibiri. [Biostratigraphy and Paleontology of the Lower Cambrian of Siberia; in Russian].- Biostratigrafiya i paleontologiya nizhnego Kembriya Sibiri. Izdatiel'noye Stvo Nauka, Sibirskoye Otdeleniye, Novosibirsk, volume 406.- FC&P 9-1, p. 51, ID=0299Topic(s):biostratigraphy; fossils stratigraphy; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Siberia^Volume with articles on : - morphology and systematic of the Erbcocyathacea (L.N. Kashina); - pathological reactions of Archeocyathan skeleton (A.Yu. Rozanov, R.A. Gangloff); - detailed subdivisions of some homological ranks in systematics of Archeocyatha (I.T. Zhuravleva). [unfortunately, these last two important works are inadequately revised, the number of misprints makes the translation particularly difficult; besides, too many inconsistencies can be pointed out (edelsteini listed as Alexandricyathus or Flexandricyathus within the same table (9 - Altai Sayan), turgidus as Porocyathellus or Kijacyathella pl.IX, 11 - pl.X fig. 1-2; preoccupied names for genus: Porocyathellus and many variations on specific names within the diagnosis itself infinitus or infirmus etc.); definitions of most of the new genera is based on slight variations of porosity characters; this method seems dangerous to the reviewer and will soon lead the group to an useless inflation of taxa - as reviewed by F. Debrenne (?)]¹¹;
- 2527 s[2524] = "SUNDUKOV V.M. (1983).- Nouveaux Archeocyathes des coupes du Cambrien inferieur des rivieres Lena et Kotui.- Paleontologicheskii Zhurnal 1983, 4: 13-14.- FC&P 13-2, p. 50, ID=0582Topic(s):new taxa; Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Siberia^4 genres dont 1 nouveau, 4 especes nouvelles, Cambrien inferieur-Atdabanien.¹¹;
- 2528 s[2525] = "ZHURAVLEVA I.T. (ed.) (1983).- Lower Cambrian stage subdivisions of the Siberia. Atlas of Fossils.- Lower Cambrian stage subdivisions of the Siberia. Atlas of Fossils [Zhuravleva I. T. (ed.)].- FC&P 13-2, p. 51, ID=0587Topic(s):atlas of fossils; paleontology, Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Siberia^Fossils found in 19 reference sections (Lena River), 423 species of Algae and animals, 172 pl.; 20 pl., 53 pp., 114 species of Archaeocyatha.¹¹;
- 2529 s[2526] = "ZHURAVLEV A.Yu., ZHURAVLEVA I.T., FONIN U.D. (1983).- Archaeocyaths from the lower Cambrian of Siberia.- Paleontologicheskii Zhurnal 1983, .- FC&P 13-2, p. 51, ID=0589Topic(s):; Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Siberia^^¹¹;
- 2530 s[2527] = "SUNDUKOV V.M. (1984).- New genera of Archaeocyatha of the Lower Cambrian SE of Siberian Platform.- Novye Vidy drevnikh bespozvonochykh i rasteniy neftegazonosnykh provintsiy Sibiri: 10-15 [SNIIGGIMS, Novosibirsk].- FC&P 15-1.2, p. 48, ID=0796Topic(s):new taxa; Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Siberia^6 taxa are described, one new genus Churanocyathus (type species C. aculeatus Sundukov 1984) Atdabanian, Churansk beds. In our opinion this genus is synonym with Coscinocyathus, the characteristic given for establishing a new genus ("malatochki-pores" of the outer wall) is not a generic feature.¹¹;
- 2531 s[2528] = "RIDING R., ZHURAVLEV A.Yu. (1995).- Structure and diversity of oldest sponge-microbe reefs: Lower Cambrian, Aldan River, Siberia.- Geology 23, 7: 649-652.- FC&P 25-1, p. 54,

- ID=3071^Topic(s): reefs, structure, diversity; reefs, Archaeocyathan-microbe; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Siberia^The oldest sponge reef is a small Early Cambrian bioherm at the base of the Tomotian Stage (~535-540 Ma) in southeast Siberia. The mainly archaeocyath construction may be a response to turbid conditions. Cambrocyathellus bowls fused to create a rigid cavernous frame colonized by cryptic Archaeolynthus and calcified microbes (Renalcis). In addition to these constructors and binders, other reef guilds are present: bafflers (other archaeocyaths, spiculate sponges, and hyoliths) and dwellers (hyoliths, mollusks, and many others). This is the oldest known reef possessing an open skeletal frame structure built by animals and a mixed animal-autotroph composition. It provides a blueprint for younger Phanerozoic reefs.^1";
- 2532 s[2529] = "ZHURAVLEVA I.T. (1972).- Facial assemblages of Archeocyathids of the Lower Cambrian (middle course of Lena River).- In Problemy Biostratigrafii i Paleontologii nizhnego Kembriya Sibiri: 31-109; Izdat. Nauka, Moskva.- FC&P 2-2, p. 25, ID=4834^Topic(s): facies; Archaeocyatha assemblages; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Siberia, Lena river^The author studies the relationships between environmental facies and archeocyathids assemblages during the development of the basin of Lena River. She distinguishes the following facial types: (1) bioherms: a) isolated bioherms; b) massive bioherms; (2) biostromes; (3) taphostromes; (4) interbioherms: a) near the bioherms; b) far from the bioherms. * Steps are recognized for the evolution of the Basin - 4 main conclusions: - one cannot speak of the diminution of the thickness of the rocks at the East and an augmentation at the west, but only of local variations; - migrations of the assemblages are observed towards the East; - 3 main types of organic building are recognized (bioherms, biostromes, taphostromes); - the differences of complexity of the bioherms are not only due to their size or their duration but also to the environmental conditions. * This article is the first important attempt to point out the links between the different species of Archeocyathids, and the types of the rocks including them. The unsurpassed experience of the author concerning the phylum Archaeocyatha as well as the stratigraphy of Siberian platform make this article a precious guide for further studies in other regions. It shows clearly that Archaeocyathids are not only good biostratigraphical markers, but could be used for ecology and biogeography.^1";
- 2533 s[2530] = "JASMIR M.M., DALMATOV B.A., JASMIR J.K. (1975).- Atlas de la faune et la flore bouriates du Paléozoïque au Mésozoïque. Tome I. Paléozoïque.- Nedra, Moskva: 181 pp., 34 pls, 15 figs.- FC&P 5-2, p. 11, ID=5446^Topic(s): atlas of fossils; atlas of fossils; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Russia, Siberia^Géologie de la région bouriate (autour du lac Baïkal) au Cambrien. Etude paléontologique des Algues (Cyanophycées, Rhodophycées) et des Archéocyathes et leur mode de gisement (biohermes ou biostromes). Description des faunes de Trilobites associées.^1";
- 2534 s[2531] = "OEKENTORP K. (2006).- Gunter Tidten.- FC&P 34: 12-15.- FC&P 34, p. 12, ID=7250^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[short obituary note of G. Tidten (1922-2005), with his portrait and a note on his two coral publications]^1";
- 2535 s[2532] = "ZHURAVLEV A.Yu. (1999).- Novyj korall iz nizhnego kembriya Sibiri.- Paleontologicheskii Zhurnal 1999, 5: 27-33.- FC&P 29-1, p. 54, ID=1470^Topic(s): new taxa, phylogeny; Tabulata, Yaworipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Cambrian L; Geography: Russia, Siberia^A new genus and species of Early Cambrian coral Yaworipora assigned to the order Tabulacnida is described. Various skeletal fossils referred

- to as Cambrian cnidarians are considered. It appears improbable that the Ordovician Tabulata were direct descendants of the Tabulaconida.¹¹";
- 2536 s[2533] = "SUNDUKOV V.M., FEDOROV A.B. (1986).- Paleontologic characteristics and age of Algal-Archaeocyathan bioherms of Medvezhnaya river.- Trudy Akad. Nauk SSSR, Sibirskoye otdeleniye 669 [Biostratigraphiya i Paleontologiya Kembriya Severnoy Azii]: 108-119.- FC&P 16-1, p. 78, ID=2029Topic(s): taxonomy stratigraphy; algal-archaeocyathan reefs; Systematics: algae; Stratigraphy: Cambrian L; Geography: Russia?, Medvezhnaya river^[described are five species of regular Archaeocyatha of Atdabanian stage]¹¹";
- 2537 s[2534] = "KOUCHINSKY A., BENGTON S., GERSHWIN L.-A. (1999).- Cnidarian-like embryos associated with the first shelly fossils in Siberia.- Geolgy 27, 7: 609-612.- FC&P 28-2, p. 18, ID=4014Topic(s): microfossils, cnidaria-like embryos; microfossils; Systematics: Cnidaria; Stratigraphy: Cambrian L; Geography: Russia, Siberia^Phosphatized spheroids 0.5mm in diameter in the Lower Cambrian Manyay Formation at the Bolshaya Kuonamka River in northern Sakha (Yakutia) are interpreted as cnidarian embryos of late developmental stages. One of the poles has a double cross-like structure, consisting of two sets of four bands each. The bands of the upper set radiate at 90° from each other; those of the lower set also radiate at about right angles from each other, but the set is rotated 45° in respect to the upper set. Although there is a resemblance to the cross-like arrangements of cells in pregastrulation spiralian eggs, in particular those of annelids, the combined evidence favors an interpretation of the bands as incipient tentacles of a cnidarian actinula larva. The embryos occur with one of the first assemblages of shelly fossils in northern Siberia, that of the Angustiochrea lata zone. The co-occurring shelly fossils, anabaritids, probably also represent the phylum Cnidaria, but because their tubes have a consistent triaxial symmetry, the connection with the tetraaxially symmetrical embryos is problematic. The size of the embryos suggests that they are nonplanktotrophic, and the presence of actinula-like features suggests the lack of a free planula stage.¹¹";
- 2538 s[2535] = "MESHKOVA N.P. (ed.) (1983).- Biostratigraphy and paleontology of the Lower and Middle Cambrian of Northern Asia.- Biostratigraphy and paleontology of the Lower and Middle Cambrian of Northern Asia [Meshkova N. P. (ed.)].- FC&P 13-2, p. 50, ID=0580Topic(s): stratigraphy, fossils; stratigraphy, paleontology; Systematics: ; Stratigraphy: Cambrian L / M; Geography: Asia N^The book deals with papers in the biostratigraphy and paleontology in the lower Cambrian and middle Cambrian deposits of the Siberian Platform, the Altai Sayan Region, the far east Kazakhstan, Middle Asia. These papers content questions of early Cambrian stage subdivisions and its lower boundary stratotype area of Lena River middle stream of boreholes. 2 parts : Stratigraphy and Paleontology, 3 articles on Archaeocyatha, 1 on Trilobites, 3 on Brachiopods, 1 on Acritarches. The description of Archaeocyatha comprises 33 genera (3 new), 62 species (14 new), from Atdabanian to Elankian.¹¹";
- 2539 s[2536] = "SAVITSKIY V.E., EGOROVA L.I., SHABANOV Yu.Ya. (1976).- Elanskiy i komanskiy faciostratotipy nizhney granitsy Srednego Kembriya Sibiri. [Elan and Koman facies-stratotypes of the lower boundary of the Middle Cambrian of Siberia; in Russian].- Proceedings Int. Geol. Congress, session 25 (Moskva): 36-44.- FC&P 6-1, p. 31, ID=5527Topic(s): stratigraphy; stratotypes; Systematics: ; Stratigraphy: Cambrian L / M; Geography: Russia, Siberia¹¹";
- 2540 s[2537] = "KHAYZNIKOVA K.B. (1981).- Evolution of Paleozoic corals of the Verkhoyansk Mountains.- Acta Palaeontologica Polonica 25, 3-4: 567-570.- FC&P 10-2, p. 71, ID=6089Topic(s): phylogeny; corals; Systematics: Cnidaria; Anthozoa;

- 2541 Stratigraphy: Paleozoic; Geography: Russia, Siberia^^1";
s[2538] = "TESAKOV Yu.I. (1990).- Stratigrafiya paleozoyskikh otlozheniy yugo-vostoka Zapadno-Sibirskoy plity.- Trudy Inst. Geol. Geofiz. 766; 115 pp.- FC&P 21-1.1, p. 52, ID=3260^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Paleozoic; Geography: Russia, Siberian Platform^I. Stratigraphy; II. Systematical descriptions of Faunas and microfossils dealing with (among others) Stromatoporoidea (by S.N. Makarenko: 47-50, 1 pl.) and Coelenterata: Tabulata & Heliolitoidea (by V.N. Dubatolov & G.D. Isaiev: 51-70, pls. 2-9, 29-32). * The new taxa are: Adetopora (?) ampla n.sp. Isaev, Lamellaeporella (?) luxuriosa n.sp. Isaev, Parastriatopora ostaninskayaensis n.sp. Isaev, Thamnopora beliakovi crassa n.ssp. Dubatolov, Alveolitella tenuicaulis n.sp. Dubatolov and Tiverina tesakovi n.sp. Dubatolov.^1";
- 2542 s[2539] = "KHAYZNIKOVA K.B. (1980).- Etapy razvitiya tabulat v paleozoye Verkhoyaniya. [natural history of tabulates in Paleozoic of Verkhoyan area; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 69-76.- FC&P 10-2, p. 71, ID=5809^Topic(s): Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: Russia, Siberia, Verkhoyan^^1";
- 2543 s[2540] = "IVANOVSKIY A.B. (1987).- Nakhodka drevneishei rugozy v Sibiri [finding of oldest rugosan in Siberia; in Russian].- Dokl. Akad. Nauk SSSR, 292, 4: 969-970.- FC&P 16-2, p. 18, ID=2041^Topic(s): new records; Rugosa, Leolasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M; Geography: Russia, Siberia^[described is the new species Leolasma sibiricum sp. n. from lower Middle Ordovician beds of the Siberian platform]^1";
- 2544 s[2541] = "SYTOVA V.A. (1979).- Rugozy mangazeyskogo, dolborskogo i ketskogo gorizontov. [rugosans of Mangaz, Dolbor and Ket horizons; in Russian].- Fauna ordovika sredney Sibiri: 159-176, pls 32-36; Nauka, Moskva.- FC&P 9-1, p. 41, ID=5799^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician; Geography: Russia, Siberia^[Proterophyllum, Cantrillia, Streptelasma, Bighornia, Paliphyllum, Favistina, Cyathophylloides, Palaeophyllum, Reimanelasma gen.n. (type species R. elegans), Kenelasma gen.n. (type species Kenophyllum holophragmoides Ivanovskiy 1961), Dimelasma gen.n. (type species D. gratum)]^1";
- 2545 s[2542] = "BOGOYAVLENSKAYA O.V. (1977).- New Ordovician stromatoporoids of the Siberian platform. [in Russian].- Akademiya Nauk SSSR, Urals Scientific Center. Trans. Inst. Geol. Geochem., Buli. 126, 3-10.- FC&P 7-1, p. 25, ID=0192^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Russia, Siberia^New species of Cryptophragmus, Stromatocerium, and Stratodictyon are described.^1";
- 2546 s[2543] = "KHROMYKH V.G. (2001).- New Upper Ordovician Stromatoporoidea from Taimyr.- Paleontologicheskii Zhurnal 2001, 4: 11-15.- FC&P 31-1, p. 72, ID=1653^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician U; Geography: Russia, Siberia, Taimyr^For the first time, a large variety of Stromatoporoidea is recorded from the Ordovician of the southern facies zone of the Taimyr Peninsula. Seven new species and two new genera are described. The majority of Ordovician Stromatoporoidea have secondary tissue surrounding the vertical skeletal elements.^1";
- 2547 s[2544] = "KHROMYKH V.G. (2000).- Rod Stratodictyon (Stromatoporoidei) iz ordovika sibirskoi platformy.- Geologiya i Geofizika 41: 179-181 [Novosti Paleontologii i Stratigrafii, vypusk 2-3 (2000)].- FC&P 32-1, p. 35, ID=1741^Topic(s): stroms, Stratodictyon; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Russia, Siberian

Platform^Diagnostic features of the genus Stratodictyon are clarified. Representatives of this genus are encountered for the first time in the Upper Ordovician of Australia. A new species, Stratodictyon moyeroanicum Khromych sp. n. is described from coeval deposits of the Silerian Platform.^1";

2548 s[2545] = "PREOBRAZHENSKIY B.V. (1976).- Drevnejshie siringoporidy Severo-Vostoka SSSR.- Akademiya Nauk SSSR, Dal'nevostochnyj nauchnyi centr, Trudy Instituta ... 42, 145: 39-43 [Gramm M. N. (ed.): Morfologiya i sistematika iskopaemykh bespozvonochnykh Dal'nego Vostoka - Morphology and Systematics of fossil Invertebrates of the Far East of Russia].- FC#038;P 9-1, p. 46, ID=0285^Topic(s): ; Tabulata, Syringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: Russia NE^Ordovician representatives of the order Syringoporida (Anthozoa, Tabulata) from the USSR North-East are little known. From Middle and Upper Ordovician deposits of Omulev mountains, Bolshoi Tuonnakh ridge and Sette-Daban range four species are described: Troedssonites conspiratus (Troebsson), Syringoporinus sp. S. celebratus Preobrazhenskiy sp.nov., Syringopora secunda (Preobrazhenskiy).^1";

2549 s[2546] = "VOLKOVA K.N., LATYPOV Yu.Ya., KHAISNIKOVA K .B. (1978).- Ordovik i Silur yuzhnogo Verkhoyan'skogo yuzhnoy. [Ordovician and Silurian of southern Verkhoyan; in Russian].- Trudy Instituta Geologii i Geofiziki, Sib. otd. 381: 1-222.- FC#038;P 9-1, p. 46, ID=0253^Topic(s): ; corals, bryozoans; Systematics: Cnidaria Bryozoa; Anthozoa; Stratigraphy: Ordovician Silurian; Geography: Russia, Siberia, Verkhoyan^Presented is extensive paleontological and stratigraphical research on Ordovician and Silurian of the southern Verkhoyan region. A biostratigraphic scheme is presented including faunistic reasons for the definition of horizons and subhorizons as well as an interregional correlation. Paleological investigations reveals three main stages in the development of fossil communities. Corals and Bryozoans from this region are, for the first time, monographically dealt with. * Described are numerous representatives of tabulate and rugose corals of the following genera: (*) Tabulata - Nyctopora, Eocatenipora, Catenipora, Halysites, Cystihalysites, Agetolites, Paleofavosites, Priscosolenia, Multisolonia, Mesosolenia, Mesofavosites, Favosites (Favosites), F.(Sapporipora), Gephuropora, Parastriatopora, Syringopora, Fletcheriella, Cyrtophyllum, Sibiriolites; (*) Rugosa - Streptelasma, Crassilasma, Dinophyllum, Tungussophyllum, Holophragma, Miculiella, Ptychophyllum, Cyathactis, Neocystiphyllum, Palaeophyllum, Entelophyllum, Strombodes, Tryplasma, Ketophyllum, Dentilasma, Diplochone, Cyatiphyllum, Kymocystis, Holmophyllum, Nipponophyllum, Yassia.^1";

2550 s[2547] = "KHROMYKH V.G. (2010).- Evolution of Stromatoporoidea in the Ordovician-Silurian epicontinental basin of the Siberian Platform and Taimyr.- Russian Geology and Geophysics 51: 684-693.- FC#038;P 36, p. 33, ID=6398^Topic(s): phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Silurian; Geography: Russia, Siberian Platform^Stromatoporoids were collected from 29 measured sections from along the Khakoma, Moiero, Moilerokan, Bugarikata, Yuktali, Bol'shaya, and Parmaya Rivers. This paper does not include descriptions of the stromatoporoids, but rather notes the stratigraphic occurrence and evolutionary relationships of the genera present. The author notes that correlation of strata at the Siberian localities with the new Ordovician stages is "fairly tentative" (p. 687). The emergence of new genera is noted by stage: * Darriwilian: Priscastroma, Cystostroma; * Sandbian: Stromatocentrum, Rosenella, Lophiostroma, Pachystylostroma, Labechia; * Katian: Aulacera, Nestoridictyon, Stratodictyon, Stelodictyon, Ecclimadictyon, Dermatostroma, Taymyrostroma; * Hirnantian: Clathrodactyon; * Aeronian: Clavidictyon, Plectostroma, Mamellolabechia; * Telychian: Stromatopora, Vikingia,

- Parallelopora, Neobeatricea, Yabeodictyon, Yavorskiina; * Sheinwoodian: Plexodictyon, Parallelostroma; * Gorstian: Hermatostromella. The author concludes that Ordovician stromatoporoid genera emerging in this basin indicate that the basin was one of the global centers of stromatoporoid origination.^1";
- 2551 s[2548] = "PREOBRAZHENSKIY B.V. (1975).- Zhiznennyye formy korallov v geologicheskoy proshlom severo-vostoka Azii. [life forms of corals in the geological past of northeastern Asia; in Russian].- Trudy instit. biologii morya, sbornik rabot 4: 193-200 [Krasnov E. V. (ed.): Paleobiologiya donnikh bespozvonochnykh pribrezhnykh zon morya - paleobiology of benthic invertebrates of coastal marine settings].- FC&P 7-1, p. 24, ID=0186^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician - Permian; Geography: Russia, Siberia^The author describes the successive change of life forms in the coral communities of palaeozoic seas, from Ordovician till Permian, based mainly on tabulate corals. Reef-type ecosystems are shown to possess all possible sets of life forms. Large cerioid coral colonies appear only in reef biocoenoses. Silting leads to predominant distribution of ramose and phaceloid colonies that form settlements of the coral "meadow" type.^1";
- 2552 s[2549] = "LATYPOV Yu.Ya. (1979).- Soobshchestva i nekotorye vidy rugoz venlokskikh biostromov Sibirskoy Platformy [communities and some rugosan species of Wenlockian biostromes of Siberian Platform].- Sbor. Inst. biol. morya 16 (Paleoekologiya soobshchestv morskikh bespozvonochnykh): 130-138.- FC&P 12-1, p. 38, ID=1915^Topic(s): biocoenoses; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Russia, Siberian Platform^^1";
- 2553 s[2550] = "STOLBOVA V.P. (1994).- Stroenie epitheki odinochnykh Llandoverijskikh rugoz Sibirskoy Platformy. [structure of epitheca of solitary rugose corals from the Llandoverian of the Siberian Platform; in Russian, with English summary].- Paleontologicheskii Zhurnal 1994, 2: 107-111.- FC&P 24-1, p. 63, ID=4478^Topic(s): structures epitheca; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Russia, Siberian Platform^A short review is given of the peculiarities of epithecal morphology of solitary rugose corals from the Llandoverian of the Siberian Platform. Different types of interseptal ridges are described for the first time and their relation to the septal microstructure is considered.^1";
- 2554 s[2551] = "KHROMYKH V.G. (1982).- Stromatopora Llandoveri i Ludlova severo-zapada Tunguskoy sineklizy [Llandoverian and Ludlowian stromatopora of NW Tunguska syncline].- Trudy Instituta Geologii i Geofiziki (Novosibirsk) 508 [Sokolov B.S. et al (eds): Silur sibirskoy platformy; razrezy, fauna i flora severo-zapadnoy chasti tunguskoy sineklizy]: 92-101.- FC&P 14-1, p. 55, ID=1045^Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Russia, Siberia^^1";
- 2555 s[2552] = "KHROMYKH V.G. (1986).- Rod Labechia v silure sibirskoy platformy [genus Labechia in the Silurian of the Siberian platform; in Russian].- Trudy Inst. Geol. Geofiz. (Novosibirsk) 666 [Sokolov B. S. (ed.), Fauna i flora zapolyaryaya sibirskoy platformy]: 84-92.- FC&P 18-1, p. 52, ID=2305^Topic(s): ; Stroms, Labechia; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Russia, Siberian Platform^^1";
- 2556 s[2553] = "IVANOVSKIY A.B. (1988).- Tri novykh roda rugoz [three new rugose genera; in Russian].- Paleontologicheskii Zhurnal 1988, 2: 109-110.- FC&P 17-2, p. 28, ID=2184^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Russia, Siberia^Some of the rugose corals from the Siberian Platform, investigated between

1950-1960, were clearly different from all rugosa known before, but material was too insufficient to establish new taxa. During the following years additional material could be collected which now gave new insights concerning the skeletal structure. Diagnoses of the new taxa are given. Tetrafossularia Ivanovskij gen. nov. (Densiphyllidae), type species Triplophyllum tetrafossulum Ivanovskij 1962; diagnosis: solitary corals with distinct fossulae between each of the protosepta; distribution: lower - middle Llandoveryan (Siberian Platform); Cereoelasma Ivanovskij gen. nov. (Cyathophylloidea), type species Cereoelasma sibirica sp. nov.; diagnosis: corallum cerioid, septa short, tabulae complete and incomplete, dissepiments sporadic or forming a narrow dissepimentarium, sometimes lonsdaleoid dissepiments may be developed; distribution: Wenlockian (Gotland, Podolia, Siberian Platform); Aphroelasma Ivanovskij gen. nov. (Phillipsastreidae), type species Frechastraea russakovi Spasskiy et Kravtsov 1975; diagnosis: aphyroid Phillipsastreidae with short rhipidacanth septa, small globose tabulae, one row of horseshoe-dissepiments is developed; distribution: Devonian, Emsian (Yakutia and Canada).^1";

- 2557 s[2554] = "LATYPOV Yu.Ya. (1977).- Odinochnye cistifornye korally Severnoj Azii. [solitary cystiphorous corals of Northern Asia].- Trudy Instituta Geologii i Geofiziki AN SSSR 353: 1-80.- FC&P 9-1, p. 34, ID=0263^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: Russia, Siberia N^The work summarizes all known data of the Cystiphor Rugosae from North-East of USSR and of the Siberian platform. Terminology and Morphology, as much as evolution of Cystiphyllidae, during the whole of the paleontological history are considered. The common system for the Silurian and Devonian cystiphors is firstly given on the base of analysis of the morphofunctional patterns. The analysis of the stratigraphical and geographical spreading of these Rugosae and also of their monographical description is carried out. [described are representatives of the genera: Dentilasma Ivanovskiy 1962 (D. honorabilis oris n.sp.); Diplochone Frech 1886; Cystilasma Zaprudskaya & Ivanovskiy 1962; Cystiphyllum Lonsdale 1839; Kymocystis Strelnikov 1968; Hedstroemophyllum wedekind 1927; Holmophyllum wedekind …]^1";
- 2558 s[2555] = "MAKARENKO S.N., SAYEV V.L. (1990).- Novyye dannyye po paleontologicheskomu obosnovaniyu vozrasta srednego paleozoya yugo-vostochnoy chasti Zapadno-Sibirskoy ravniny po formainiferam i stromatoporatam.- In Sukov V.S. (ed.): Stratigrafia i paleontologia dokembriya i fanerozoya Sibiri: 82-88; Novosibirsk.- FC&P 27-1, p. 108, ID=3861^Topic(s): stratigraphy; Stromatopora; forams; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic M; Geography: Russia, Siberia^^1";
- 2559 s[2556] = "ALKHOVIK T.S., IVANOVSKIY A.B. (1988).- Korally i Biostratigrafiya nizhnego Devona Severo - vostochnoy Yakutii [corals and biostratigraphy of the Lower Devonian of North-Eastern Yakutia].- Trudy paleont. Inst. 237: 1-94, 23 figs., 1 tbl., 32 pls.; Nauka, Moskva (Nauka). [in Russian, with short English summary].- FC&P 18-1, p. 33, ID=2232^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: Russia, Yakutia^Abundant and significant complex of favositids (23 species) and rugose corals (26 species) from the Lower Devonian of Yakutia is firstly described. The authors offer a new [insight] in detailed stratigraphic scale of these deposits. * Emsian - Krivorutchevskaya Formation: Subcladopora elegans, Caliapora parva; * Pragian - Nelitchevskaya Formation: Alveolitella crassicaulis, Subcladopora abnormis; * Pragian - Sagirskaaya Formation: Yacutiopora fallacies, Y. irinae; * Lochkovian - Nelyuklinskaya Formation: Favosites socialis, F. admirabilis. The genus Victorilites elegans (Dubatolov) is established. Described are species of the genera: Tabulata: Favosites, Striatoporella, Victorilites, Squameofavosites, Pachypora, Striatopora, Subcladopora, Alveolitella, Scoliopora,

- Fainella, Coenites, Egosiella; Rugosa: Briantelasma, Breviphyllum, Pseudamplexus, Papiliophyllum, Thoulelasma, Acanthophyllum, Taimyrophyllum, Embolophyllum, Astrictophyllum, Spongonaria, Zelolasma, Bensonastraea, Aphroelasma, Exilifrons, Paradisphyllum, Aristophyllum, Hemiaulacophyllum, Zonophyllum, Cystiphyllodes, Microplasma, Stereophyllum, Digonophyllum.¹";
- 2560 s[2557] = "BESPROZVANNYKH N.I., DUBATOLOV V.N., KRAVTSOV A.G., LATYPOV Yu.Ya., SPASSKIY N.Ya. (1975).- Devonian Rugosa of the Taimyr-Kolyma province.- Trudy Instituta Geologii i Geofiziki AN SSSR 228: 1-171.- FC&P 6-2, p. 14, ID=0112Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Siberia NEBiostratigraphy and systematic descriptions includ";
- 2561 s[2558] = "SPASSKIY N.Ya., KRAVTSOV A.G. (1978).- Granica nizhnego i srednego devona v Taimyro-Kolymskoy provincyi po materialam izucheniya rugoz. [Lower / Middle Devonian boundary in Taimyr-Kolyma province as marked by rugose corals; in Russian].- Voprosy stratigrafii paleozoya (devon, karbon): 91-96; Nauka, Leningrad.- FC&P 8-2, p. 33, ID=5698Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L/M; Geography: Russia, Taimyr-Kolyma province";
- 2562 s[2559] = "VOLKOVA K.N., LATYPOV Yu.Ya. (1976).- Rannedevonskie rugozy i mshanki Selennyakhskogo kryazha.- Trudy Instituta Geologii i Geofiziki AN SSSR 287: 1-70.- FC&P 9-1, p. 36, ID=0268Topic(s): ; Rugosa, Bryozoa; Systematics: Cnidaria Bryozoa; Rugosa; Stratigraphy: Devonian L; Geography: Russia, Siberia, Selennyakh basinInvestigations on the taphonomy and paleology of Lower Devonian faunas from the Northeast of the USSR are presented. Special consideration is given to the clarification of specific facial representatives of the single groups and to the provisions regarding their colonization. A monographic compilation is, for the first time, carried out on Devonian Bryozoa and Rugosa from northeastern Asia, the Selennyakhsk depression. The following species are described: Heterophrentis duplicata (Hall 1882), Siphonophrentis (?) variabilis Oliver.";
- 2563 s[2560] = "MAKARENKO S.N. (1988).- Subtsilindricheskie (Dendroidnye) Stromatoporaty devona Yugo-vostoka Zapadno-sibirskoi plity i ikh znachenie dlya stratigrafii. [subcylindrical (dendroid) Devonian stromatoporoids of SE W-Siberian plate and their stratigraphical significance; in Russian] .- Materialy po paleontologii i stratigrafii zapadnoy Sibiri [Podobinoi V. M. (ed)]: 57-67; Izdatelstvo Tomskogo Universiteta.- FC&P 19-1.1, p. 66, ID=2700Topic(s): stratigraphy; Stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Russia, SiberiaSeven species of Amphipora are described none of which is new.";
- 2564 s[2561] = "KHROMYKH V.G. (1974).- Devonian Stromatoporoids of the north-east of the USSR.- Trudy Instituta geologii i geofiziki 64: 104 pp., 18 pls.- FC&P 4-1, p. 30, ID=5098Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Russia NEThe first description of Devonian Stromatoporoids from the north-east of the USSR. The characteristic features among which the particular attention is paid in the relation of horizontal and vertical skeletal elements is shown. The age of Neludiraskaya suite is defined more exactly and it is correlated with Sayano Altay areas and with other regions. * The paper is intended for geologists-surveyors and the specialists on Coelenterates.";
- 2565 s[2562] = "KHROMYKH V.G. (1974).- Devonian Stromatoporida from the NE of the USSR. [in Russian] .- Trudy Inst, geol. geofiz. AN SSSR 64: 103 pp., 24 figs.- FC&P 4-1, p. 46, ID=5179Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: USSR NE";

- 2566 s[2563] = "KHROMYKH V.G. (1981).- Stromatoporaty i ikh raspredeleniye v otlozheniyakh vskrytykh skvazhinoy Luginetskaya 170. [stromatoporoids and their distribution in the Luginetskaya 170 borehole; in Russian].- Trudy Inst. Geol. Geofiz. AN SSR, Sibir. Otd. 482 [Paleozoy Zapadno-sibirskoy Nizmennosti i Gornogo Obramleniya]: 60-63.- FC&P 12-1, p. 46, ID=6196^Topic(s): distribution; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian?; Geography: Russia, Siberia^ [the species Amphipora laxeperforata Lecompte, Stachyodes singularis Yavorskiy, Amphipora ramosa Phillips, Anostylotroma sp. and Amphipora sp. 1 are described]^1";
- 2567 s[2564] = "DUBATOLOV V.N. (1977).- Geographical controls in the distribution of Devonian Tabulates in Siberia.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 152-159.- FC&P 6-2, p. 19, ID=0150^Topic(s): geography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Russia, Siberia^The dispersal of Tabulate corals in the Devonian seas of Siberia and contiguous realms was conditioned by paleo-geographical environment. In the Early Devonian between the seas of Altai-Sayan, Indigiro-Kolymian and Mongolo-Okhotsk provinces there were large geographical barriers, that made difficult the exchange of Tabulate species of adjacent seas. These conditioned sharp geographical differentiation of fauna. In the Middle Devonian the boundaries of the provinces became obliterate. It resulted in the fact that constant content of fauna in different basins was more uniform. Faunal integration continued up to the end of the Frasnian.^1";
- 2568 s[2565] = "SMIRNOVA L.V. (1984).- Tabulate corals.- Annales de la Societe geologique de Belgique 107 [Shilo N. A. et al. (eds): Sedimentological and paleontological atlas of the late Famennian and Tournaisian deposits in the Omolon region (NE-USSR)].- FC&P 15-2, p. 33, ID=0697^Topic(s): atlas of fossils; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fam; Geography: Russia, Siberia^^1";
- 2569 s[2566] = "DUBATOLOV V.N. (1972).- Tabulata and biostratigraphy of middle and upper Devonian of Siberia.- Trud. Inst. Geol. i geofiziki AN SSSR, Sibirsk. otd. (number?): 1-184.- FC&P 2-2, p. 15, ID=4790^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M U; Geography: Russia, Siberia^Monographical description of 45 species of Tabulata from the middle and upper Devonian of Altai-Sayan Mountains, Northeastern USSR, and other parts of Siberia. In this book, detailed stratigraphical subdivisions of the Devonian deposits of Siberia and zoogeographical provinces are proposed. All geologists and paleontologists are concerned by these results.^1";
- 2570 s[2567] = "SMIRNOVA M.A. (1977).- Etapy razvitiya rannedevonskikh Tabulyat centralnogo Taimyra. [phylogeny of Lower Devonian Tabulata of central Taimyr; in Russian].- In: Stratigrafiya i paleontologiya Dokembriya i Paleozoya severa Sibiri: 20-27; Nauch.-issled. inst. geologii Arktiki, Leningrad.- FC&P 7-2, p. 19, ID=5623^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Russia, Siberia, Taimyr^Als Ergebnis der Untersuchung der Tabulata aus dem forlaufenden Profil am Taree-Fluss (Zentral Taimyr) lassen sich biostratigraphische Zonen und drei Etappen der Entwicklung der Tabulata, vor allem der Favositida, erkennen. Sie sind die zahlreichsten Vertreter und unabhängig von wechselnden Sedimentationsbedingungen. Die Vertreter des Genus Parastriatopora sind an eine Küstenfazies angepasst. Aufgezeigt wird die charakteristische Zusammensetzung der Tabulata und die Morphologie der Favositida jeder Etappe. * Die Frage einer Revision der Grenze zwischen Unter- und Mittel-devon des Taimyr wird auf der Basis der Faunenevolution diskutiert. Die natürliche Grenze findet sich nicht im Hangenden der Taribichaiskiye Schichten,

- sondern vielmehr an deren Basis. An dieser Grenze erscheinen die Tabulata in weiter Verbreitung in benachbarten Becken. Dazu trug offensichtlich auch ein Wechsel palaeofazieller Bedingungen bei, wie die D.K. Patrynov feststellte.¹¹";
- 2571 s[2568] = "KHAYZNIKOVA K.B. (1975).- Variability of Devonian Alveolitida of Sette-Daban.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 24-29.- FC&P 5-2, p. 6, ID=5400^Topic(s): ; Tabulata, Alveolitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Russia?, Sette-Daban^Phenotypic variation in alveolitids and the selection of criteria for taxonomic discrimination.¹¹";
- 2572 s[2569] = "DUBATOLOV V.N. (1975).- Indigiro-Kolymская i Mongolo-Okhotskaya zoogeograficheskie provintsyi v Devone.- Trudy Instituta Geologii i Geofiziki AN SSSR (Sibirskoe Otdeleniye) 220: 7-19.- FC&P 7-1, p. 20, ID=0173^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Devonian; Geography: Indigiro-Kolyma, Mongolia-Okhotsk^(Indigiro-Kolymская and Mongolo-Okhotskaya zoogeographical provinces in the Devonian.)¹¹";
- 2573 s[2570] = "DUBATOLOV V.N., KRASNOV V.I. (2000).- Paleolandshafty Srednedevonskikh i Franskikh Morey Sibiri. [palaeogeography of Middle Devonian and Frasnian Seas in Siberia; in Russian].- Stratigraphiya i Geologicheskaya Korellyatsiya 8, 6: 34-58.- FC&P 30-1, p. 22, ID=1495^Topic(s): paleogeography; paleogeography; Systematics: ; Stratigraphy: Devonian M U; Geography: Russia, Siberia¹¹";
- 2574 s[2571] = "POTY E., ONOPRIENKO Yu.I. (1984).- Rugose corals.- Annales de la Societe geologique de Belgique 107 [Shilo N. A. et al. (eds): Sedimentological and paleontological atlas of the late Famennian and Tournaisian deposits in the Omolon region (NE-USSR)]: 29-35.- FC&P 15-2, p. 32, ID=0691^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam / Carboniferous Tour; Geography: Russia, Siberia¹¹";
- 2575 s[2572] = "ONOPRIENKO Yu.I. (1979).- Nove rugozy iz perkhodnikh otlozheniy mezhdru devonom i karbonom Omolonskogo massiva [new Rugosa from the Devonian-Carboniferous transitional deposits of the Omolon massif].- 14th Pacific Science Congress, USSR, Khabarovsk, August, 1979, Field Excursion Guide Book for Tour 9, Biostratigrafiya i fauna pogranychnykh otlozheny devona i karbona, suppl. 3, Coelenterata: 4-73.- FC&P 11-1, p. 53, ID=1791^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: Russia, Siberia NE¹¹";
- 2576 s[2573] = "SIMAKOV K.V., BLESS M.J.M., BOUCKAERT J., CONIL R., GAGIEV M.H., KOLASHEV Ye.V., ONOPRIENKO Yu.I., POTY E., RAZINA T.P., SHILO N.A., SMIRNOVA L.V., STREEL M., SWENNEN R. (1983).- Upper Famennian and Tournaisian deposits of the Omolon region (NE USSR).- Annales de la Societe geologique de Belgique 106: 335-399.- FC&P 13-2, p. 40, ID=0554^Topic(s): geology; fossils carbonates; Systematics: ; Stratigraphy: Devonian / Carboniferous; Geography: Russia, Siberia¹¹";
- 2577 s[2574] = "SHILO N.A., BOUCKAERT J., AFANASJEVA G.A., BLESS M.J.M., CONIL R., ERLANGER O.A., GAGIEV M.H., LAZAREV S.S., ONOPRIENKO Yu.I., POTY E., RAZINA T.P., SIMAKOV K.V., SMIRNOVA L.V., STREEL M., SWENNEN R. (1984).- Sedimentological and paleontological atlas of the Late Famennian and Tournaisian deposits in the Omolon Region (NE-USSR).- Annales de la Societe geologique de Belgique 107 [Shilo N. A. et al. (eds): sedimentological and paleontological atlas of the late Famennian and Tournaisian deposits in the Omolon region (NE-USSR)]: 137-247.- FC&P 14-1, p. 68, ID=1083^Topic(s): carbonates; carbonates fossils; Systematics: ; Stratigraphy: Devonian / Carboniferous; Geography: Russia, Siberia, Omolon Massif^As a complement to the concise description of the sedimentology,

- paleoecology, biostratigraphy and paleomagnetism of Late Famennian and Tournaisian strata of the Omolon region (NE-USSR) which had been published in these Annales in 1983 by K.V. Simakov et al., a sedimentological and paleontological atlas of the same strata is presented here. The data published in these two papers serve as a basis for more detailed studies on the deposits of the Omolon area, which will be carried out in the forthcoming years. At the same time, these represent the preliminary results of the joint investigations carried out by a team of geologists from the USSR, Belgium and the Netherlands during the period between 1981 and 1984.^1";
- 2578 s[2575] = "ROGOZOV Yu.A. (1972).- Coraux de la coupe de référence du Carbonifère inférieur du Taïmyr oriental.- In Opornyj razrez nizhnekamennougolnykh otlozheniy Vostochnogo Tajmyra : 38-56; Nauchno-issled. inst. geol. Arktiki, Leningrad.- FC&P 4-2, p. 61, ID=5289^Topic(s): new taxa; Chaetetida, Rugosa; Systematics: Porifera Cnidaria; Chaetetida Rugosa; Stratigraphy: Carboniferous; Geography: Russia, Siberia, Taimyr^description d'une espèce de Chaetetida, de cinq espèces dont deux nouvelles de Tabulata, de 54 espèces dont 11 nouvelles de Tetracoralla]^1";
- 2579 s[2576] = "ONOPRIENKO Yu.I. (1979).- Nekotorye rannekamennougolnye odinochnye rugozy Omolonskogo massiva [some Early Carboniferous solitary Rugosa from the Omolon Massif].- Iskopaemye bespozvonochnye Dalnego Vostoka: 3-28; Vladyvostok.- FC&P 9-1, p. 40, ID=0476^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Siberia NE^Zaphrentites, Amplexizaphrentis, Caninia, Caninophyllum, Bothrophyllum, Palaeosmia, Campophyllum, Keyserlingophyllum, Uralinia, Siphonophyllia, Pseudouralia, Pseudomicroplasma]^1";
- 2580 s[2577] = "ONOPRIENKO Yu.I. (1976).- Rannekamennougolnye kolonialnye rugozy severo-vostoka SSSR. [Lower Carboniferous colonial Rugosa of NE USSR; in Russian].- Trudy Dalnevost. Nauch. centra, Biol.-pochv. inst. 42, 145 [V. Petrashevskaya (ed.): Morfologiya i sistematika iskopaemykh bespozvonochnykh Dalnego Vostoka]: 5-34.- FC&P 7-2, p. 23, ID=5649^Topic(s): colonial; Rugosa colonial; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: USSR NE^1";
- 2581 s[2578] = "KROPACHEVA G.S. (1990).- Novye Uraliniidy ? (Rugozy) iz nizhnekamenougolnykh otlozheniy v khrebtu Sette-Daban. [new Uraliniidae ? (Rugosa) from the Lower Carboniferous of the Sette-Daban Range] .- In: Kolobova I.M. & Khozatskiy L.I. (eds): Ezhegodnik Vsesoyuznogo Paleontologicheskogo Obshchestva 33: 40-50; Leningrad (Nauka). [in Russian].- FC&P 19-2.1, p. 31, ID=2747^Topic(s): new taxa; Rugosa, Uraliniidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Siberia^A new genus Yakutophyllum (Rugosa) from limestones of Sette-Daban Range (Yakutia) is being described. This new genus contains four new species: Y. settedabanense, Y. grande, Y. pumilum, Y. elegans. It can conditionally be classed with the family Uraliniidae Dobrolyubova 1962 since this new genus shows great morphological similarities to some representatives of Yakutophyllum. The main differences to typical Uraliniidae can be seen in the continuation of a long major septa and the missing or a drastic reduction of the width of the dissepimentarium in the grown-up (ephebeal) stage of the coral development. [translated from original summary]^1";
- 2582 s[2579] = "ONOPRIENKO Yu.I. (1976).- Nekotorye uralinidy iz Turneyskikh otlozheniy Omolonskogo massiva. [some uraliniids from the Lower Tournaisian deposits of the Omolon massif; in Russian].- Ocherki geologii i paleologii Dalnego Vostoka: 20-29.- FC&P 7-2, p. 23, ID=5647^Topic(s): ; Rugosa, Uraliniidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: Russia, Siberia, Omolon Massif^1";

- 2583 s[2580] = "CHUDINOVA I.I. (1976).- Pervaya nakhodka Palaeacis (Tabulata) v Karbone Verkhoyan'skiy. [first discovery of Palaeacis (Tabulata) in the Carboniferous of Verkhoyane; in Russian].- Paleontologicheskii Zhurnal 1976, 3: 30-35.- FC#038;P 6-2, p. 24, ID=0073^Topic(s): ; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: Russia, Siberia^A revision of the family Palaeacidae and the genus Palaeacis is presented. The new species Palaeacis formosa from the Middle Carboniferous of Verkhoyansk is described. The diameter of the pores (0,1-0,2mm) and the corallites (10-12mm) and the absence of tabulae distinguish this species from all the others yet known.^1";
- 2584 s[2581] = "MALKOVSKIY F.S. (1975).- K voprosu o rasprostraneni massivnykh kolonial'nykh korallov v Ural'skom (Assel'skom) i Sakmarskom Yarusakh Tatarii. [distribution of massive colonial corals in Uralian (Asselian) and Sakmarian of Tataria].- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 195-197.- FC#038;P 5-1, p. 29, ID=5356^Topic(s): distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian Ass Sakm; Geography: Russia, Tataria^[synopsis of stratigraphic distribution of coral species]^1";
- 2585 s[2582] = "WEINBERG L., ECKERT C., MULLER J., EFREMOVA S., MEHL D. (1998).- Spicules analysis - the possible perspectives of its use for studies of bottom sediments in Lake Baikal.- Vth International Sponge Symposium, Brisbane [1998?]; poster. [poster] - FC#038;P 28-1, p. 51, ID=6927^Topic(s): spiculae; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Russia, Baikal^Sponges are beside diatoms, because of their wide spatial distribution in geological time, the only endemic species for paleostratigraphy in Lake Baikal. This poster presents first attempts in this field. * For a sure identification of species of baikalian sponges it is necessary to know the architectonics of their skeletons and the form of their spicules The difficulty: in Lake Baikal bottom sediments is that we have only isolated skeleton spicules. Therefore to identify the spicules in the sediments we compared photos of skeleton architectonics in recent sponges, their spicules and spicules of the sediments. It has been found that some species of baikalian sponges can be easily identified by their typical morphological and morphometric peculiarities of their spicules (B. robusta, B. recta, Rezinkovia sp., Swartschewskia sp.). The spicules of such species as B. intermedia, B. bacilifera, B. tenera, gen. Lubomirskia, are more variable, therefore the identification of these species by spicules is done with less trustworthiness degree. The use of this method has given a possibility to identify species composition of spongi fauna of Holocene-Pleistocene deposits of underwater Akademicheskii Ridge in Lake Baikal.^1";
- 2586 s[2583] = "LATYPOV Yu.Ya. (1982).- Odnokhnyye diafragmatofornyye korally Severnoy Azii [solitary diaphragmatophorid corals from North Asia].- Nauka, Moskva; 116 pp., 37 figs., 8 pis [in Russian].- FC#038;P 12-1, p. 31, ID=1897^Topic(s): ; Rugosa, Streptelasmataceae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Russia NE^This monograph deals with all the known data of solitary, monozonate corals from the Northeastern USSR, the Southern Verkhoyansk region and the Siberian Platform. Questions are discussed concerning the terminology, morphology and problems of the systematics of Streptelasmataceae, the history of investigations of this group, and the discussion of the taxonomic characteristics. A description of the fauna is given as well as a taxonomic scheme. Described are the following taxa: Kenophyllum subcylindricum Dybowski, Dalmanophyllum dalmani (Milne-Edwards et Haime), Densigrewingkia, Grewingkia contexta Neumann, Helicelasma whittardi Smith, Streptelasma corniculum Hall, S. cyrtum Neumann, S. obesa (Lindstroem), S. sibiricum (Nikolaeva), S. concavifundatum (Ivanovskiy), Crassilasma completum (Nikolaeva), C. simplex Ivanovskiy, C. crassiseptatum (Smith), Dinophyllum involutum (Lindstroem), D. apertum (Soshkina), D.

- breviseptatwn Ivanovskiy, D. bilateralicum n.sp., D. ambiguum n.sp., D. solidovolutus n.sp., Pseudophaulactis lycophylloides Zaprudskaya et Ivanovskiy, Povifirievella stokesi (Milne-Edwards et Haime), P. fossulatum (Ivanovskiy).^1";
- 2587 s[2584] = "KOSAREVA Ye.G., BETEKHTINA O.A., ZHURAVLEVA I.T. (1977).- Stromatoporoid paleoecology.- Akademiya Nauk SSSR, Sibirskoe Otdeleniye, Trudy Inst. Geol. Geofiz. / Environment and Life in the Geologie Past: Paleobiocoenoses and conditions of sedimentation / 360, 65-69.- FC&P 8-1, p. 49, ID=0208^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: Russia, Siberia^^1";
- 2588 s[2585] = "DUBATOLOV V.N. (1998).- Dynamics of biodiversity of tabulatomorph corals of Siberia.- Russian Geology and Geophysics 39, 10: 1329-1365.- FC&P 31-1, p. 62, ID=1632^Topic(s): biodiversity; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Russia, Siberia^Biodiversity of Devonian tabulatomorph corals of the Salair, west-Siberian, Taimyr, and Central-Siberian seas has been investigated for years. The data obtained demonstrate its significant variability. We have tentatively recognized periods of great and small biodiversity as well as borderlines at which the taxonomic diversity of tabulatomorphs either increased or decreased drastically. It is shown that in the Salair sea, tabulatomorphs were the most diverse during the Lochkovian, Emsian, and Givetian. The same stages are observed in the Altai sea, although the dynamics of tabulatomorph biodiversity was not so well-pronounced in the Lochkovian or Givetian. Biodiversity was little variable in the west-Siberian, Taimyr, and Central Siberian seas. In all Siberian seas, it reached its minimum in the Famennian. This was related to a change in the composition of predominant corals, when Thamnoporina and Alveolitina became extinct and gave way to Syringoporidae and Auloporidae. Of favositids, Micheliniidae and Cleistoporidae were of the greatest abundance.^1";
- 2589 s[2586] = "KRASNOPEEVA P.S. (1978).- Principy estestvennoj klassifikacii Arkheociat (trubchatye arkheocyathy).- Stratigrafiya i Paleontologiya Sibiri i Urala: 76-79 [Tomsk].- FC&P 9-1, p. 50, ID=0293^Topic(s): systematics; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: Russia, Siberia, Urals^^1";
- 2590 s[2587] = "DUBATOLOV V.N., KRASNOV V.I. (2002).- Paleoklimaty Aziatskoj chasti Rossii v devonie. [paleoclimates of Asiatic part of Russia in the Devonian; in Russian].- SNIIGGIMS Novosibirsk: pp 1-77, 16 figs.- FC&P 32-1, p. 16, ID=7137^Topic(s): paleoclimates; climates; Systematics: ; Stratigraphy: Devonian; Geography: Russia, Asiatic^^1";
- 2591 s[2588] = "GUO SHENGZHE (1986).- On determination of convergence time between Siberian Plate and Sino-Korean Plate and its biostratigraphic evidence.- Bulletin Shengyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 14: 127-136.- FC&P 16-2, p. 31, ID=2077^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Paleozoic; Geography: Russia, Siberian Plate, Sino-Korean Plate^[the paper deals with the palaeozoic strata and fossils to find a time limit of the convergence process (many rugose corals are mentioned)]^1";
- 2592 s[2589] = "DUBATOLOV V.N. (1978).- Zakonomernosti geograficheskogo rasprostraneniya tabulat v devone Sibiri i Dalnego Vostoka. [principles of geographical distribution of Devonian Tabulata of Siberia and the Far East; in Russian].- Trudy Inst. geol. i geofiz. Sib. otd. AN SSSR 386: 4-13.- FC&P 8-2, p. 33, ID=5702^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Russia, Siberia, Far East^^1";
- 2593 s[2590] = "BRASIER M., GREEN O., SHIELDS G. (1997).- Ediacarian sponge spicule clusters from southwestern Mongolia and the origins of the

- Cambrian fauna.- *Geology* 25, 4: 303-306.- **FC#038;P 26-1**, p. 48, ID=3625^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Ediacaran; Geography: Mongolia SW^Carbon and strontium isotopic data are used to show that the earliest sponge spicule clusters and associated phosphatic sediments (with Anabarites) from southwestern Mongolia are of Ediacarian age. Spicule morphologies include bundles of oxeas arranged in three-dimensional quadrules, linked together at junctions by tetracts, pentacts, hexacts, or polyactines. All are referred to the phylum Porifera, Class Hexactinellida. These sponge spicules provide the oldest remains that can be assigned without question to an extant phylum, and also the first firm evidence for filter feeding and metazoan silica biomineralization in the fossil record. It is suggested that siliceous and phosphatic members of the "Cambrian fauna" may have had their origins in eutrophic and outer shelf facies of the Late Proterozoic.^1";
- 2594 s[2591] = "ROZANOV A.Yu. (ed.) (1982).- The Precambrian / Cambrian boundary in the geosynclinal areas - the reference sections of Salany-Gol M.P.R. [in Russian].- Nauka, Moskva.- **FC#038;P 13-1**, p. 52, ID=6353^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: ; Stratigraphy: Precambrian / Cambrian; Geography: Mongolia, Salany-Gol^Collective book comprising a paleontological description of fauna and flora present in beds of Upper Proterozoic and Lower Paleozoic. Archaeocyatha are present in Atdabanian and Botomian parts of the sections. 30 genera and 70 species are described. Some of them are new: 3 genera (Fonin 2, A. Zhuravlev 1) and 32 species (4 described by Voronin, 7 by A. Zhuravlev, 21 by Fonin). These studies give a base for biostratigraphic and paleogeographic reconstruction of the area, and propose distant correlation with other Cambrian regions, particularly Soviet Union and China.^1";
- 2595 s[2592] = "WEINBERG E., ECKERT C., MEHL D., MUELLER J., MASUDA Y., YEFREMOVA S. (1999).- Extant and fossil spongiofauna from the underwater Akademician Ridge of Lake Baikal (SE Siberia).- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 651-658.- **FC#038;P 28-2**, p. 10, ID=6996^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: living & fossil; Geography: Russia, Baikal^^1";
- 2596 s[2593] = "ZHURAVLEVA I.T. (1979).- Stratigrafiya i Arkheociaty nizhnego Kembriya Altae Sayanskoy skladchatoy oblasti.- *Izdatiel'stvo Nauka, Moskva. ???*.- **FC#038;P 9-1**, p. 51, ID=0298^Topic(s): stratigraphy; stratigraphy; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Altay-Sayan^Stratigraphy and Archeocyaths from the Lower Cambrian of Altaj-Sayan folded area. "Sbornik" with articles of D.V. Osadchaja, L.N. Kashina, I.T.Zhuravleva, N.P. Borodina, A.S. Boyarinov on Archeocyaths assemblages of the different parts of the Altai Sayan Range.^1";
- 2597 s[2594] = "FONIN V.D. (1985).- Taenial archaeocyathans of the Altai Sayan folded region.- *Trudy Paleont. Inst. AN SSSR* 209; Nauka, Moskva; 144 pp. [monograph] - **FC#038;P 14-1**, p. 59, ID=0795^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Altay-Sayan^Monography in which 52 genera of taenialian Archaeocyatha are described, among them 28 new. Detailed analysis of each taxon is made in the point of view of its morphological characteristics, systematic position, ontogenetic evolution and stratigraphic position. The idea of the author concerning the splitting into two main groups of the Irregulares (Dictyonalia with rods and Taenialia with plates or pseudosepta) is here applied to Irregular Archaeocyatha with twisted plates. Revision of Soviet type-species has been carefully made, leading to a coming back of the genus Retecyathus

versus Archaeocyathus on the base of its simple inner wall. Unfortunately the author has ignored the recent revisions of the western authors, and used wrong names (such as Flindersicyathus j. syn. of Pycnoidocyathus instead of Graphoscyphia) errors that will be unfortunately perpetuated in Russian literature. Nevertheless, it is a very valuable book, the first attempt to carefully investigate the generally neglected Irregulares.¹¹;

- 2598 s[2595] = "VORONIN Yu.I., VORONOVA I.G., DROSDOVA N.A. (1983).- Archaeocyatha and Algae of the Lower Cambrian Egiin-gol Basin (NW Mongolia).- Trudy Sovmestnoy Sovetsko-Mongol'skoy Paleontologicheskoy Ekspeditsyi [Transactions of Soviet-Mongolian Paleontological Expedition: New species of fossil Invertebrates of Mongolia]: 7-10.- FC&P 15-1.2, p. 48, ID=0797^Topic(s):taxonomy; Archaeocyatha, Algae; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Mongolia NW^List of Regular Archaeocyatha (6 Atdabanian taxa in Ukhu-Tvlogoi - 4 taxa in Postonkolitov - 14 Botornian taxa in Alaq-Erdene - 9 taxa in Mt Severnoi).¹¹;
- 2599 s[2596] = "FONIN V.D. (1983).- New Irregular Archaeocyatha from the northwestern Mongolia Lower Cambrian rocks.- Trudy Sovmestnoy Sovetsko-Mongol'skoy Paleontologicheskoy Ekspeditsyi [Transactions of Soviet-Mongolian Paleontological Expedition: New species of fossil Invertebrates of Mongolia]: 11-14.- FC&P 15-1.2, p. 47, ID=0802^Topic(s):new taxa; Archaeocyatha irregulares; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Mongolia NW^The new forms belong to the Anthomorphidae with or without tabulae; they all are restricted to the Botomian.¹¹;
- 2600 s[2597] = "OSADCHAYA D.V., GANACHKOVA T.Yu. (1986).- New Archaeocyathan fauna from the Atdabanian stage of Altai Sayan folded region.- Trudy Akad. Nauk SSSR, Sibirskoye otdeleniye 669 [Biostratigraphiya i Paleontologiya Kembriya Severnoy Azii]: 169-184.- FC&P 16-1, p. 78, ID=2028^Topic(s):taxonomy; Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Altay-Sayan^[described are ten species of regular Archeocyatha]¹¹;
- 2601 s[2598] = "KOTELNIKOV D.B. (1995).- New archaeocyath species from the Lower Cambrian buildups of Vadi-Bala, (Central Tuva).- Paleontologicheskii Zhurnal 1995, 2: 21-29.- FC&P 25-2, p. 62, ID=3163^Topic(s):new taxa; Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Tuva^The archaeocyathan assemblage of the Vadi-Bala buildups, described for the first time, comprises 9 new species of Ajacicyathina belonging to 9 genera among them two are new, Natalijaecyathus (close, if not junior synonym, of Tenerricyathus according to the figure) and Torosocyathella which differs from Torosocyathus by more than one row of pores per interseptum at the inner wall. The complete faunal assemblage is characteristic of the upper Atdabanian.¹¹;
- 2602 s[2599] = "ZHURAVLEVA I.T., KONYAYEVA I.A., OSADCHAYA D.V., BOYARINOV A.S. (1997).- Early Cambrian archaeocyaths and spicular sponges from the Kiya river section (Kuznetsk Alatau).- Annales de Paleontologie 83, 1: 3-92 & 83, 2: 115-200.- FC&P 26-2, p. 85, ID=3775^Topic(s):; Archaeocyatha, Porifera; Systematics:Porifera; Archaeocyatha; Stratigraphy:Cambrian L; Geography:Russia, Kuznetzk Alatau^This second volume includes a revised comparative chart of zonal subdivisions; it is devoted to the biostratigraphy of the Kiya River Basin (Kuznetsk Alatau, Siberia) based on sponges with calcified skeleton such as archaeocyaths, and isolated spicules of siliceous sponges. Archaeocyaths described by the present authors belong to 4 orders, 50 families, 116 genera among them 11 new, and 280 species with 40 new. Isolated spicules are related to heteractinellid sponges and demosponges. [abstract of first part] *

- This paper follows two previous articles devoted to calcibionts, acritarchs, mollusks, SSF (Pospelov et al. 1995) and to a part of the archaeocyathan fauna (Zhuravleva et al. 1997). It includes a comparative chart of zonal subdivisions; based on sponges with calcified skeleton and spicular sponges and a biostratigraphic column, connecting this work to the global studies of the faunal assemblages of the Lower Cambrian Kiya River Section. [abstract of second part]^1";
- 2603 s[2600] = "ZHURAVLEVA I.T. (1980).- O nakhodke novoi formy odnostennykh Arkheotsiat s dopolitelno poristym karkasom (Butakovicyathus butakovi gen. et sp.nov.). [discovery of new single-walled archaeocyathan; in Russian].- Kembriy Altaye-Sayanskoy sklادتchatoy oblasti: 174-176, pl. 30, figs 1-2; Nauka, Moskva.- FC&P 10-1, p. 60, ID=6027^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Altay-Sayan^^1";
- 2604 s[2601] = "KASHINA L.N., SAYUTINA T.A. (1986).- New discoveries of Hydroconozoa in lower Cambrian strata of eastern Sayan.- Trudy Akad. Nauk SSSR, Sibirskoye otdeleniye 669 [Biostratigraphiya i Paleontologiya Kembriya Severnoy Azii]: 202-212.- FC&P 16-1, p. 79, ID=2032^Topic(s): ; Cnidaria, Hydroconozoa; Systematics: problematica; Stratigraphy: Cambrian L; Geography: Russia, Sayans^[Several specimens of Dasyconus porosus Korde have been found in Atdabanian. Discussed is systematic position of the genus within the Hydroconozoa and its relations with related genera.]^1";
- 2605 s[2602] = "ZADOROZHNYAYA N.M. (1983).- Reef complexes of Torgashino (Lower Cambrian, Eastern Sayan).- Sreda i zhizn v Geologicheskom proshlom, Paleobiogeografiya i Paleoekologiya: 138-151 [Nauka, Novosibirsk].- FC&P 13-2, p. 50, ID=0584^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Cambrian L; Geography: Russia, Sayans^^1";
- 2606 s[2603] = "LINDSAY J., BRASIER M.D., DORJNAMJAA R., GOLDRING R., KRUSE P., WOOD R., (1996).- Facies and sequence controls on the appearance of the Cambrian biota in southwestern Mongolia: implications for the Precambrian-Cambrian boundary.- Geological Magazine 133: 417-428.- FC&P 25-2, p. 26, ID=3089^Topic(s): facies, sequences; facies, sequence controls, biota; Systematics: ; Stratigraphy: Cambrian; Geography: Mongolia SW^^1";
- 2607 s[2604] = "KRUSE P.D., GANDIN A., DEBRENNE F., WOOD R.A. (1996).- Early Cambrian bioconstructions from the Zavkhan Basin, western Mongolia.- Geological Magazine 133: 429-444.- FC&P 25-2, p. 62, ID=3090^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Cambrian L; Geography: Mongolia, Zavkhan Basin^The Neoproterozoic-Cambrian succession in the Zavkhan Basin of western Mongolia preserves Early Cambrian bioconstructions of Nemakit-Daldynian to Botomian age. As elsewhere (Siberia, Morocco), the older bioconstructions (upper Tsagan-Oloom to lower Bayan-Gol Formations = Namakyt-Daldynian) were purely calcimicrobial; in the upper Bayan-Gol Formation (?Tommotian), spectacular calcimicrobial "patch-reefs" are present. In contrast, the Salaany-Gol Formation bioherms (late Atdabanian-early Botomian) are varied and well developed and included archaeocyaths and other metazoans as bioconstructors together with calcimicrobes. Three types of bioconstructions are recognized : 1) Gordonophyton-Razumovskia crusts supporting a cryptic community of corallomorphs, cribricyaths and archaeocyaths; 2) radiocyathan - archaeocyath bioherms; the abundant and diverse archaeocyath fauna served a binding function, while calcimicrobes were relatively minor; 3) calcimicrobial bioherms including layered fabric of intergrown erect bushes and rafts of calcimicrobes with associated oligotypic archaeocyaths and bioclastic debris. Comparisons with coeval bioconstructions of the Gondwana margins are made; among them, the Zavkhan Basin archaeocyathan - radiocyathan bioherms represent the moderate to high-energy spectrum

- with archaeocyaths, mud and cement dominant.^1";
- 2608 s[2605] = "SYTOVA V.A., ULITINA L.M. (1983).- Early Palaeozoic Rugosa of Mongolia and Tuva.- Nauka, Moskva; 167 pp.- FC&P 13-1, p. 39, ID=0465^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic L; Geography: Mongolia, Tuva^1";
- 2609 s[2606] = "BOLSHAKOVA L.N., ULITINA L.M. (1985).- Stromatoporaty i biostratigrafiya nizhnego paleozoya Mongolii [Stromatoporata and biostratigraphy of the Lower Paleozoic of Mongolia].- Trudy Sovmestnoy Sovetsko-Mongol'skoy Paleontologicheskoy Ekspeditsyi .- FC&P 15-2, p. 43, ID=0741^Topic(s): stratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic L; Geography: Mongolia^1";
- 2610 s[2607] = "ULITINA L.M., BOLSHAKOVA L.N., KOPAYEVICH G.B. (1976).- Features of the distribution of stromatoporoids, Rugosa and bryozoans in the Paleozoic sections of Dzhinsetu-Ula Mountains (Gobi Altay).- Paleontology and Biostratigraphy of Mongolia 3: 327-340.- FC&P 6-1, p. 21, ID=5507^Topic(s): biostratigraphy; stroms, Rugosa, zonation; Systematics: Cnidaria Porifera; Rugosa Stromatoporoidea; Stratigraphy: Paleozoic; Geography: Mongolia, Gobi Altay^1";
- 2611 s[2608] = "BONDARENKO O.B., MINZHIN C. (1977).- Morfologiya i astogenez nekotorykh pozdneordovikskikh korallov Bayan-Khongara (centralnaya Mongolia). [morphology and astogeny of some Upper Ordovician corals of Bayan-Khongar, central Mongolia; in Russian].- Trudy sovetsko-mongolskoy paleont. ekspeditsyi 5 [Tatarinov (ed.): Bespozvonochnye Paleozoya Mongolii]: 20-31.- FC&P 7-2, p. 16, ID=5617^Topic(s): morphology, astogeny; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician Ashg; Geography: Mongolia^The preface contains a brief stratigraphical introduction. The paleontological part describes new representatives of the family Proheliolitidae Kiaer 1899: Mongoliolites paradoxides n.gen. et n.sp., and of the family Billingsariidae Okulitch 1956: Transitolites hongorensis n.gen. et n.sp. The age of the new taxa is determined as Lower Ashgillian.^1";
- 2612 s[2609] = "BONDARENKO O.B., MINZHIN C. (1980).- Pozdneordovikskie geliolitoidy Central'noy Mongolii.- Paleontologicheskii Zhurnal 1980, 1: 31-46.- FC&P 9-2, p. 49, ID=0366^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: Mongolia^From a section of Cangan-den the fauna of heliolitoid corals is described and data are given concerning the stratigraphical range of the forms. Variability and morphogenesis of the new genus Khangailites (subfamily Proheliolitinae) are discussed. The new genus Khangailites with the type-species K. heteromorphosus n.sp. as well as the species K. sinkiangensis (Yu) are described.^1";
- 2613 s[2610] = "YERINA M.V., KIM A.J. (1981).- On some Ordovician Scleractinia-like corals from the south Tien-Shan.- Acta Palaeontologica Polonica 25, 3-4: 375-379.- FC&P 10-1, p. 44, ID=5967^Topic(s): ; corals, ? scleractiniamorphs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Ordovician; Geography: Russia, Tien-Shan^[Sumsarophyllum and Tjanshanophyllum (new gen.) from the Ordovician of Tien-Shan are interpreted as the oldest representatives of the scleractinian order Fungiida]^1";
- 2614 s[2611] = "BOLSHAKOVA L.N. (1980).- Pozdneordovikskie Stromatoporaty Mongolii [Upper Ordovician stromatoporoids of Mongolia].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 17-21; Nauka, Moskva.- FC&P 11-2, p. 35, ID=1848^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician U; Geography: Mongolia^1";
- 2615 s[2612] = "YERINA M.V. (1978).- Rugozy. [in Russian].- Pogranichnye sloi ordovika i silura Altaye-Sayanskoy oblasti i Tian-Chana: 64-74, pls

- 7-11; Nauka, Moskva.- FC&P 9-1, p. 39, ID=5792^Topic(s):; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Ordovician / Silurian; Geography:Russia, Altay, Tien-Shan^[Streptelasma, Grewingkia, Bodophyllum, Crassilasma, Pseudophaulactis, Sogdianophyllum, Calostylus, Sumsarophyllum, Cantrillia, Lamellophyllum gen.n. (type species L. bitecum)]^1";
- 2616 s[2613] = "LESOVAYA A.I. (1978).- Stromatoporata. [in Russian].- Trudy Inst. geol. i geofiz. Sib. otd. AN SSSR 397 [B.S. Sokolov & E.A. Yolkin (eds): Ordovician-Silurian transition beds of Altay-Sayan region and the Tien Shan]: 53-57.- FC&P 8-2, p. 50, ID=5728^Topic(s):; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Ordovician / Silurian; Geography:Russia, Altay, Tien-Shan^[species of Clathrodictyon, Ecclimadictyon and Actinodictyon are described and illustrated]^1";
- 2617 s[2614] = "BONDARENKO O.B., ULITINA L.M. (1976).- Early and middle Palaeozoic corals of Mongolia (locational survey).- Palaeontology and Biostratigraphy of Mongolia 3: 306-326.- FC&P 6-1, p. 18, ID=0004^Topic(s):sampling sites; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Ordovician - Devonian; Geography:Mongolia^Includes species lists for the Upper Ordovician, Silurian and Devonian of Mongolia.^1";
- 2618 s[2615] = "ROZANOV A.Yu. (2003).- Paleontology of Mongolia. Corals and Stromatoporoids. Ordovician-Devonian. [П а л е о н т о л о г и я М о н г о л и и К о р а л л ы и с т р о м а т о п о р о и д е и О р д о в и к - Д е в о н ; in Russian].- Nauka, Moskva; 286pp, 68 pls. ISBN 5-02-006448-3.- FC&P 33-2, p. 21, ID=1128^Topic(s):; paleontology; Systematics:Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy:Ordovician - Devonian; Geography:Mongolia^Presented are descriptions of all taxa from genus to order levels of stromatoporoids, tabulates, heliolitids and rugosans from Ordovician, Silurian & Devonian deposits of Mongolia. Described are 23 orders, 82 families and 179 fossil genera. All major groups are supplied by short note of systematical position, morphology, ecology, biogeography and stratigraphic distribution. Each genus is with one illustrated species, and with a list of its other species recorded from Mongolia. The book contains also an index of latin names of taxa.^1";
- 2619 s[2616] = "BOLSHAKOVA L.N. (2003).- Stromatoporoidei.- Paleontologiya Mongolii. Korally i stromatoporoidei. Ordovik-devon [A.Yu. Rozanov (ed.), L.N. Bolshakova; Nauka, Moskva; 285pp]: pp 18-52, pls 1-12. [book chapter] - FC&P 33-1, p. 39, ID=7192^Topic(s):; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Ordovician - Devonian; Geography:Mongolia^This monograph includes an introductory section by several authors on the stratigraphy of the area. The general material on stromatoporoids by Bolshakova includes sections on Morphology, Methods of Study, Systematic Position, Paleoecology, Stratigraphic Occurrence, and Paleobiogeography. In the Systematic Section there are descriptions of 25 genera, and the plates illustrate 24 species of stromatoporoids. [comments by C.W. Stearn]^1";
- 2620 s[2617] = "KIM A.I., LELESHUS V.L. (1980).- Novye siluriyskiye korally yuzhnogo Tyan-Chana. [new Silurian corals of southern Tian-Chan; in Russian].- Novye vidy drevnikh rasteniy i bespozvonochnykh SSSR 5: 14-16; Nauka, Moskva.- FC&P 10-1, p. 40, ID=5962^Topic(s):new taxa; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:Silurian; Geography:Russia, Tien-Shan^^1";

- 2621 s[2618] = "BONDARENKO O.B. (2001).- Reviziya roda Helioplasmolites (Geliolitoidei) i ego pervye nakhodki v Silure Mongolii.- Paleontologicheskii Zhurnal 2001, 3: 10-17.- FC&P 30-1, p. 29, ID=1542^Topic(s): taxonomy; Heliolitida, Helioplasmolites; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Mongolia^The genus Helioplasmolites is revised and only three species are retained, including H. dzharensis sp.nov. From Wenlockian of Northwest Mongolia; ten of the remaining species are transferred to the genera Diploepora, Helenolites, Hemiplasmopora, Lacerites, Mcleodea, Squameolites and ?Bogimbailites, and nine are considered as incertae sedis.^1";
- 2622 s[2619] = "BONDARENKO O.B. (2001).- Silurijskie korally-geliolitoidei vostochnoj Mongolii.- Paleontologicheskii Zhurnal 2001, 5: 10-19.- FC&P 30-2, p. 24, ID=1577^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Mongolia E^A concise characterization of the lithology and stratigraphy of the Eastern Mongolian localities of Silurian Heliolitoidea and the faunal list of Heliolitoids from the Salhitin, Baruun Urt, and Sûchbaatar Beds (Upper Llandovery-Pridoli) are presented. Four new monotypic genera are described: Cromyolites accuratus gen. et sp.nov. (Wenlock), Cryptolites capillaris gen. et sp.nov. (Wenlock), Lidaelites ulitinae gen. et sp.nov. (Ludlow), Barunolites pectinatus gen. et sp.nov. (Ludlow or Pridoli).^1";
- 2623 s[2620] = "BONDARENKO O.B. (2002).- Novye silurijskie korally-Geliolitoidei yuzhnoy Mongolii.- Paleontologicheskii Zhurnal 2002, 5: 7-14.- FC&P 31-2, p. 45, ID=1691^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian Ludl; Geography: Mongolia S^Three new species of Heliolitoid corals, Luvsanilites danzani gen. et sp.nov., Cromyolites abruptus, and Paraheliolites irinae, are described from the stratotype area of the Tsagaan Bulag Beds (Lower Ludlow; Jinsetu-Ula Ridge, Gobi Altai). ^1";
- 2624 s[2621] = "BONDARENKO O.B. (1986).- Novoe semejstvo i rod geliolitoidey iz Silura Mongolii. [new family and genus of Heliolitoidea from the Silurian of Mongolia; in Russian].- Paleontologicheskii Zhurnal 1986, 4: 21-26.- FC&P 16-1, p. 64, ID=1971^Topic(s): taxonomy; Heliolitida, Sytovaelitidae; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Mongolia NW^Beschrieben wird die neue Familie Sytovaelitidae mit der ebenfalls neuen Gattung Sytovaelites, vertreten durch eine neue Art und zwei neue Unterarten. Typusart ist Sytovaelites verae (Unterarten S. verae verae und S. verae nimbus) aus dem Wenlock bis ? tiefes Ludlow der NW Mongolei (Chokusinsk Schichten). Zur neuen Familie wird auch die Art S. crassiseptatus (Flügel 1956) gerechnet [von Flügel als Cosmiolithus crassiseptatus aus den Karnischen Alpen beschrieben).^1";
- 2625 s[2622] = "BONDARENKO O.B. (1991).- New species of Stelliporella (corals, Heliolitoidea) from the Silurian of Mongolia.- Paleontologicheskii Zhurnal 1991, 3: 20-27.- FC&P 23-1.1, p. 67, ID=4146^Topic(s): taxonomy; Heliolitida, Stelliporella; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Mongolia^Descriptions are given of Stelliporella species from the Wenlock - Lower Ludlow deposits. The new species S. kisilensis and S. ilensis are established.^1";
- 2626 s[2623] = "LELESHUS V.L. (1974).- Ducdonia n.gen. - eine Heliolitoide Koralle aus dem Silur Mittelasiens.- Paläontologische Zeitschrift 48, 3/4: 230-235.- FC&P 4-1, p. 34, ID=5118^Topic(s): taxonomy; Heliolitida, Ducdonia; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian Wen; Geography: Russia, Tien-Shan^In southern Tien-shan was found in deposits of lower Wenlockian age the new genus Ducdonia with the new species D. interrupta. Ducdonia belongs to the Heliolitoidean family Proporidae Sokolov. The new genus has great resemblance with the late Ordovician

- genus *Plasmoporella* Kiaer.^{^1};
- 2627 s[2624] = "IVANOVSKIY A.B., KUL'KOV N.P. (1974).- Rugosa, brachiopodes et stratigraphie du Silurien de la r gion montagneuse de l'Altai-Sayan.- Trudy Inst. Geol. geof. 231: 122 pp., 30 figs, 25 pls.- FC&P 4-1, p. 33, ID=5109^Topic(s):biostratigraphy; paleontology, stratigraphy; Systematics:Cnidaria; Rugosa; Stratigraphy:Silurian; Geography:Russia, Altay-Sayan^{^1};
- 2628 s[2625] = "PAVLOVA A.P. (1979).- O novom rode poznesiluriyskikh rugoz yuzhnogo Tyan-Chana. [new Upper Silurian rugosan genus of southern Tian-Chan; in Russian].- Yezhegodnik VPO 22: 3-8.- FC&P 9-1, p. 40, ID=5797^Topic(s):new taxa; Rugosa, Ulanophyllum; Systematics:Cnidaria; Rugosa; Stratigraphy:Silurian U; Geography:Russia, Tien-Shan^[Ulanophyllum (*U. aculelimbatus*)]^{^1};
- 2629 s[2626] = "ULITINA L.M. (1980).- Zakonomernosti rasprostraneniya siluriyskikh rugoz Mongolii. [distribution of Silurian rugosans of Mongolia; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5830^Topic(s):distribution patterns; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Silurian; Geography:Mongolia^{^1};
- 2630 s[2627] = "CHEREPNINA S.K., KRASNOV V.I. (1982).- Rugozy pzhidola Tsentralnogo Altaya. [Pridolian Rugosa of Central Altay; in Russian].- Ezhegodnik Vsesoy. Paleont. Obshch. 25: 31-47.- FC&P 12-1, p. 17, ID=6311^Topic(s):; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Silurian Prid; Geography:Russia, Altay^[species of *Tryplasma*, *Carinophyllum*, *Pilophyllum*, *Entelophyllum*, *Cystiphyllum*, *Aphyllum*, *Spongophylloides*, *Phaulactis*, *Zelophyllum*, *Pycnostylus*, *Circophyllum*]^{^1};
- 2631 s[2628] = "LESOVAYA A.I. (1991).- Novyye siluriyskiye stromatoporaty Severnogo Nuratau Yuzhnogo Tyan-Shanya [new Silurian Stromatoporoidea from northern Nuratau, southern Tian Shan; in Russian].- Paleontologicheskii Zhurnal 4: 26-31 [Paleontological Journal 25: 31-39].- FC&P 22-2, p. 94, ID=3546^Topic(s):new taxa; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian; Geography:Russia, Tien-Shan^The following new species are described from upper Wenlockian and Pridolian strata in the Abartkan Preserve: *Ecclimadictyon abartkanica*, *E. irinae*, *Desmostroma fasciatum*. In addition the new genus *Faciledictyon* (type species - *Simplexodictyon torosum* Lessovaya 1972) is established and two new species of the genus described *F. olgae*, *F. nuratinia*. The new genus is characterized by single laminae and separate pillars confined between two laminae, numerous astrorhizae of fistular type arranged in vertical systems with a common vertical canal, and compact microstructure. The genus ranges from Wenlockian to Lower Devonian. The genus includes *F. simplex* (Nestor) the type species of *Petridiostroma* Stearn.^{^1};
- 2632 s[2629] = "BOGOYAVLENSKAYA O.V. (1972).- Nouveaux genres de Stromatoporoidea du Silurien de Touva. [en russe] .- Paleontologicheskii Zhurnal 1972, 2: 26-31.- FC&P 3-2, p. 47, ID=4983^Topic(s):new taxa; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian; Geography:Russia, Tuva^Description de *Pichiostroma pichiense* gen. nov., sp.nov. (Actinostromellidae) et *Columnostroma frutelosum* (Yavorsky) (Hermatostromatidae).^{^1};
- 2633 s[2630] = "BOGOYAVLENSKAYA O.V. (1986).- Novye predstaviteli Clathrodictyidae Kuhn iz silura Tuvy [new representatives of the Clathrodictyidae Kuhn from the Silurian of Tuva].- Zapiski Leningradskogo Gornogo Instituta 107: .- FC&P 17-1, p. 40, ID=2157^Topic(s):; stroms, Clathrodictyidae; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian; Geography:Russia, Tuva^{^1};
- 2634 s[2631] = "BONDARENKO O.B., MINZHIN C. (2000).- The age of Chokusu beds

- in the Kyzyl-Dzhar-Chokusu section (the Silurian of Northwestern Mongolia).- Stratigraphy and Geological Correlation 8 (3): 243-255, 7 figs.; Birmingham. [translated from Stratigrafiya i Geologicheskaya Korrelyatsiya 8, 3].- FC&P 30-2, p. 9, ID=1589^Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Mongolia NW^ [translated from: Stratigrafiya. Geologicheskaya Korrelyatsiya 8, 3]^1";
- 2635 s[2632] = "MIRONOVA N.V. (1978).- Nekotorye przhidolskiye tabulaty Centralnogo Altaya. [some Pridolian Tabulata of Central Altay; in Russian].- Trudy Inst. geol. i geofiz. Sib. otd. AN SSSR 405: 104-117.- FC&P 8-2, p. 34, ID=5706^Topic(s): Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Prid; Geography: Russia, Altay^1";
- 2636 s[2633] = "PAVLOVA A.P. (1980).- Smena sistematicheskogo sostava rugoz v pogranichnykh siluriysko-devonskikh otlozheniyakh Turkestan-Altaya. [change of taxonomic composition of rugosans within the Silurian-Devonian boundary interval in Turkestan-Altay; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5823^Topic(s): faunal turnover S/D; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian / Devonian; Geography: Turkestan, Altay^1";
- 2637 s[2634] = "SHARKOVA T.T. (1981).- Siluriyskiye i devonskiye Tabulyaty Mongolii. [Silurian and Devonian Tabulata of Mongolia; in Russian].- Trudy Sovmestnoy sovetsko-mongolskoy paleontologicheskoy ekspeditsii 14; 104 pp., 20 figs, 6 pls.; Moskva.- FC&P 11-2, p. 34, ID=6169^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Devonian; Geography: Mongolia^Stratigraphy and the Tabulata (62 species and subspecies, 13 of which are described for the first time) from the Silurian, the Lower Devonian and the Middle Devonian of Mongolia are presented. A new interpretation of classification and correlation of Silurian, Lower and Middle Devonian deposits of Mongolia, the Gobi Altai and the eastern part of the Gobi are discussed. By means of the Tabulata, local zonal differentiations can be undertaken which are compared with each other.^1";
- 2638 s[2635] = "KOSAREVA Ye.G. (1980).- Rifogennye postroyki silura-devona Sayano-Altayskoy gornoy oblasti. [Silurian-Devonian reefoid buildups of Sayan-Altay; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 41, ID=5811^Topic(s): reefs; reefs; Systematics: Stratigraphy: Silurian Devonian; Geography: Russia, Altay-Sayan^1";
- 2639 s[2636] = "KULKOV H.P. (ed.) (1990).- Biostratigrafija nizhnego i srednego Devona Rudnogo Altaya.- Trudy Akad. Nauk SSSR, sib. otd., Inst. Geol. geofiz. 425; 65 pp.- FC&P 21-1.1, p. 50, ID=3256^Topic(s): biostratigraphy; biostratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Russia, Rudnyi Altay^- Introduction (Dubatolov V.N. & Kozlov M.S.); - The history of the study of Lower and Middle Devonian stratigraphy of the Rudnyi Altay (Dubatolov V.N. & Kozlov M.S.); Stratigraphy: - Composition of the Rudnyi Altay in the Devonian (Kozlov M.S.); - Description of Lower and Middle Devonian deposits (Dubatov V.N. & Kozlov M.S.); - Stratigraphic and paleozoogeographic review of Lower and Middle Devonian corals and crinoids (Dubatolov V.N., Dubatolova J.A., Spasskiy N.Ya. & Kozlov M.S.); Description of fauna: - Phylum Coelenterata; Subclass Tabulata (Dubatolov V.N.); - Phylum Echinodermata; Class Crinoidea (Dubatolova J.A.); - Conclusions (Dubatolov V.N., Dubatolova J.A., Kozlov M.S. & Spasskiy N.Ya.); - References. [the following new coral taxa are described: Favosites kozlovi n.sp., Emmonsia globosiformis n.sp., Nekhorochelites absolutus n.gen. & n.sp. (Pachyporidae), Thamnopora stscherbai n.sp., Placocoenites crassimus n.sp., and Barrandeolites (?) nekhorochevi n.sp.]^1";

- 2640 s[2637] = "ULITINA L.M. (2001).- Franske rugozy Mongolii.- Paleontologicheskii Zhurnal 2001, 2: 8-22.- FC&P 30-1, p. 27, ID=1540^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Mongolia^The first records of Frasnian Rugosa from Mongolia are discussed, including Nicholsoniella golovtshenkoae sp.nov., N. hurenensis sp.nov., Aulacophyllum exiguum sp.nov. and Temnophyllum ruzhentsevi sp.nov.^1";
- 2641 s[2638] = "IVANIYA V.A. (1975).- The ecology of early and middle Devonian rugose corals from the outskirts of Kuzbass.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 29-36.- FC&P 5-2, p. 5, ID=5397^Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L M; Geography: Kuzbass^[species lists are used to demonstrate facies restricted distribution of rugose corals in the Kuzbass Devonian]^1";
- 2642 s[2639] = "CHEREPNINA S.K. (1978).- Granica nizhnego i srednego devona v Gornom Altaye po dannym izucheniya rugoz. [Lower / Middle Devonian boundary in Gornoy Altay as marked by rugose corals; in Russian].- Voprosy stratigrafii paleozoya (devon, karbon): 105-107; Nauka, Leningrad.- FC&P 8-2, p. 33, ID=5700^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L/M; Geography: Gornyi, Altay^1";
- 2643 s[2640] = "IVANIYA V.A. (1980).- Devonskiye chetyrekhluchevye korally Salaira i severnogo Kuzbassa. [Devonian tetracorals of Salair and of Northern Kuzbass; in Russian].- Devonskiye chetyrekhluchevye korally Salaira i severnogo Kuzbassa: 140 pp., 41 pls, 17 figs; Tomsk.- FC&P 12-1, p. 26, ID=6308^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Salair, Kuzbass^[species of Dendrostella, Loyolophyllum, Fasciphyllum, Lyrielasma, Stringophyllum, Marisastrum, Haplothecia, Disphyllum, Tabulophyllum, Phaulactis, Aulacophyllum, Tryplasma, Bethanyphyllum, Temnophyllum, Neostrophophyllum, Ptenophyllum, Phillipsastrea, Thamnophyllum, Pseudomicroplasma, Diplochone, Cystiphyllodes, Dialythophyllum, Pseudozonophyllum, Digonophyllum]^1";
- 2644 s[2641] = "KOSAREVA Ye.G. (1979).- K vovprosu o vozraste losishinskoy svity. [on age of Losishin suite; in Russian].- Trudy Inst. geol. geofiz. AN SSSR, Sib. otd. 401 [O.A. Betekhtina & R.T. Gratsianova (eds): Fauna i stratigrafiya srednego i verkhnego paleozoya Sibiri]: 39-44.- FC&P 8-2, p. 51, ID=5733^Topic(s): biostratigraphy; stroms, stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Eif; Geography: Russia, Rudnyi Altay, Salair^Investigation of a Stromatopora Fauna - consisting of Stromatoporella paschkoviensis n.sp., Stictostroma khalinae n.sp., Columnostroma(?) subpartitum n.sp. and Paschkoviella aequicrassa n.gen. et n.sp. - indicates Eifelian age of the Loshinskian sequence. Their joint occurrence in beds of equivalent age in the Rudnyi Altai and Salair reveals a connection between these basins during the Middle Devonian. * Paschkoviella n.gen. et n.sp.: Type species: P. aequicrassa Kosareva 1979: p. 43, pl. 3: 1, 2, 6; Diagnosis: Coenosteum flattened, hemispherical, sometimes with latilaminae. Laminae compact. Pillars long, showing sometimes a lighter structure in the central part. Skeletal elements finely porous. Astrorrhizae present; Remarks: The structure of the pillars differentiates this genus from Gerronodictyon Bogoyavlenskaya 1969.^1";
- 2645 s[2642] = "LESOVAYA A.I. (1982).- Ranne- i srednedevonskie stromatoporata Juzhnogo Tien-Shana. [Lower and Middle Devonian stroms of S Tien-Shan; in Russian].- Biostratigrafiya pogranychnykh otlozheniy nizhnego i srednego devona; Trudy polevoy sessii Mezhdunarodnoy podkomissii po stratigraphii devona; Samarkand 1978: 102-104; Nauka Leningrad.- FC&P 12-1, p. 46, ID=6197^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L M; Geography: Russia,

- Tien-Shan[^][the geographical and stratigraphic distribution of genera and species and their variation through time in Lochovian, Pragian and middle Devonian beds are discussed]^{^1}";
- 2646 s[2643] = "DUBATOLOV V.N., STUKALINA G.A. (eds) (1991).- Biostratigrafija nizhnego i srednego Devona Dzhungaro-Balkhashskoy provintsi.- Nauka, Novosibirsk; 334 pp.- FC&P 21-1.1, p. 50, ID=3253[^]Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L M; Geography: Dzhungaro-Balkhash province[^]I: Stratigraphy of Lower and Middle Devonian of the Dzhungar-Balkhash province; II: Palaeontological setup of the division and correlation of the Lower and Middle Devonian of the Dzhungar-Balkhash province. Tabulate corals of this province are described by N.I. Ivanova on pages 63-91, pls. 1-17; the new taxa are Alveolites isignis dzungaricaensis n.ssp., A. poltavcevae n.sp., Alveolitella humilissiformis n.sp., Axuolites multispinosus n.sp., and Placocoenites bilamellifer besobaensis n.ssp.^{^1}";
- 2647 s[2644] = "MIRONOVA N.V. (1978).- Granica nizhnego i srednego devona na Salire i v Gornom Altaye po dannym izucheniya tabulat. [Lower / Middle Devonian boundary of Salair and of Gornyi Altay as marked by tabulates; in Russian].- Trudy Mezhd. stratigr. kom. SSSR 1978, 6: 74-80.- FC&P 8-2, p. 34, ID=5705[^]Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L/M; Geography: Russia, Salair, Gornyi Altay^{^1}";
- 2648 s[2645] = "DUBATOLOV V.N., SPASSKIY N.Ya. (1971).- Devonian Corals from the Dzungaro Balkhash Province [in Russian].- Trudy Inst. Geol. Geofiz. AN SSSR (Sib. Otd.) 74: 132 pp., 41 pls, 7 tabs, 6 figs.- FC&P 2-1, p. 16, ID=4715[^]Topic(s): ; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Devonian; Geography: Dzhungaro-Balkhash province[^]In this monograph, a review of the Devonian stratigraphy of the Near-Balkhash and Dzungarian Alatau is followed by a description of Tabulates and Tetracorals of that period. The analysis of corals rendered possible the division of the Dzungaro-Balkhash Province into two paleobiogeographical regions, each having characteristic and correspondent complexes of genera and species. On the basis of the study of corals, the Early and Middle Devonian are subdivided each into three parts. The relationship of the Dzungaro-Balkhash Province with adjacent territories is presented. The book is of interest to stratigraphers, paleontologists and geologists working in Kazakhstan and Central Asia.^{^1}";
- 2649 s[2646] = "SHARKOVA T.T. (1980).- Rifogennye postroyki rannego devona Yuzhnoy Mongolii. [Lower Devonian reefoid buildups of southern Mongolia; in Russian].- Korally i rify fanerozoja SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5825[^]Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian L; Geography: Mongolia^{^1}";
- 2650 s[2647] = "SHCHUKINA V.Ya. (1975).- Rugozy i biostratigrafiya Nizhnego Karbona severnogo Tian-Shana. [Rugosa and biostratigraphy of the Lower Carboniferous of northern Tian-Shan] .- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 180-185.- FC&P 5-1, p. 30, ID=5369[^]Topic(s): biostratigraphy; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Tien-Shan[^][stratigraphic distribution of coral species]^{^1}";
- 2651 s[2648] = "PUNINA T.A. (1999).- Stratigraphic levels of Triassic limestones of the South Sikhote-Alin (on the basis of coral study).- Mémoires de Géologie 30: 155-163.- FC&P 29-1, p. ???, ID=1490[^]Topic(s): biozonation; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Russia, Sikhote-Alin^{^1}";
- 2652 s[2649] = "PUNINA T.A. (1999).- Triassic Scleractinians in organogenous

- buildups of the Dalnegorsk district (Sikhote-Alin).- Dalnauka, Vladivostok; 128 pp.- FC&P 29-1, p. 40, ID=7025^Topic(s): reefs; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Russia, Sikhote-Alin^1";
- 2653 s[2650] = "PUNINA T.A. (1999).- Stages of the development of Triassic biogenic buildups in Sikhote-Alin.- Mémoires de Géologie 30: 165-173.- FC&P 29-1, p. ???, ID=1491^Topic(s): reefs, history; reefs; Systematics: ; Stratigraphy: Triassic; Geography: Russia, Sikhote-Alin^1";
- 2654 s[2651] = "WEINBERG I., GLYZINA O., WEINBERG E., KRAVTSOVA L., ROZHKOVA N., SHEVLEVA N., NATYAGANOVA A., BONSE D., JANUSSEN D. (2004).- Types of interactions in consortia of Baikalian sponges.- Bolletino Mus. Inst. Biol. Univ. Genova 68 [M. Pansini, R. Pronzato, G. Bavestrello & R. Manconi (eds): Sponge Science in the New Millennium]: 655-663.- FC&P 33-2, p. 43, ID=1202^Topic(s): ecological interactions; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Russia, Baikal^The composition of invertebrate communities inhabiting Baikalian sponges was studied. All the sponges examined were inhabited by invertebrates. Their number varied from 80 to 280 individuals per 100 cm³ of sponge, the biomass was found to be from 200 to 1020 mg per 100 cm³ of sponge. Twelve taxa: Turbellaria, Hirudinea, Nematoda, Oligochaeta, Polychaeta, Copepoda, Ostracoda, Isopoda, Amphipoda, Trichoptera, Chironomidae, Mollusca were found. There are two distinctive sets of species within the sponge consortia, which we designate as "specific" and "non-specific" ones. The latter differs in sponges sampled in different parts of the lake. The specific set consists of species, which are typical of all the sponge species sampled in different parts of the lake. The interaction between the sponges and the inhabiting invertebrates includes topic and trophic links. For most of sponge-dwelling invertebrates their interaction with the sponge is most likely to be as proto-cooperation (non-obligate co-existence), and for some species like Brandtia parasitica and Acanthocyclops spongicola as mutualism (obligate co-existence). [original abstract]^1";
- 2655 s[2652] = "MEHL-JANUSSEN D., ECKERT C., WEINBERG E.V. (2000).- Investigations on the endemic freshwater Porifera of Lake Baikal (Lubomirskiidae): status and perspectives.- Terra Nostra 2000, 9: 49-59.- FC&P 30-2, p. 36, ID=1605^Topic(s): freshwater, taxonomy; Porifera, freshwater; Systematics: Porifera; Stratigraphy: Recent; Geography: Russia, Baikal^The endemic Porifera of Lake Baikal constituting the family Lubomirskiidae are comparably well investigated, but still there are many "white spots". This group is unique in its adaptation, both with respect to nutrition and reproductive strategies and also regarding its synecological significance. Particularly the genus Baikalospongia exhibits remarkable flexibility of its endosymbiotic relations, from autotrophic eucaryotes in the littoral to methanotrophic bacteria at thermal vents, and the role of these different symbiotic strategies are poorly investigated. So far, only one genetic analysis of Baikal sponges has been published, and the resulting phylogenetic tree rises more questions than answers. To clarify the phylogenetic relationships within the Lubomirskiidae, further genetic sequencing as well as intensive palaeoecological research of fossil spicule assemblages from drilling cores are necessary. First investigations of oxygene isotopes on spicules from recent Lubomirskiidae show the perspectives for a broader use of freshwater sponge spicules as a paleoclimatological indicator in limnic sediments.^1";
- 2656 s[2653] = "ROPSTORF P., REITNER J. (1994).- Morphologie einiger Suesswasserporifera (Baikalospongia bacillifera, Lubomirskia baicalensis, Swartschewskia papyracea) des Baikal-Sees (Sibirien, Russland).- Berliner geowissenschaftliche Abhandlungen E13: 507-525.-

- FC&P 23-2.1, p. 62, ID=4421^Topic(s): freshwater, morphology; Porifera, freshwater; Systematics: Porifera; Stratigraphy: Recent; Geography: Russia, Baikal^During a 9-day excursion at the beginning of September 1993 to Lake Baikal (Siberia) several samples of the endemic Baikal-sponges (Lubomirskiidae) Swartschewskia papyracea, Lubomirskia baicalensis, and Baikalospongia cf. bacillifera were collected and afterwards examined at histological and ultrastructural level. Special interest was focused on the morphology of choanocyte chambers and choanocytes, embryonal stages, larvae, spicules, and the contact between the substrate and the sponge. All choanocytes of the examined lubomirskiid species showed similar morphological patterns. The flagellum is located in a little pit and the kinetosome anchored with microtubules. In September Baikalospongia contained already fully developed parenchymellae, while Swartschewskia exhibited cleavage stages and Lubomirskia large oocytes only. Between sponge and substrate a biofilm-layer was detected.^1";
- 2657 s[2654] = "ITSKOVICH V.B., BELIKOV S.I., YEFREMOVA S.M., MASUDA Y. (1999).- Phylogenetic relationships between Lubomirskiidae, Spongillidae and some marine sponges according [to] partial sequences of 18S rDNA.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 275-281.- FC&P 28-2, p. 8, ID=6958^Topic(s): systematics, molecular data; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Russia, Baikal^^1";
- 2658 s[2655] = "LAVRUSEVICH A.I. (1974).- On morphology, ecology and systematic position of the calceoloid, holophragmoid and manusoid Rugosa.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 191-198.- FC&P 5-2, p. 6, ID=5402^Topic(s): operculate; Rugosa, operculate; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Russia, Tien-Shan^Comments on operculate and possibly operculate corals with particular reference to material from Tien-Shan.^1";
- 2659 s[2656] = "KRASNOV V.I., MIRONOVA N.V., ASTASHKINA V.F. (1978).- O vozraste sukhoy svity na Salaire. [on age of the Sukhaya suite of the Salair; in Russian].- Sb. nauch. trudov Sib. N. I. geol., geofiz. i min. syrya 258: pp . ???.- FC&P 8-2, p. 34, ID=5704^Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: Russia, Salair^^1";
- 2660 s[2657] = "LAVRUSEVICH A.I., PYZHYANOV I.V. (1984).- Rodovye assotsiatsii rugoz Tyan'-Shanya, Pamira i Afganistana [Rugose generic associations from Tian-Shan, Pamir and Afghanistan].- Paleontologicheskii Zhurnal 1984, . 3-11.- FC&P 14-1, p. 49, ID=0996^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Russia, Tien-Shan, Tajikistan, Pamirs, Afghanistan^^1";
- 2661 s[2658] = "WU WANGSHI, LIAO Wei-Hua (1981).- Stratigraphic distribution of fossil corals and their palaeobiogeographic provinces in Xizang.- Geological and ecological studies of Qinghai-Xizang (Tibet) Plateau 1: 165-170.- FC&P 11-2, p. 28, ID=6160^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: China, Tibet^^1";
- 2662 s[2659] = "LELESHUS V.L. (1998).- The study of Fossil Cnidaria and Porifera in Tajikistan in 1996-1997.- FC&P 27, 1: 26-28.- FC&P 27-2, p. 46, ID=3901^Topic(s): research history; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: Tajikistan^^1";
- 2663 s[2660] = "LELESHUS V.L. (1994).- The study of fossil Cnidaria and Porifera in Tajikistan.- FC&P 23, 1.1: 38-41.- FC&P 23-1.1, p. 38, ID=4454^Topic(s): research history; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: Tajikistan^^1";
- 2664 s[2661] = "LELESHUS V.L. (1995).- The study of fossil Cnidaria and

Porifera in Middle Asia.- FC&P 24, 2: 73-75.- FC&P 24-2, p. 73, ID=4548^Topic(s): research history; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: Tajikistan^[author reviews history of research beginning with publication of Romanovsky (1890); presented is also list of papers not listed previously in FC&P newsletter]^1";

2665 s[2662] = "HOU XIANGUANG, STANLEY G.D.jr, ZHAO JIE, MA XIAOYA (2005).- Cambrian anemones with preserved soft tissue from the Chengjiang biota.- Lethaia 38, 3: 193-203.- FC&P 34, p. 97, ID=1359^Topic(s): soft tissues; Anthozoa Anemones; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian; Geography: China, Chengjiang^The group Cnidaria includes 'jellyfish', soft-bodied anemone and anemone-like forms and calcified corals. These diploblastic organisms have a fossil record extending back to the earliest metazoans of the Neoproterozoic; however certain cnidarians of the subclass Zoantharia, characterized by soft-bodied anemone-like forms, are absent or poorly represented in the fossil record. Despite the paucity of fossils, it is thought that calcification by soft anemone-like animals was responsible for producing the skeleton that allowed the preservation of the first corals. We report discovery of an abundant assemblage of in situ soft-bodied polyps with tissues. They are preserved in exquisite detail and come from the well-known Lower Cambrian Chengjiang biota of Yunnan, China. The soft-bodied polyps display a simple anatomy that is comparable to some extant anemones of the order Actinaria. The new fossils are assigned to Archisaccophyllia kunmingensis n.gen. et n.sp. Their simple and conservative form suggests that these fossils may represent some kind of ancestral rootstock. The preserved life assemblage provides a unique snapshot of Lower Cambrian anemone life and provides clues for relationships with extant actiniarians as well as calcified corals.^1";

2666 s[2663] = "JIAN HAN J., KUBOTA S., UCHIDA H., STANLEY G.D.jr, YAO X., SHU D., LI Y., YASUI K. (2010).- Tiny sea anemone from the Lower Cambrian of China.- PLOS ONE 5, 10: e13276.- FC&P 36, p. 78, ID=6485^Topic(s): ; corals anemones; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: China S^Abundant fossils from the Ediacaran and Cambrian showing cnidarian grade grossly suggest that cnidarian diversification occurred earlier than that of other eumetazoans. However, fossils of possible soft-bodied polyps are scanty and modern corals are dated back only to the Middle Triassic, although molecular phylogenetic results support the idea that anthozoans represent the first major branch of the Cnidaria. Because of difficulties in taxonomic assignments owing to imperfect preservation of fossil cnidarian candidates, little is known about forms ancestral to those of living groups. * we have analyzed the soft-bodied polypoid microfossils Eolympia pediculata gen. et sp.nov. from the lowest Cambrian Kuanchuanpu Formation in southern China by scanning electron microscopy and computer-aided microtomography after isolating fossils from sedimentary rocks by acetic acid maceration. The fossils, about a half mm in body size, are preserved with 18 mesenteries including directives bilaterally arranged, 18 tentacles and a stalk-like pedicle. The pedicle suggests a sexual life cycle, while asexual reproduction by transverse fission also is inferred by circumferential grooves on the body column. * The features found in the present fossils fall within the morphological spectrum of modern Hexacorallia excluding Ceriantharia, and thus Eolympia pediculata could be a stem member for this group. The fossils also demonstrate that basic features characterizing modern hexacorallians such as bilateral symmetry and the reproductive system, have deep roots in the Early Cambrian. [original abstract]^1";

2667 s[2664] = "SAYUTINA T.A. (1983).- Au sujet des ressemblances et differences de quelques Archeocyathes avec des Stromatopores possibles du Cambrien inferieur. In: Morfologiya i Sistematika bespozvonochnykh

- Fanerozooya. [Morphology and Systematics of Phanerozoic Invertebrates].- Izdatiel''stvo Nauka, Moskva: 149-151.- FC&P 13-2, p. 50, ID=0581^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Kazakhstan^In: Morfologiya i Sistematika bespozvonochnykh Fanerozooya. [Morphology and Systematics of Phanerozoic Invertebrates] Les Kazakhstanides occupent une position intermediaire entre les Archeocyathes et les Stromatopores.^1";
- 2668 s[2665] = "ZHANG Sen-Gui (1983).- Early Cambrian archaeocyathids from Kuraktag, Xinjiang.- Acta Palaeontologica Sinica 22, 1: 9-20.- FC&P 13-2, p. 50, ID=0585^Topic(s): new taxa; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China, Xinjiang^New taxon, anatomy, biostratigraphy of lower Cambrian of N.W. China, Xinjiang, Uygur.^1";
- 2669 s[2666] = "YUAN KEXING, ZHANG SENQUI (1983).- Biogeographical provinces of Early Cambrian Archaeocyathids in China.- Bulletin Nanjing Institute Geology and Palaeontology, Academia Sinica . 101-116.- FC&P 15-1.2, p. 48, ID=0798^Topic(s): biogeography; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China^The Early Cambrian archaeocyathid fauna in China can be divided into a South Realm and a North Realm.- 1) The South Realm consists of 3 provinces : a) the Yangtze Province representing one of the most flourishing area for the Archaeocyatha, with 4 assemblages; b) the North China Province with scattered Archaeocyatha; c) the Tarim Province where Coscinocyathids are the most abundant forms.- 2) The North Realm, where Archaeocyathan fauna is closely related to that of Siberian Platform.^1";
- 2670 s[2667] = "ZHANG SENGUI, YUAN KEXING (1985).- Discovery of genus Cambrocyathellus in China.- Acta Palaeontologica Sinica 24, 5: 518-527.- FC&P 15-1.2, p. 49, ID=0799^Topic(s): biostratigraphy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China^The present discovery, and the previous recognition of Tommotids in SW China is of great importance for international correlations of the Lower Cambrian and for the problem of the early distribution of Archaeocyathans at the limit between the Precambrian and the Cambrian.^1";
- 2671 s[2668] = "ZHANG SENGUI, YUAN KEXING (1984).- Lower Cambrian archaeocyathids of weiganping from Funquan, Guizhou.- Acta Palaeontologica Sinica 23, 5: 543-553.- FC&P 14-1, p. 60, ID=1066^Topic(s): new taxa; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China, Guizhou^The archaeocyathid fauna consists of 9 genera, 11 species and 5 indeterminate species; 7 species are new ones. Anaptyctocyathus and Stillicidocyathus have not been found in China before. The new species are: Rotundocyathus (Robustocyathus) weiganpingensis, Sibirecyathus simplex, Anaptycyathus guizhouensis, Stillicidocyathus lubricus, Dictyocyathus daopingensis, Agastrocyathus fuquanensis, Protopharetra dismorpha.^1";
- 2672 s[2669] = "YUAN KEXING, ZHANG SENQUI (1980).- Lower Cambrian Archaeocyatha of Central and Southwestern China.- Acta Palaeontologica Sinica 19, 5: 380-392.- FC&P 11-2, p. 25, ID=1826^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China Central SW^1";
- 2673 s[2670] = "DEBRENNE F., JIANG ZHIWEN (1989).- Archaeocyathan fauna from the Lower Cambrian of Yunnan (China).- Bulletin de la Societe geologique de France V, 8: 819-828.- FC&P 19-1.1, p. 70, ID=2711^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China, Yunnan^The archaeocyath fauna collected in the lower Cambrian of Yang Chang section (Yunnan) is studied in the light of a

- recent revision of the Chinese collections. The composition of the fauna shows that: 1) the two fossiliferous levels belong to one assemblage; 2) the distribution of species is homogenous through SW and Central China; 3) the archaeocyaths are Botomian in age, and no Tommotian archaeocyaths are known in China to-date; 4) palaeogeographic relationships exist between China, Altay Sayan, South western Europe and possibly Australia.¹";
- 2674 s[2671] = "BELYAYEVA G.V. (1995).- Morphological evolution of archaeocyaths from Russian Far East.- *Tikhookeanskaya Geologiya* 14, 2: 62-67.- FC&P 25-2, p. 60, ID=3159Topic(s): phylogeny; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Far EastAnalysis of time of appearance and disappearance of morphological characters of Siberian and Far-East archaeocyaths establishes that their rate of evolution is significantly different. The first stages were slower in Far-East paleobasins and continued up to the Early Botomian, while the acme was short and limited to the Middle Botomian. Nevertheless most of the morphological characters chosen have no systematic significance; the problem of heterochrony between Siberia and Far-East, a very interesting problem, was neither well explained nor interpreted properly, even in the two following abstracts presented at the International Symposium "Ecosystem Evolution" Moscow, RAS, 1995 and in Madrid at the Cnidaria Symposium, 1995, in which Belyaeva put forward the action of environment and particularly volcanism as factors influencing the rate of archaeocyath morphological evolution.¹";
- 2675 s[2672] = "BELYAYEVA G.V., YUAN KEXING (1995).- New taxa of archaeocyaths from the Lower Cambrian of Central China.- *Paleontologicheskii Zhurnal* 1995, 2: 140-142.- FC&P 25-2, p. 61, ID=3160Topic(s): new taxa; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China CentralA new genus of Erismacoscina, Yhecyathus and 2 new species are described and the complete associated faunal assemblage from a bioherm horizon of Funtshi, Yangse Region, is listed. Comparisons with Siberian Platform and Far-East sections give them a Botomian age.¹";
- 2676 s[2673] = "DEBRENNE F., KRUSE P., ZHANG SENGUI (1991).- An Asian compound archaeocyath.- *Alcheringa* 15, 4: 285-291.- FC&P 21-1.1, p. 62, ID=3285Topic(s): taxonomy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: AsiaMaterial from the Jindingshan Formation (Tsanglangpu stage) at Jindingshan, Guizhou province, China, confirms that Agastrocyathus grandis Yuan & Zhang is a massive compound archaeocyath with chaetetide architecture. A new genus Zunyicyathus includes this species and Z. pianovskajae from Central Asia. [original abstract]¹";
- 2677 s[2674] = "DAI SUNG LEE, KI HONG CHANG, HA YOUNG LEE (1972).- Discovery of Archaeocyatha from Hyangsari Dolomite Formation System and its significance.- *J. Geol. Soc. Korea* 8, 2: 191-197.- FC&P 7-2, p. 14, ID=5604Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Korea<¹";
- 2678 s[2675] = "YUAN KEXING (1974).- Archaeocyatha. [in Chinese].- A handbook of the stratigraphy and palaeontology of south-west China: 80-82, pls 29-30; Science Press, Beijing.- FC&P 9-1, p. 14, ID=5762Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China SW<¹";
- 2679 s[2676] = "YUAN KEXING, ZHANG SENGUI (1977).- Archaeocyatha. [in Chinese].- Atlas of Fossils in Central and Southern China, pt 1: 4-8, pls 1-2; Geological Publishing House, Beijing. [atlas of fossils] - FC&P 9-1, p. 14, ID=5763Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy:

- Cambrian L; Geography: China S^^1";
- 2680 s[2677] = "YUAN KEXING, ZHANG SENGUI (1978).- Archaeocyatha. [in Chinese].- The stratigraphy and palaeontology of Sinian to Permian in the Eastern part of the Yangtze Gorge: 138-140, pls 16-17; Geological Publishing House, Beijing.- FC&P 9-1, p. 14, ID=5764^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China, Yangtze Gorge^^1";
- 2681 s[2678] = "GUO SHENGZHE (1981).- Lower Cambrian Archaeocyathids from the central part of Da Hinggan Ling. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 20, 1: 60-64.- FC&P 10-1, p. 60, ID=6024^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: China, Da Hinggan Ling^^1";
- 2682 s[2679] = "CHEN JUNYUAN, HOU XIANGUANG, LU HAOZHI (1989).- Lower Cambrian Leptomitids (Demosponges), Chengjiang, Yunnan.- Acta Palaeontologica Sinica 28, 1: 17-32.- FC&P 18-2, p. 47, ID=2506^Topic(s): taxonomy; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Cambrian L; Geography: China, Chengjiang^The sponges of the Lower Cambrian Chiungchussu Formation in Chengjiang, Yunnan are of unique importance in early history of sponges. At least 11 genera and 20 species have been found, forming the second most diversified metazoan group in Chengjiang. A majority of the sponges belong to the Demospongiae with a broad spectrum of morphological variation and sizes. - They were embedded in the mudstone layers of the lower part of the Yuanshan Member. This member is the unit representing the upper part of the Chiungchussu Formation. Stratigraphically the fossils in our study range in a narrow interval dated as the lowest Eoredlichia Zone in the trilobite sequence. [fragment of extensive summary]^1";
- 2683 s[2680] = "CHEN JUNYUAN, HOU XIANGUANG, LI GUOXIANG (1990).- New Lower Cambrian Demosponges - Quadrolaminiella gen. nov. from Chengjiang, Yunnan.- Acta Palaeontologica Sinica 29, 4: 402-414.- FC&P 20-1.1, p. 70, ID=2855^Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Cambrian L; Geography: China, Chengjiang^Although isolated spicules of sponges are known, virtually in all continents with greatly abundant Lower Cambrian rocks, the preservation of verified articulate skeletons is extremely rare in the past records. The Chengjiang Lagerstätten is of special importance in fossil sponge studies for the record of its older age and the excellent preservation. Because of the biased preservation, the knowledge of Lower Cambrian sponges has been heavily dependent on the isolated spicules which are largely known as isolated stauractines, and which have led to assumption by various authors that sponges in Early Cambrian had a limited diversity, consisting largely of Hexactinellid protosponges with a few rare demosponges. On the contrary, a supported evidence from Chengjiang Lagerstätte suggest that the sponges, particularly Demospongiae in the Early Cambrian Chiungchussu stage underwent very rapid diversification which led to many indefinite morphologic types, with an evolutionary complexity which might stand comparison with those of the Middle Cambrian Burgess Shale. The striking similarity of the sponge fauna between the Chengjiang Lagerstätten and the Burgess Shale suggest that sponges have retarded their evolutionary pace from the Chiungchussu stage for at least a period of 30 Ma. Among the demosponges, Leptomitid has a simple and thin double-layered skeleton and stratigraphic lowest occurrence which have led to assumption as the central stock of the Demospongiae. Fossil evidences indicate that many elements of demosponges have adopted from Leptomitid a virtually unchanged pattern of double-layered skeleton. None of multiple-layered skeletons have been known among the Cambrian sponges apart from the present new genus Quadrolaminiella. This new form is characterized by a unique four-layered and double-netted skeleton. The outer net consists of the

1st (outermost) and the 2nd layers of oxeas, which extend parallel and vertical to the length of the sponges respectively; inner net formed by the 3rd and 4th layers, extending upward diagonally clockwise and counter clockwise respectively. Quadrolaminiella might have derived from Leptomitus as if it had development a thicker skeleton with an additional inner net. All the specimens available for the present studies were collected from Quarries M3 and CF5 on the W and NW slopes of the Maotian hill, about five km SE of Chengjiang. They were embedded in the mudstone layers in the lower part of the Yuanshan Member, a unit representing the upper part of the Chingchussu Formation. Biostratigraphically the specimens under study range within a narrow interval dated as the lower Eoredlichia zone. [fragment of extensive original summary]^1";

2684 s[2681] = "WEN WU, YANG AIHUA, JANUSSEN D., STEINER M., ZHU MAOYAN (2005).- Hexactinellid Sponges from the Early Cambrian Black Shale of South Anhui, China.- Journal of Paleontology 79, 6: 1043-1051.- FC&P 34, p. 25, ID=1219^Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cambrian L; Geography: China, Anhui^Three new and one completely preserved species of hexactinellid sponges are described from Early Cambrian black shales of South Anhui, China. The sponges occur in the middle part of the Huangboling Formation, which is assigned to the early Canglangpuian based on trilobite biostratigraphy. Metaxyspongia skelidata n.gen. and sp. and Hexatractiella dongzhiensis n.sp. are subcylindrical thin-walled Protospongiidae. Ratcliffespongia multiformina n.sp. is assigned to the Hintzespongiidae. With these new sponges, the first occurrences of the Protospongiidae and Hintzespongiidae, and of Hexatractiella Mehl, 1996, can be traced back to the Early Cambrian. Solactiniella cf. plumata Steiner et al., 1993, with irregular rossellimorph skeletal architecture and regular spicular organization, is found here associated with the above species. Thus, the Anhui assemblage can be considered as intermediate between Atdabanian shallow-water communities of hexactinellids with irregular skeletons and the Middle Cambrian deepwater sponge facies characterized by regularly organized Hexactinellida.^1";

2685 s[2682] = "RIGBY J.K., HOU XIANGUANG (1995).- Lower Cambrian Demosponges and hexactinellid sponges from Yunnan, China.- Journal of Paleontology 69, 6: 1009-1019.- FC&P 25-1, p. 47, ID=3056^Topic(s): taxonomy; Porifera, Demospongiae, Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cambrian L; Geography: China, Yunnan^The assemblage of demosponge and hexactinellid sponges described here was collected from the Lower Cambrian, Atdabanian, Yu'anshan member of the Chingchussu Formation, at the Maotianshan and Xiaolantian sections in Chengjiang County, Yunnan Province, 70km southeast of Kunming. The sponges occur in relatively massive to weakly graded-bedded, grayish-yellow mudstone and silty mudstone. They are associated with other soft-bodied and skeletonized fossils. The new demosponge species and genera Choiaella radiata. Allantospongia mica, and the questionable sponge Parvulonoda dubia are described, along with new specimens of Leptomitus teretiusculus Chen, Hou & Lu 1989, the hexactinellid sponge, Triticispongia diagonata Mehl and Reinter 1993 and the probable hexactinellid sponge. Saetaspongia densa Mehl & Reinter 1993. The sponges occur in what may be distal turbidite deposits, and they may have been buried essentially in situ by these argillaceous accumulations.^1";

2686 s[2683] = "MEHL D., ERDTMANN B.-D. (1994).- Sanshapentella dapingi n.gen., n.sp. - a new hexactinellid sponge from the Early Cambrian (Tommotian) of China.- Berliner geowissenschaftliche Abhandlungen E13: 315-319.- FC&P 23-2.1, p. 60, ID=4415^Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Cambrian L; Geography: China, Hunan^New entirely preserved body fossils of Porifera

(Hexactinellida) from the Tommotian section Sansha (N-Hunan, China) have been studied. This material leads to a better understanding of a fossil sponge published recently from the same locality and allows the description of *Sanshapentella dapingi* n.gen., n.sp. This new genus is characterized by a special type of dermal spicules unknown in recent hexactinellids, but common in Cambrian sediments. *Hunanospongia delicata* Qian & Ding 1988, known as isolated spicules only, may be closely related to *Sanshapentella dapingi*.^1";

2687 s[2684] = "SUN WEIGUO, HOU XIANGUANG (1987).- Early Cambrian Medusae from Chengjiang, Yunnan, China.- *Acta Palaeontologica Sinica* 26, 3: 257-270.- FC&P 17-1, p. 37, ID=2149^Topic(s):taxonomy, stratigraphy, biogeography; Hydrozoa; Systematics:Cnidaria; Hydrozoa; Stratigraphy:Cambrian L; Geography:China, Yunnan, Chengjiang^This paper presents a preliminary report on the highly diversified and beautifully preserved medusoid fossils recently discovered from the Lowermost Cambrian Yuanshan Member of the Chiungchussu Formation at Mt. Maotian-shan, Chengjiang County, eastern Yunnan, southwestern China. The specimens are moulds and casts of medusa body impressions, which were compressed into very thin discs or completely flattened into films between the bedding planes of shales and mudstones. They are accompanied by abundant and varied, soft-bodied and also shelly metazoans including sponges, annelids, brachiopods, gastropods, hyolithids, bradoriids, trilobites and other arthropods, etc. in the same assemblage, i.e. the Chengjiang fauna. The rock sequence of this fauna is marked by the *Parabadiella* Zone just at the bottom and bracketed within the lower part of the succeeding *Eoredlichia-wutingaspis* Zone. These two trilobite zones represent the very early Cambrian Chiungchussu Stage, which was immediately predated by the Precambrian-Cambrian transition of the Meishucun Stage. * The medusoid fossils constitute a prominent part of the Chengjiang fauna. Four new genera and species are described here, including the hydrozoan *Heliomedusa orientalis* gen. et sp.nov., the chondrophoran *Rotadiscus grandis* gen. et sp.nov. and the scyphozoan *Stellostomites eumorphus* gen. et sp.nov. and *Yunnannomedusa eleganta* gen. et sp.nov. * The medusae in the Chengjiang fauna represent the genuine medusoid fossils first discovered in China and the only known medusae occurring in the basal Cambrian of the world. The diversification of these new medusae can be traced back to their ancestors in the latest Precambrian Ediacara fauna in South Australia, providing remarkable evidence for a continuous metazoan evolution across the crucial Precambrian (Proterozoic) - Cambrian (Phanerozoic) boundary [fragment of extensive summary].^1";

2688 s[2685] = "STANLEY G.D.jr, SANDERSON A., AILIN C., HOU X.G. (2005).- Soft-bodied anemone and gelatinous fossils (Cnidaria / Ctenophora) from the Lower Cambrian, Chengjiang biota, Yunnan Province, China.- *Geological Society of America, Abstracts with Programs* 37, 7: 486. [abstract] - FC&P 34, p. 104, ID=1371^Topic(s):ex Chengjiang biota; Cnidaria, Ctenophora; Systematics:Ctenophora; Stratigraphy:Cambrian L; Geography:China, Yunnan^The celebrated Early Cambrian Chengjiang biota of southwestern China has yielded some exquisite and extraordinary fossils. These fossils have provided important and unparalleled insights into the biology, taxonomic diversity and nature of the Cambrian explosion. While arthropods and other hard-shelled fossils are well known, considerable soft-bodied components of this biota also have been discovered. Among these newly discovered taxa are a whole assemblage of in situ anemones preserved on the bedding surface, replete with attachment disc, column, tentacles and crown. Also found are an abundance of possible hydroids on the bedding planes. Extremely fragile gelatinous taxa belonging to the phyla Cnidaria and Ctenophora are present as well. Pelagic taxa among the gelatinous biota include a possible jellyfish-like siphonophoran with tentacles and gonozooids and also several examples of ctenophores. The ctenophores are the oldest yet known. They are

easily recognized as ctenophores because they still retain their eight comb-rows, cilia plates and associated gelatinous soft tissues. Compared to some other soft-bodied taxa, they are unique in preserving details of the delicate soft tissues and gelatinous material of the original living organisms. These fossils also provide valuable information on anatomy and body organization, connecting these 530 million-year old organisms with their distant living relatives. The striking degree of anatomical similarity at high taxonomic levels between some of these Early Cambrian taxa and their extant counterparts, hints at a much older origin in the late Precambrian for the ancestors of these groups.^1";

- 2689 s[2686] = "CHEN ZHE, HU JIE, ZHOU CHUANMING, XIAO SHUHAI, YUAN XUNLAI (2004).- Sponge fossil assemblage from the Early Cambrian Hetang Formation in southern Anhui.- Chinese Science Bulletin 49, 15: 1625-1628.- FC&P 33-2, p. 42, ID=1191^Topic(s):assemblages; Porifera communities; Systematics:Porifera; Stratigraphy:Cambrian L; Geography:China, Anhui^Abundant well-preserved large articulated sponge fossils and isolated spicules have been reported from Early Cambrian Hetang Formation, southern Anhui Province. This unique epifaunal fossil assemblage dominated by articulated sponge fossils is called the Xidi Sponge Fauna. The sponge fauna lived in a quiet oxygenic environment below the storm wave base. Bloom of phytoplankton and rapid sedimentation rate resulted in the deposition of the black shales. Sufficient food supply, lack of other competitors, abundant ecological niches, and demand for oxygen during early Cambrian were in favor of the diversification and evolution of large sponges in the Early Cambrian.^1";
- 2690 s[2687] = "DONG XIPING, KNOLL A.H. (1996).- Middle and Late Cambrian sponge spicules from Hunan, China.- Journal of Paleontology 70, 2: 173-184.- FC&P 25-1, p. 46, ID=3053^Topic(s):spicules; Porifera; Systematics:Porifera; Stratigraphy:Cambrian M / U; Geography:China, Hunan^Abundant and well-preserved assemblages of disarticulated sponge spicules occur in Middle and Late Cambrian platform carbonates of western Hunan, China. Assemblages recovered from 11 stratigraphic horizons include calcisponges, demosponges, and hexactinellids. Hexactinellida, in particular, are both abundant and diverse in Upper Cambrian carbonates. Comparison with spicule assemblages from Australia indicates that many of these taxa have long stratigraphic ranges, limiting their use in correlation. The morphological diversity of these spicules exceeds that known for living siliceous sponges, supporting the observation that during the Cambrian radiation, sponges, like other metazoans, evolved a variety of architectural forms not observed in later periods. Like conodonts, individual sponges can produce more than one spicule form; thus, an "apparatus genus" concept based on multiple cooccurring elements may eventually prove useful in the biostratigraphic and paleobiological interpretation of disarticulated sponge spicules. Four distinctive forms are recognized as new taxa. Australispongia sinensis new genus and species, Flosculus gracilis new genus and species, Pinnatispongia bengtsoni new genus and species, and Nabaviella paibiensis new species.^1";
- 2691 s[2688] = "STEINER M., MEHL D., REITNER J., ERDTMANN B.D. (1993).- Oldest entirely preserved sponges and other fossils from the Lowermost Cambrian and new facies reconstruction of the Yangtze platform (China).- Berliner geowissenschaftliche Abhandlungen E09: 293-329.- FC&P 22-2, p. 93, ID=3544^Topic(s):new taxa, facies; paleontology, Porifera; Systematics:Porifera; Stratigraphy:Cambrian L; Geography:China, Yangtze platform^A facies reconstruction and correlation of Upper Sinian - Lower Cambrian strata of the Yangtze platform (South China) is presented. Protected basin, uplift and deep basin development may be distinguished. The Lower Cambrian black shale transgression, the "Badaowan" Event, is characterized as diachronous. As a result

of these investigations of lithology and geochemistry of the Lower Cambrian sediments (mainly black shales of the Sansha section, near Dayong, N. Hunan), sediments deposited under partially anoxic conditions or in a stagnant basin have been recognized. * Sponge spicules are widely distributed in the lowermost Lower Cambrian of Central China. Recently discovered more or less complete sponges, including *Sanshadictya microreticulata* gen. et sp.n., *Triticispongia diagonata* gen. et sp.n., *Solactiniella plumata* gen. et sp.n., *Hunanospongia* sp. Qian & Ding 1988, *Hexactinellida* indet., a questionable demosponge, *Saetaspongia densa* gen. et sp.n., and the Malacostraca *Perspicaris* sp., and an unnamed alga are described. Sponge spicules additionally were found in rocks of the Shibantan Mb. (Dengying Fm., Upper Proterozoic) from the road section of Liantuo (near Yichang, S. Hubei province). The fauna of mainly hexactinellid poriferans from Sansha is discussed with regard to the similar taphonomy of the sponge faunas from the Red Hills Quarry (Middle Devonian of Nevada) and from the Arnagar limestone (Cretaceous, Bornholm).^1";

- 2692 s[2689] = "MORRIS S.C., MENGE C. (1990).- *Blastulospongia polytreta* n.sp., an enigmatic organism from the Lower Cambrian of Hubei, China.- *Journal of Paleontology* 64, 1: 26-30.- FC&P 19-1.1, p. 62, ID=2695^Topic(s): Porifera ?, Radiolaria; enigmatic *Blastulospongia*; Systematics: problematica; Stratigraphy: Cambrian L; Geography: China, Hubei^*Blastulospongia* is an enigmatic siliceous fossil with affinities proposed amongst both the sphinctozoan-grade sponges and radiolarians. *Blastulospongia polytreta* n.sp. extends the record of this genus into the Lower Cambrian (Shuijingtuo Formation) and represents its first occurrence in China (Taishanmiao section, Hubei Province). It differs from previously described species in size and pore spacing. The first evidence for benthic attachment is presented. A relationship with sphinctozoan-grade sponges is considered unlikely, but firm support for a place in the radiolarians is lacking.^1";
- 2693 s[2690] = "DEBRENNE F., GANDIN A., ZHURAVLEV A.Yu. (1991).- Palaeoecological and sedimentological remarks on some Lower Cambrian sediments of the Yangtze Platform (China).- *Bulletin de la Societe geologique de France* 162, 3: 575-583.- FC&P 21-1.1, p. 62, ID=3284^Topic(s): ecology sedimentology; Systematics: ; Stratigraphy: Cambrian L; Geography: China, Yangtze platform^^1";
- 2694 s[2691] = "LELESHUS V.L., MAMBETOV A.M. (1996).- Organic world in Cambrian of Middle Asia.- *Geology and Geophysics (Novosibirsk)* 37, 7: 34-38.- FC&P 27-1, p. 27, ID=3793^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Cambrian; Geography: Asia Central^At the Tommotian stage of Middle Asia small shelly fossils are determined. At the Aldanian and Lenian stages *Archaeocyatha* (50 genera), *Trilobita* (40 genera) and *Inarticulata* (17 genera) are determined. At the close of early Cambrian *Archaeocyatha* disappeared. In the middle and late Cambrian *Trilobita* and *Inarticulata* dominated. Dominated genera are in common with the Cambrian faunas of Siberia.^1";
- 2695 s[2692] = "OKUNEVA O.G., REPINA L.N. (1973).- Biostratigraphy and fauna of the Cambrian of Primorie. [in Russian] .- *Trudy Inst. Geol. Geofiz. AN SSSR* 37: 284 pp., 4 ht, 147 figs.- FC&P 4-1, p. 47, ID=5191^Topic(s): biostratigraphy; stratigraphy; Systematics: ; Stratigraphy: Cambrian; Geography: Russia, Primorye^^1";
- 2696 s[2693] = "BELYAYEVA G.V., LUCHININA V.A., NAZAROV B.B., REPINA L.N., SOBOLEV L.L., (1975).- Faune et flore du Cambrien de la crête de Dzhagdy (Extrême-Orient).- *Nauka, Moskva*: 208 pp., 14 fig., 51 pl.- FC&P 5-2, p. 10, ID=5443^Topic(s): ; various; Systematics: ; Stratigraphy: Cambrian; Geography: Russia, Far East^Géologie et stratigraphie de la région de Dzhagdy.

- Description de la faune d'Archeocyathes, Trilobites, Brachiopodes, Algues, Hyolithes, Eponges, Radiolaires et Problematica.¹";
- 2697 s[2694] = "JIA HUIZHEN, WU JINZHU (1977).- Corals. [in Chinese].- Atlas of Fossils of Central-South China, pt 1: Early Palaeozoic. [atlas of fossils] - FC&P 9-1, p. 12, ID=5744Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic L; Geography: China Central-S¹";
- 2698 s[2695] = "CAO XUANDUO, LIN BAORYU (1982).- Rugosa.- Paleontological Atlas of Northwest China, Shaanxi-Gansu-Ningxia, Vol. I: Pre-Cambrian and Early Palaeozoic: 12-50.- FC&P 13-1, p. 29, ID=0422Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic L; Geography: China NW¹";
- 2699 s[2696] = "LAVRUSEVICH A.I. (1977).- Paleobiological relations of early-middle Paleozoic Rugosa of Tajikistan (followed by the description of Pseudomucophyllum gen. nov.).- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 221-227.- FC&P 6-1, p. 20, ID=5499Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic L - M; Geography: Tajikistan¹[comparative distribution of early-middle Paleozoic rugose genera of Central Asia with other regions of the world]¹";
- 2700 s[2697] = "YANG SHENGWU, JIN CHUNTAI, ZHOU XIYUN (1978).- Tabulata. [in Chinese].- Atlas of Fossils of Southwest China, Guizhou Volume; pt 1: Cambrian - Devonian. [atlas of fossils] - FC&P 9-1, p. 12, ID=5748Topic(s): Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Cambrian - Devonian; Geography: China, Guizhou¹";
- 2701 s[2698] = "LELESHUS V.L. (1985).- K evolyutsii yestestvennoy prodolzhitelnosti zhizni korallovykh polipov v paleozoye Sredney Azii.[?].- Paleontologicheskii Zhurnal 1985, 2: 17-21.- FC&P 15-2, p. 27, ID=0643Topic(s): life span; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Asia Central¹";
- 2702 s[2699] = "WANG HONGZHEN, HE XINYI (eds) (1989).- Classification, evolution, and biogeography of the Palaeozoic corals of China.- Science Press, Beijing; xvii + 391 pp., 41 figs., 67 tpls., 81 pls. [in Chinese, with English summary].- FC&P 17-2, p. 42, ID=2631Topic(s): classification, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: China¹This book is an outcome of a collective research on the subject of the authors. The contents include two parts. Part I contains nine chapters and deals mainly with the skeletal structures and classification of the Palaeozoic corals. The first chapter is introductory. The main theme of this work is to investigate the minute skeletal structures and to attempt a revised classification on that basis, especially of rugose corals. This forms the content of chapter 2. Two different kinds of primary skeleton, the lamellar skeleton characterized by calcite flakes and the fibrous skeleton dominated by calcite needles or fibres, may be distinguished in Rugosa, Tabulata and also in Heterocorallia. The skeletal structure of the Rugosa is the most interesting and complicated. Altogether 75 genera of Rugosa, 24 of Tabulata and one of Heterocorallia are studied by SEM method, and the photographs are illustrated in 73 plates out of the 81 in total. [introductory part of the extensive English summary]¹";
- 2703 s[2700] = "LELESHUS V.L. (1995).- Additional list of Palaeozoic corals from Middle Asia and bibliography.- FC&P 24, 1: 42-47.- FC&P 24-1, p. 42, ID=6860Topic(s): list of taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Asia Central¹My recent paper (Leleshus 1994: Fossil Cnidaria & Porifera 23, 1.1: 42-46), contains a list of Palaeozoic corals of Middle Asia and the names of paleontologists who studied these corals during the second half of the 20th century. I am very

- sorry, that the names of paleontologists G.M. Gataulina, V.V. Ogar, M.G. Sladkovskaya and Wu Din Li are missing. * This report gives the names of the missing genera, the corrections of mistakes and a bibliography. Here, only those publications are given, which are not present in the Bibliographical Guidebook by A.B. Ivanovskiy (editor-in-chief), 1973, History of investigation of Palaeozoic corals and stromatoporoids (286pp; Nauka, Moskva), as well as in the informational report (Leleshus 1994: The Study of Fossil Cnidaria and Porifera in Tajikistan. - Fossil Cnidaria & Porifera 23, 1.1: 38-41).^1";
- 2704 s[2701] = "WU WANGSHI, LIAO Wei-Hua, ZHAO JIAMING (1982).- Palaeozoic Rugose Corals from Xizang.- Palaeontology of Xizang 4: 107-145.- FC&P 12-1, p. 34, ID=1907^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Paleozoic; Geography: China, Tibet^The rugose coral faunas include 46 genera comprising 70 species, 27 of which are new. In addition, a new Permian tabulate genus Neokueichoupora (including four species, one of which is also new) is described in this paper [first fragment of extensive summary).^1";
- 2705 s[2702] = "DONG DEYUAN (1982).- Paleozoic Stromatoporoids from Markam of Xizang and Batang of Sichuan.- Paleontological atlas of w Sichuan and E Xizang, vol. 2: 283-291.- FC&P 21-1.1, p. 59, ID=1825^Topic(s): atlas of fossils; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: China SW^[species of Hammatostroma. Actinostroma, Geronostroma, Trupetostroma, Stromatopora, Parallelopora, Idiostroma, Stachyodes and Paramphipora are described and illustrated; two species of Paramphipora are new]^1";
- 2706 s[2703] = "GUO SHENGZHE (1980).- Phylum Coelenterata, Stromatoporoidea.- Palaeontological Atlas of Northeast China: Paleozoic. Geol. Publ. House Beijing, (in Chinese) v. 1, 98-105.- FC&P 11-2, p. 36, ID=1853^Topic(s): atlas of fossils; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: China NE^1";
- 2707 s[2704] = "DONG DEYUAN, WANG BAOYU (1984).- Paleozoic stromatoporoids from Xinjiang and their stratigraphical significance.- Bulletin of Nanjing Institute of Geology and Paleontology, Academia Sinica 6, 7: 237-286.- FC&P 16-2, p. 33, ID=2083^Topic(s): stratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: China, Xinjiang^Stromatoporoids are described from Middle Ordovician, Upper Ordovician, Middle-Upper Silurian, Middle Devonian, and Lower Carboniferous rocks. New species of the following genera are described: Amphipora (2), Clathrodictyon (2), Cliefdenella (6), Ecclimadictyon (2), Intexodictyon (1), Labechia (12), Paramphipora (1), Plectostroma (1), Pseudolabechia (7), ?Stictostroma (1), Syringostromella (1), Tuvaechia (3). The new genus Tianshanostroma of the Idiostromatidae is described. 31 other species are also described. The Carboniferous species of Pseudolabechia is listed as of Visian age.^1";
- 2708 s[2705] = "LI YAOXI, LIN BAOYU (1983).- Tabulata.- Paleontological Atlas of Northwest China, Shaanxi, Gansu and Ningxia. Vol. II: Upper Palaeozoic [Xi'an Institute of Geology and Mineral Resources]: 179-220.- FC&P 13-1, p. 29, ID=0426^Topic(s): atlas of fossils; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: China NW^1";
- 2709 s[2706] = "LIN BAOYU (1985).- Geographic and geological Distribution of Palaeozoic Tabulate corals of Qinghai Province.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 16: 107-114.- FC&P 15-1.2, p. 35, ID=0826^Topic(s): distribution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: China, Qinghai^The Palaeozoic tabulate Corals of Qinghai Province can be subdivided into 5 assemblage zones as

follows: (1) *Foerstephyllum golmudense* - *Rhabdotetradium qinghaiensis* - *Neoplasmoporella golmudensis* assemblage zone; (2) *Agetolites* - *Wormsipore* - *Plasmoporella* assemblage zone; (3) *Fistulimurina compacta* - *Cladochonus* - *Kueichowpora* assemblage zone; (4) *Customichelinia qilianensis* assemblage zone; (5) *Qinghaipora titnjunensis* - *Sinopora dendroides* assemblage zone. Zones 1 and 2 are of Late Ordovician; zone 3 is of Late Early Carboniferous; zones 4 and 5 are of Early Permian. The descriptions of 5 species collected from Upper part (Visean) of Lower Carboniferous near Mahai of Da qaidam are given: *Multithecopora* ? *qinghaiensis* Lin, sp.nov., *Syringopora pseudodistans* Lin, sp.nov., *Cladochonus socialis* Sokolov, *Fistulimurina compacta* Sokolov, *Pentaphyllia gracilis* Lin, sp.nov.¹;

- 2710 s[2707] = "DENG ZHANQIU (1999).- Some Palaeozoic Tabulate corals from Northern Xinjiang.- Palaeozoic Fossils of Northern Xinjiang, China [Nanjing University Press]: 187-269, 15 figs, 26 pls.- FC&P 30-1, p. 29, ID=1543Topic(s): Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: China, XinjiangNorthern Xinjiang is subordinate to Palaeozoic Tianshan-Hinggan geosynclinal area. Coral faunas, especially those of Palaeozoic. Are well-developed in many rock formations. The Ordovician to Devonian tabulate corals from northern Xinjiang represent the geosynclinal faunas in North China, which are different from the faunas from South China in their assemblages and some structural features of corallites. In general, wall and septal component of corallites from geosynclinal faunas in North China are more varied than those of corallites from platform faunas in South China. The species of tabulate corals described in this paper amount to 58 species, including 21 new ones, which belong to 28 genera (3 of them are new). Their geographical and stratigraphical distributions are indicated, and features of some tabulate corals from Northern Xinjiang are briefly discussed.1"
- 2711 s[2708] = "LIN BAOYU (1980).- A preliminary study on the stratigraphical distribution and zoogeographical provinces of Palaeozoic tabulate corals in China. [in Chinese].- Geological Review 26, 5: 377-383.- FC&P 9-2, p. 11, ID=5853Topic(s): biogeography; Tabulata, biogeography; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: China1"
- 2712 s[2709] = "LIN BAOYU, TCHI YONGYI, JIN CHUNTAI, LI YAOXI, YAN YOUYIN (1988).- Monograph of Palaeozoic Corals: Tabulatomorphic Corals [in 2 volumes].- Geological Publishing House, Beijing: 454 pp., 469 figs, 4 tpls, 13 pls.- FC&P 17-2, p. 32, ID=2104Topic(s): tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ChinaThe present monograph deals with all Palaeozoic and Mesozoic Tabulatomorphic Corals (Tabulata, Heliolitoidea and Chaetetida). It is subdivided into two volumes: volume 1 includes the morphology, symbiosis and parasitism, evolution, palaeoecology, palaeozoogeographic provinces, sequences of faunas, techniques of study, classification and systematic descriptions (10 orders, 15 suborders, 85 families, 16 subfamilies and 476 genera); volume 2 contains the summary character of the species (about 247 genera and 2006 species) of tabulatomorphic corals in China. These two volumes are intended for palaeontologists, geologists and stratigraphers.1"
- 2713 s[2710] = "LIN BAOYU et al. (1988).- Monograph of Palaeozoic Corals: Tabulatomorphic corals. [in Chinese, with English abstract].- Geological Publishing House Xisi, Beijing, China; in two volumes. [monograph] - FC&P 17-1, p. 44, ID=6769Topic(s): tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ChinaThe present monograph deals with all Palaeozoic and Mesozoic Tabulatomorphic Corals (Tabulata, Heliolitoidea and Chaetetoidea). It is subdivided into two volumes: Volume One includes the morphology, symbiosis and parasitism, evolution, palaeoecology, palaeozoogeographic provinces, sequences of faunas, techniques of study, classification and systematic descriptions

- (about 10 orders, 15 suborders, 85 families, 16 subfamilies and 476 genera); volume Two contains the summary character of the species (about 2006 species) of tabulatomorphic corals in China.¹¹;
- 2714 s[2711] = "LELESHUS V.L. (1994).- The Genera of Palaeozoic Corals from Middle Asia.- FC&P 23, 1.1: 42-46.- FC&P 23-1.1, p. 42, ID=4455^Topic(s): list of genera; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Paleozoic; Geography: Asia Central^[list of genera, arranged by stage, and/or region, found and determined] during the second half of the 20th century [by] V.A. Anikina, S.F. Biske, V.D. Chekhovich, I.A. Chernova, P.S. Dziubo, M.V. Erina, V.B. Gorianov, T.G. Iljina, A.I. Kim, O.L. Kossovaja, G.S. Kropacheva, A.I. Lavrusevich, N.K. Ospanova, A.P. Pavlova, I.V. Pyzhyanov, V.I. Shchukina, B.S. Sokolov, I.I. Chudinova, D. Weyer, V.L. Leleshus. [Tabulata & Rugosa from Caradocian - Upper Permian interval]¹¹;
- 2715 s[2712] = "YAN YOUYING, CHEN HUACHENG (1982).- Coelenterata.- Paleontological Atlas of eastern China region, Late Paleozoic Part:108-169 [Chen Huacheng, Wang Yu-hui & Yan Youyin (eds); Nanking Geological and Mining Research Institute, Ministry of Geology].- FC&P 14-1, p. 52, ID=1023^Topic(s): atlas of fossils; Coelenterata; Systematics: Cnidaria; Stratigraphy: Paleozoic; Geography: China E¹¹;
- 2716 s[2713] = "SAN K.K., YAN J., SCHRÖDER S., FENG Q., INGAVAT-HELMCKE R., HELMCKE D. (2004).- Comparison of the Paleozoic sequences from the Padaukpin area (Northern Shan States, Union of Myanmar) and the Baoshan region (Western Yunnan, P.R. of China).- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 233, 3: 351-368.- FC&P 33-2, p. 21, ID=1129^Topic(s): stratigraphy; stratigraphy, Rugosa; Systematics: ; Stratigraphy: Paleozoic; Geography: Myanmar, China^The Paleozoic sequences of the Padaukpin area of the Northern Shan States (Union of Myanmar) and the Baoshan region in western Yunnan (P.R. of China) are compared. They show many similarities. A hiatus in sedimentation during the Carboniferous is developed in both regions and is therefore of regional importance. The Middle Devonian rugose coral fauna of both regions are typical for the Old world Faunal Realm and especially corals from the Padaukpin area (Northern Shan States), show strong affinities to the Rhenish faunas from the German Eifel Mountains. while the "pebbly mudstones" of Lower Permian age from the Baoshan region are usually discussed in the literature as glaciomarine deposits, similar strata in the Shan States are described as oligomictic conglomerate facies at the base of the Thitsipin Limestone Formation.¹¹;
- 2717 s[2714] = "CHANG N.-T., CHU C.-H., CHIEN Y.-Y., LIN H.-L., CHOW J.-Y., CHIEN Y., WU H.-J., ZHANG H.-J., HAO L.-Y., (1974).- A handbook of the Stratigraphy and Paleontology in SW China.- Nankin Inst. of Geol. and Paleontol., Acad. Sinica Sciences Press.- FC&P 5-2, p. 10, ID=5444^Topic(s): atlas of fossils; atlas of fossils; Systematics: ; Stratigraphy: Paleozoic; Geography: China SW^Algae microfossils (Acritarches), Archaeocyathids, Trilobites, Brachiopods, Cephalopods, Tabulate Corals, Bryozoans, Stromatoporoids, Tetracorals, Gastropods, Foraminifera, Vascular Plants, Spores; paleobiogeography and biostratigraphy of paleozoic rock of South-west China.¹¹;
- 2718 s[2715] = "LAVRUSEVICH A.I. (1980).- Glavneyshiye facyi nizhnego i srednego paleozoya Centralnogo Tadzhikestana i ikh deshifriruyemost na srednemasshtabnykh kosmicheskikh snimkakh. [major facies of lower and middle paleozoic in central Tajikistan and their legibility in medium-scale space images; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 121-126.- FC&P 9-1, p. 42, ID=5814^Topic(s): facies; facies; Systematics: ; Stratigraphy: Paleozoic; Geography: Tajikistan¹¹;
- 2719 s[2716] = "LELESHUS V.L. (2003).- Five maxima of Biodiversity in the Paleozoic of Central Asia. [in Russian].- Paleontologicheskii zhurnal

- 2003, 3: 13 -20.- FC&P 33-1, p. 24, ID=7177Topic(s): biodiversity; biodiversity; Systematics: Stratigraphy: Paleozoic; Geography: Asia Central^Five maxima of biodiversity are identified in the Paleozoic of Central Asia; Late Cambrian, Caradoc-Ashgill, Early Devonian, Early Carboniferous, and late Early Permian. These maxima regularly alternated with the minima of biodiversity in the Early Ordovician, Early Silurian, Late Devonian, Middle Carboniferous, and Early Triassic.^1";
- 2720 s[2717] = "Nanking Institute of Geology and Paleontology (1974).- Handbook of Stratigraphy and Paleontology in Southwest China. [in Chinese].- Science Press: 454 pp., 66 figs, 202 pls; Beijing.- FC&P 5-1, p. 18, ID=5337Topic(s): atlas of fossils; stratigraphy, paleontology; Systematics: Stratigraphy: Cambrian - Jurassic L; Geography: China SW^This monographic treatment in the Chinese language of Cambrian through early Jurassic stratigraphy and paleontology provides illustrations and terse descriptions of more than 1,000 genus-group taxa (121 new) and nearly 1,500 species-group taxa (682 new). Newly named genus-group taxa were proposed for the archaeocyathids (Chengkoucyathus), graptolites (Hunanodendrum, Paraorthograptus, Pararetiograptus, Retioclimacis, Sinoretiograptus), and corals (Antheria, Densiphyllodes, Digonoclisia, Dushanophrentis, Nephelophyllum, Ningqiangophyllum, Pilophylloia, Qianbeilites, Shensiphyllum, Xystiphyllodes). * Among the Archaeocyatha 1 of 11 genera is listed as new and 7 out of 11 species are considered new. Among the Graptolites 5 of 56 genera and 33 out of 106 species are considered new; for stromatoporoids the numbers are 10 genera (none new) and 4 out of 11 species considered new; for corals 10 out of 110 genera and 63 out of 126 species are presented as new. [this volume has been reviewed by Jeffords & wilde in Journal of Paleontology 50]^1";
- 2721 s[2718] = "DONG DEYUAN (2001).- Stromatoporoids of China.- Academia Sinica Press, Nanjing: 423 pp., 175 pls.- FC&P 31-1, p. 71, ID=1650Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic, Mesozoic; Geography: China^China is one of those countries that are extremely rich in stromatoporoids fossils in the world and has a history of over 60 years in the study of stromatoporoids fossils although there are only very few scholars engaged in the research on them. In this book a thorough, systematic, and intensive summary of the stromatoporoids found in China is made and serious and systematic amalgamation and revision of over 1100 species of stromatoporoids which have been described are also made. A total of 726 species and 97 genera are described herein, of which 78 genera and 675 species are of Paleozoic age and 19 genera and 51 species are Mesozoic in age. [first part of extensive summary presented on-line at <http://www.hceis.com/book.asp?id=818> by vendor of this book]^1";
- 2722 s[2719] = "DENG ZHANQIU (1982).- Paleozoic and Mesozoic sponges from southwest China.- Paleontological atlas of W Sichuan and E Xizang, vol. 2: 251-259.- FC&P 11-2, p. 25, ID=1824Topic(s): atlas of fossils; Porifera; Systematics: Porifera; Stratigraphy: Paleozoic, Mesozoic; Geography: China SW^^1";
- 2723 s[2720] = "PREOBRAZHENSKIY B.V. (1977).- Korally pozdnego Ordovika Chukotskogo poluostrova.- Trudy Instituta Geologii i Geofiziki AN SSSR (Sibirskoe Otdeleniye) /351: 51-63/ OBUT, A.M. (Ed.): Stratigrafiya i fauna Ordoyika i Silura Chukotskogo poluostrova.- FC&P 7-1, p. 24, ID=0187Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: Russia, Chukotka^Apart from a short introduction on the research history of the fauna, this paper deals with the description. of only. Late Ordovician Tabulate corals from the Chukchi peninsula. The fauna contains characteristic forms well known mainly from the arctic island as well as from the Far East of the USSR, Alaska, Canada and Greenland. The following forms are described: Troedssonites

- 2724 **s**[2721] = "LIN BAOYU (1982).- Ordovician Corals.- Paleontological Atlas of East China, Vol. I. Early Palaeozoic: 9-28.- FC&P 13-1, p. 29, ID=0423Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: China E^1";
- 2725 **s**[2722] = "DENG ZHANQIU (1984).- Middle-Upper Ordovician corals from the marginal areas of the Ordos Platform, China.- Nanjing Institute Geology Paleontology, Academia Sinica 8: 305-322.- FC&P 15-2, p. 35, ID=0721Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician M U; Geography: China, Ordos Platform^This paper deals with Middle-Upper Ordovician corals collected in 1977 from the marginal areas of the Ordos Platform, mainly in Mt. Zhuozi of Nei Mongol, Long Xian and Yao Xian of Shaanxi province. The corals were found in association with brachiopods, trilobites, conodonts and graptolites. They include Rugosa, Tabulata and Heliolitida, 9 genera and 18 species in all, occurring in the following formations: Mt. ZhuoziThe Sheshan Formation (O3): Amsassia sheshanensis sp.nov.; Long XianThe Beigoushan Formation (O3 + O1): Catenipora distincta sp.nov., C. sp., Palaeophyllum thomi simplex subsp.nov.;The Longmendong Formation (O1 + O3): Catenipora inclinata sp.nov., Favistina midiana sp.nov., F. longxianensis sp.nov., F. pachytheca sp.nov., F. sp.; Yao XianThe Taoqupo Formation (O3): Favistina formasa sp.nov., F. dybovskii Soshkina, F. sp., Catenipora subovata C.M.Yu, Plasmoporella convexotabulata maxima C.M.Yu, P. arcatabulata Bondarenko, P. afff. granulosa Bondarenko; JingyangThe Taoqupo Formation (O3): Rhabdotetradium jingyangense sp.nov., Heliolites aff. tashanensis Lin et Chow, Hormsipora simplex sp.nov., Favistina arcata sp.nov., F. strigosa sp.nov., F. ssp.Among corals, Agetolites, Amsassia, Rhabdoterium, Catenipora, Heliolites, wormsipora and Plasmoporella are characteristic forms in the Middle-Upper Ordovician of South China. Most remarkably, Favistina is very abundant in these areas but entirely absent in South China.^1";
- 2726 **s**[2723] = "LIN BAOYU (1985).- Some corals from the Saishiteng group of Qinghai province and its stratigraphical significance.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 17: 281-288.- FC&P 15-1.2, p. 36, ID=0827Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: China, Qinghai^The corals described in this paper were collected from the upper part of the Saishiteng Group (Upper Ordovician) at Mahai, in Daqaidam, Qinghai Province. They contain 4 species and 4 genera (including 2 new species and 1 indeterminate species) as follows: Agetolites daqaidamensis LIN, sp.nov., Catenipora gracilis (HALL), Brachyelasma sp., Palaeophyllum qinghaiense LIN, sp.nov.(from original summary)^1";
- 2727 **s**[2724] = "LIN BAOYU (1984).- New developments in coral biostratigraphy of the Ordovician of China.- Palaeontographica Americana 54: 444-447 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 46, ID=0971Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: China^1";
- 2728 **s**[2725] = "DENG ZHANQIU (1987).- Late Ordovician corals from Xichuan, Henan.- Acta Palaeontologica Sinica 26, ??: 616-625.- FC&P 17-1, p. 25, ID=2121Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician Ashg; Geography: China, Henan^The coral-bearing strata from Shiyanhe of Xichuan county, Henan, are grey, thick-bedded limestones of the Shiyanhe Formation, and the coral assemblage contains such species as Agetolites rariseptatus Lin et Chou, A. cf. raritabulatus Lin, Agetolitella tashanensis henanensis subsp.nov., Lyopora blanata

- sp.nov., Calapoecia anticostiensis xichuanensis subsp.nov., Paracorrugopora shiyanheensis gen. et sp.nov. and Favistina aff. shifosiensis Cao. Correlation of the coral assemblage with those from southeast China leads to the conclusion that the coral-bearing horizon should belong to the Late Ordovician, approximately corresponding to the early Ashgillian stage of Europe. [fragment of original summary]^1";
- 2729 s[2726] = "HE XINYI (1990).- ordovician rugose corals and tabulates of the Ngari Area.- In: Yang Zunyi, Nie Zetong et al. (eds): Paleontology of Ngari, Tibet (Xizang): 20-22; China Univ. Geosci. Press. [in Chinese, with English summary].- FC&P 20-2, p. 61, ID=2950^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: China, Tibet^[new taxa are: Brachyelasma burangense n.sp.; Lambelasma pachythemum n.sp.]^1";
- 2730 s[2727] = "YI NUNG (1974).- A preliminary study on the stratigraphical distribution and zoogeographical provinces of the Ordovician Corals of China.- Acta geologica Sinica 1974, 1: 22-34.- FC&P 4-1, p. 41, ID=5155^Topic(s): stratigraphy, biogeography, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician; Geography: China^[also French version in the same volume of AGS, pp 5-22]^1";
- 2731 s[2728] = "CHEN XUESHI (1996).- Patch reefs of Late Ordovician stromatoporoids and corals in Yushan, Jiangxi.- Oil & Gas Geology 17: 326-336.- FC&P 29-1, p. 45, ID=7035^Topic(s): reefs; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician U; Geography: China, Jiangxi^^1";
- 2732 s[2729] = "LELESHUS V.L., OSPANOVA N.K. (1979).- Neue spatordovizische Heliolitoidea aus Mittelasien.- Muenstersche Forschungen zur Geologie und Palaeontologie - volume - pages ???.- FC&P 8-1, p. 54, ID=0235^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: Asia Central^New representatives of the Heliolitoidea are described from the Late Ordovician of the Zeravshan-Gissar mountains. Heliolites senex n.sp. is one of the earliest species of the genus Heliolites. Hayoites simmetricus n.gen, et n.sp. belongs to the subfamily Pseudoplasmorinae.^1";
- 2733 s[2730] = "OSPAANOVA N.K. (1978).- Semejstvo Plasmoporellidae (Heliolitoidea). [family Plasmoporellidae (Heliolitoidea), in Russian].- Izvestiya Akademii Nauk Tadzhikskoy SSR, otdeleniye biologicheskikh Nauk 72, 3: 85-93.- FC&P 9-1, p. 48, ID=0290^Topic(s): ; Heliolitida, Plasmoporellidae; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician; Geography: Kazakhstan^Separation of the family Plasmoporellidae is precisely evidenced. The apertaining genera, one of which is new, are characterized. The phylogenetic relation of the family Plasmoporellidae with other groups of the Heliolitoidea could be revealed. The following genera are described: Granulina Leleshus 1975; Voruporella Ospanova n.gen.; Plasmoporella Kiaer 1899; Proporella Leleshus 1975; Acdalopora Bondarenko 1958 - these order agrees with the phylogenetic development [?]. Diagnosis of Voruporella: corallum spherical, bowl-shaped. Corallite walls thick, consisting of twelve closely adjacent trabecula-like vertical small columns. If wall thickness is uniform, the trabeculae appear slightly conical or rectangular in transverse section; if thickness changes, the trabeculae show a conical or oval shape. Trabeculae are also found in the coenenchyme The vesicles of the coenenchyme are elevated. Plasmoporella crassa Kovalevskiy 1964, from the Upper Ordovician (Ashgill) from Kazakhstan and Central Asia is the type species.^1";
- 2734 s[2731] = "OSPAANOVA N.K. (1980).- O prirode soedinitel'nykh obrazovaniy u geliolitoidey. [nature of coenenchymal structures of heliolitids; in Russian].- Paleontologicheskij Zhurnal 1980, 2: 135-138.- FC&P 9-2, p. 50, ID=0359^Topic(s): coenenchymal structures; Heliolitida; Systematics: Cnidaria;

- Heliolitida; Stratigraphy: Ordovician Ashg; Geography: Tajikistan, Zeravshan Mts^[In connexion with the discussion on the nature of the connecting tubes, a new species of Voruporella Ospanova 1978 is described - V. anomalia sp.n. from the Upper Ashgillian of the Zeravshan Mountains.]^1";
- 2735 s[2732] = "LELESHUS V.L., OSPANOVA N.K. (1979).- Novye pozdneordovikskie proporidy (Heliolitoida) Sredney Azii.- Paleontologicheskii Zhurnal 1979, 4: 19-23.- FC&P 9-2, p. 49, ID=0368^Topic(s): taxonomy; Heliolitida, Proporidae; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: Asia Central, Zeravshan-Hissar^From the Upper Ordovician beds of the Zeravshan-Gissarskye area the new genus Acdalina with the type species A. mutata n.sp. is described as well as the new species Propora ornata n.sp. Biostratigraphic characteristics of Upper Ordovician corals from Central Asia are discussed.The new genus shows great affinities to Acdalopora but can be distinguished by the presence of interrupted walls, strongly developed coenenchyme, existence of vertical rods and short coenenchymal tubes. A difference between these two genera is very great in the early stages of growth but there is a great affinity of Propora to Acdalina. But in Propora convex dissepiments and other characteristics have developed.^1";
- 2736 s[2733] = "LIN BAOYU (1985).- Some late Ordovician Heliolitoid corals from Jiabosar formation of Jiabosar district, Xinjiang.- Acta Palaeontologica Sinica 24, 4: 351-357.- FC&P 15-1.2, p. 36, ID=0829^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: China, Xinjiang^This paper deals with 8 genera and 16 species of the Late Ordovician heliolitoid corals from the Fuyun County, Xinjiang, including 10 new species, all of which are listed as follows: Taeniolites junggarensis sp.nov., Stelliporella junggarensis sp. nov., wormsipora hirsuta (Lindstroem), w. modica sp.nov., Acdalopora jiabosarensis sp.nov., A. qiakuertensis sp.nov., Concuvites mongulicus (Kovalevskiy), Propora densa sp.nov., P. inordinata sp.nov., Plasmoporella chamomilla Bondarenko, P. kiaeri Sokolov, P. spinosa Bondarenko, P. convexotabulata Kiaer, P. qiakuertensis sp.nov., P. diffita sp.nov. and Neoplasmoporella hirsuta sp.nov.^1";
- 2737 s[2734] = "OSPANOVA N.K. (1984).- Novye dannye o vozraste Archalyskoy svity (Zeravshano-Gissarskaya gornaya oblast). [new data on age of Archalyska suite (Zeravshan-Hissar Mts); in Russian].- Akademiya Nauk SSSR, Doklady 27, 7: 399-401.- FC&P 14-1, p. 53, ID=1028^Topic(s): stratigraphy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician Ashg; Geography: Asia Central, Zeravshan-Hissar^with help of the Heliolitid-fauna a comparison is given with the main Silurian [Ordovician] areas - Canada, Estonia, Urals, Kazakhstan, Altai. The result is the age-determination of the Archalyska suite as middle to upper Ashgillian.^1";
- 2738 s[2735] = "LIN BAOYU (1993).- Longxianites, a new Upper Ordovician heliolitid corals genus from North China.- Stratigraphy and Palaeontology of China 2: 129-134.- FC&P 25-1, p. 6, ID=2988^Topic(s): ; Heliolitida, Longxianites; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: China N^^1";
- 2739 s[2736] = "OSPANOVA N.K. (1997).- A new Genus and some morphological features of the most ancient Heliolitoida.- In G.Kh. Salibayev (ed.): Paleontology and Stratigraphy of Phanerozoic of Tajikistan 1: 37-42. Donish, Dushanbe.- FC&P 27-1, p. 28, ID=3797^Topic(s): taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: Tajikistan, Zeravshan Mts^Manzuriporites takfnensis Ospanova gen. et sp.nov. are described (family Palaeoporitidae Kiaer 1899) from upper Ordovician deposits of Zeravshan range (Tajikistan).^1";
- 2740 s[2737] = "LIU BINGLI, RIGBY J.K., JIANG YANWEN, ZHU ZHONGDE (1997).-

- Lower Ordovician Lithistid Sponges from the Eastern Yangtze Gorge Area, Hubei, China.- Journal of Paleontology 71, 2: 194-207.<http://www.jstor.org/pss/1306456>.- **FC#038;P 27-1**, p. 100, ID=3851^Topic(s):taxonomy; Porifera Lithistida; Systematics:Porifera; Lithistida; Stratigraphy: Ordovician L; Geography: China, Hubei^A moderately diverse assemblage of anthaspidellid demosponges has been recovered from reef-bearing carbonate platform deposits of Early Ordovician, Tremadoc to early Arenig age, in Hubei Province. The sponges occur, in part, in the Tremadoc Fenxiang Formation and, in part, in the lower Arenig Honghuayuan Formation at several localities near Yichang, Xintan, and Liujiachang. Archaeoscyphia nana Beresi and Rigby 1993, Archaeoscyphia pulchra (Bassler 1927), and Archaeoscyphia minganensis (Billings 1859) occur with the new genera and species, Jianghai yichangensis and velellospongia adnata, and the new species Rhopalocoelia sanxiaensis and Anthaspidella lamellata. This is the first reported occurrence of Anthaspidella in Ordovician rocks of China. Great numbers of these species of fossil sponges have been found in Lower Ordovician outcrops, particularly in the eastern Yangtze Gorge area of Hubei Province.^1";
- 2741 s[2738] = "WANG HONGZHEN (1985).- Systematics and palaeobiogeography of the Middle and Late Ordovician rugose corals of China.- Earth Sciences - Journal wuhan College of Geology 10: 19-34.- **FC#038;P 15-1.2**, p. 25, ID=0878^Topic(s):biogeography; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: Ordovician M U; Geography: China^^1";
- 2742 s[2739] = "HE XINYI, CHEN JIANQIANG, TANG LAN, WANG WEIWIE (2006).- New material of rugose corals from the uppermost Ordovician (Hirnantian) in northern Guizhou and their geological significance.- Acta Palaeontologica Sinica 45, 3: 293-310.- **FC#038;P 35**, p. 54, ID=2338^Topic(s):new records; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: Ordovician Hir; Geography: China, Guizhou^The latest Ordovician (Hirnantian) rugose coral fauna from the Guanyinqiao Beds in Bije, Remhuai and Shiqian districts of northern Guizhou are studied in detail, and some genera and species are reviewed. 4 genera and 2 species of rugose corals are reported from the Guanyinqiao Beds in northern Guizhou for the first time, they are Axiphora, Bodophyllum, Dalmanophyllum, Leolasma, Brachyelasma unicum (Neuman), and Grewingkia anguinea (Scheffen). In the past, quite a number of rugosan taxa, including the genera Borelasma, Kenophyllum and Ullernelasma, etc. had been discovered in the Guanyinqiao Beds (He 1978, 1985). The present new material thus further enrich the content of the latest Ordovician (Hirnantian) rugosan fauna in the Upper Yangtze region and indicate the close affinities of the late Ordovician rugosan faunas in the Yangtze region to those of the Scandinavia and central Asia. Up to now, totally 39 species of 18 genera have been found from the Guanyinqiao Beds (tab. 1). Among them, 12 species of 10 genera of rugosan are described in this paper, including Amplexobrachyelasma He et Chen gen. nov., Grewingkia densicolumna He et Chen sp.nov., Kenophyllum fossulatum He et Chen sp.nov. and Leolasma qianbeiense He et Chen sp.nov.^1";
- 2743 s[2740] = "HE XINYI, CHEN JIANQIANG (2004).- Late Ordovician mass extinction of rugose corals in the Yangtze region. [in Chinese, with English abstract].- Biotic Mass Extinction and Recovery of the Paleozoic in South China [Rong Jiayu & Fang Zhongjie (eds)]: chapter 2, part 6, pp 167-183; Hefei Science and Technology Press.- **FC#038;P 33-1**, p. 57, ID=7172^Topic(s):extinctions O/S; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: China, Yangtze region^Two phases of the latest Ordovician rugosan mass extinction are recognized based on the study of rugose coral fauna from the Sanjushan Formation (middle Ashgill) in the Lower Yangtze region and the Guanyinqiao Beds (late Ashgill) in the Upper Yangtze region integrated with modification as well as statistical analysis of range and distribution of the genera

and species. The first phase took place during the end of Rawtheyan Stage. The Late Ordovician (middle Ashgill) rugosan fauna of Lower Yangtze region contains 16 genera, among which 6 genera (Cystocantrillia, Hillophyllum, Bowanophyllum, Parastreptelasma, Favistina and streptelasmaticid one new genus) (37.5%) became extinct in the end of Rawtheyan stage. The second phase happened during the latest Himantian. The rugose coral fauna from the Guanyinqiao Beds of Upper Yangtze region contains 15 genera, among which 9 genera (Sinkiangolasma, Lambeophyllum, Kenophyllum, Borelasma, Salvadorea, Ullernelasma, Siphonolasma, Pycnactoides, Bodophyllum) (60%) became extinct. The present paper deals with the controlling factors of two extinction events and their differences. The global sea-level decline caused by the southern Hemisphere glaciation of the Late Ordovician and climatic deterioration are the main factors, which resulted in the first phase of rugosan mass extinction during the end of Rawtheyan. In the Lower Yangtze region, because of the beginning time of the first phase of rugosan mass extinction was earlier than brachiopods and graptolites, the authors concluded that the factors of the first phase may be also connected with the Guaxian Orogeny. The second phase of the extinction again related to a rise of global temperature and a sharp rise of sea-level with oceanic water anoxia which caused the demise of the shallow, bottom-living and cool / cold water rugose coral fauna at the late Himantian (latest Ashgill) and the earliest Silurian. The two phases coincided with the start of the Gondwana Supercontinental glaciation and its melting respectively. [original abstract]^1";

- 2744 s[2741] = "SULTANBEKOVA Zh.S. (1978).- Novoe semeystvo rugoz iz nizhnego paleozoya vostochnogo Kazakhstana.- Paleontologicheskii Zhurnal 1978, 3: 39-44.- FC&P 8-1, p. 52, ID=0221^Topic(s): new taxa; Rugosa, Tchingizophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician; Geography: Kazakhstan^The new genus Tchingizophyllum is described from the upper Ordovician (Upper Caradoc) of the Chingiz ranges. Evolution of microstructure and morphology of the skeleton in representatives of this genus are investigated. The older representatives are related to Primitophyllum, whereas the younger ones show relations to the Lower Silurian genera Cysticonophyllum Zaprudskaya & Ivanovskiy 1962, and Cantrillia Smith 1930. A close genetic relationship between the genera Tchingizophyllum. Cysticonophyllum and Cantrillia allows to combine them into the family Tchingizophyllidae. The new species T. primitivum and T. perplexum, both from the Upper Caradoc, and the new species Cantrillia orientalis from the lower Upper Llandovery, as well as Cysticonophyllum tchingizicum are described. Diagnosis of Tchingizophyllum: solitary, conical to cylindrical. The wall consists of lamellar sclerenchyma with fine holacanthic trabeculae; septal spines are sometimes developed. Tabulae absent or rare, horizontal or deeply inclined. Elongated dissepiments sometimes are developed at the wall.^1";
- 2745 s[2742] = "WEBBY B.D., LIN BAOYU (1988).- Upper Ordovician cliefdenellids (Porifera: Sphinctozoa) from China.- Geological Magazine 125: 149-159.- FC&P 17-1, p. 14, ID=2108^Topic(s): ; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Ordovician U; Geography: China^^1";
- 2746 s[2743] = "STOCK C.W. (2000).- Concerning: High-Mg calcite in Ordovician stromatoporoids (?).- FC&P 29, 1: 5. [short note] - FC&P 29-1, p. 5, ID=7004^Topic(s): misidentification case?; Porifera Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Ordovician; Geography: Korea^I received today on interlibrary loan, a copy of the following article: Chan Min YOO and Yong II LEE, 1993. Original mineralogy of Ordovician stromatoporoids. Carbonates and Evaporites, 8(2):224-229. In this paper Chan and Yong claim to have shown that Ordovician stromatoporoids were originally high-magnesium calcite, rather than the aragonite that

others have proposed (at least for Labechiids). They called their specimens *Labechia regularis*. * What is interesting is that the Korean specimen they illustrated looks very much like *Cliefdenella*, with relatively straight laminae and tubelike pillars. *Cliefdenella* is now considered a sphinctozoan sponge. The end product of this is that they apparently did not work with labechiids (or clathrodictyids), and the most useful information we have is a new occurrence of *Cliefdenella*. [comment and correction to a paper by Yu Changmin & Lee Yongil, 1993]^1";

- 2747 s[2744] = "KANO A., LEE D.-J. (1997).- Fluorite cement in Ordovician stromatoporoid skeletons.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 067-076.- FC&P 26-2, p. 23, ID=3703Topic(s): fluorite cements; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician M; Geography: Korea S^Fluorite crystals have been found within the skeletons of a Middle Ordovician (Llanvirn) stromatoporoid, *Labechiella regularis* (Yabe & Sugiyama), from peritidal carbonates of the Youngwol area, Southern Korea. Observation of sedimentary and diagenetic characteristics indicates that the carbonates were deposited and buried in an evaporitic, very shallow water environment, with some dolomite also formed. Occurrence fluorite is most common within the stromatoporoid skeletons. The fluorite occurs in pillars, galleries, and within dolomitic sediment between the latilaminae. In normal optical view, the pillars seem to exhibit a tube-like structure. However, the "walls of the tubes" are composed of fine-grained calcite crystals representing the earliest stage of cementation, and appear to have a different refractive index to the fluorite crystals occurring in the centre of the pillars. Formation of the fluorite clearly postdates and may be related to the dolomitization, consuming the magnesium ion and releasing the fluoroide to the reacting fluid. Diagenesis of the stromatoporoids does not resemble the diagenesis of aragonitic (molluscan) or high-Mg calcitic (echinoderm) skeletons. However, the selective occurrence in the stromatoporoid is probably related to the textural or mineralogical characteristics of the stromatoporoids.^1";
- 2748 s[2745] = "KANO A., LEE D.-J., CHOI D.K., YOO C.-H. (1994).- Ordovician (Llanvirnian) stromatoporoids from the Youngwol area, southern Korea.- Transactions and Proceedings of the Palaeontological Society of Japan, N.S. 174: 449-457.- FC&P 24-1, p. 80, ID=4510Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Llanv; Geography: Korea S^[*Labechia regularis* (Yabe and Sugiyama) is described and illustrated from the shallow ramp facies of the Teongheung Formation of the Ogcheon Fold Belt. The skeleton has been considerably altered by diagenesis. The occurrence extends the geographical range of the species.]^1";
- 2749 s[2746] = "KHROMYKH V.G. (1977).- Ordovician stromatoporoids of the Chukotka Peninsula. [in Russian].- Trudy Inst. Geol. Geofiz. AN SSSR, Sib. Otd. 351 [Stratigraphy and fauna of the Chukotka Peninsula]: 43-50.- FC&P 7-2, p. 15, ID=5613Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Russia, Chukotka^[the new genus *Mamelolabechia* (type species: *Pseudolabechia tuberculata* Yavorskiy) is described; in addition species of *Labechia*, *Stromatoceriurn*, *Pseudostylodictyon*, and *Stylodictyon* are described]^1";
- 2750 s[2747] = "DONG DEYUAN (1982).- Lower Ordovician Stromatoporoids of northern Anhui. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 21, 5: pp ???.- FC&P 12-1, p. 46, ID=6195Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Llanv; Geography: China, Anhui^[from the Machiakou Formation of Llanvirnian age 9 species of the genera *Cystistroma*, *Rosenella*, *Labechia*, *Cryptophragmus*, *Aulacera*, and *Ludictyon* are described]^1";
- 2751 s[2748] = "KARIMOVA F.S., LESSOVAYA A.I. (2007).- Ordovician System:

- stromatoporoids.- Palaeontological Atlas of Phanerozoic Faunas and Floras of Uzbekistan [A.I. Kim, F.A. Salimova, I.A. Kim & N.A. Meschankina (eds.)], volume I. Republic of Uzbekistan State Committee on Geology and Mineral Resources, Tashkent; pp 28-29, pl. 10, figs. 1-2. [book chapter] - **FC** P 36, p. 31, ID=6395^**Topic(s):** **stroms**; **Systematics:** **Porifera**; **Stromatoporoidea**; **Stratigraphy:** **Ordovician**; **Geography:** **Uzbekistan**^ [two species are described: (1) *Labechia regularis* Yabe & Sugiyama, 1930 from the Katian-age Archalyk Beds; and (2) *Plectostroma sumsarensis* Lessovaya, 1971; the occurrence of the latter is said to be the same as the holotype, which the authors say is from the Llandovery (Lower Silurian), a curious occurrence for an Ordovician stromatoporoid]^1";
- 2752 s [2749] = "YU CHANGMIN, LEE YONGIL (1993).- Original mineralogy of Ordovician stromatoporoids.- Carbonates and Evaporites 8: 224-229.- **FC** P 29-1, p. 70, ID=7051^**Topic(s):** **skeletal mineralogy**; **stroms ?**; **Systematics:** **Porifera**; **Stromatoporoidea**; **Stratigraphy:** **Ordovician M**; **Geography:** **Korea**^ **Stromatoporoids in the Middle Ordovician Yeongheung Formation show delicate reticulate structure of persistent laminae and discontinuous pillars. Abundant microdolomite inclusions are found in the stromatoporoid skeletons. Coexisting aragonite precursor grains, such as those of gastropods and cephalopods, preserve no internal microstructures due to extensive dissolution and subsequent filling by low-magnesian calcite. Brachiopods (low-magnesian calcite precursor) show well preserved skeletal microstructures but do not contain any microdolomite inclusions. Stromatoporoids were not dissolved as completely as original aragonitic shells but recrystallized more than shells with low-magnesian calcite precursor. The similarity of the stromatoporoid preservation pattern to that of echinoderm grains (high magnesian-calcite precursor) and the widespread occurrence of microdolomite rhombs in the stromatoporoid skeletons indicate that the Middle Ordovician stromatoporoids were originally composed of high-magnesian calcite. [original abstract; Stock, 2000, states the specimens described in the present paper are in fact sphinctozoan sponge Cliefdenella]^1";**
- 2753 s [2750] = "LIN BAOYU, WEBBY B.D. (1988).- Clathrodictyid Stromatoporoids from the Ordovician of China.- Alcheringa 12: 233-247.- **FC** P 18-1, p. 52, ID=2307^**Topic(s):** **taxonomy**; **stroms**, **Clathrodictyonida**; **Systematics:** **Porifera**; **Stromatoporoidea**; **Stratigraphy:** **Ordovician**; **Geography:** **China**^ [species of *Ecclimadictyon* and *Clathrodictyon* are described from Upper Ordovician strata]^1";
- 2754 s [2751] = "LIN BAOYU (1983).- Ordovician Tabulate Corals of China.- Acta palaeontologica Sinica 22, 5: 487-492.- **FC** P 13-1, p. 29, ID=0427^**Topic(s):** **Tabulata**; **Systematics:** **Cnidaria**; **Tabulata**; **Stratigraphy:** **Ordovician**; **Geography:** **China**^1";
- 2755 s [2752] = "LIN BAOYU (1985).- Upper Ordovician Tabulate Corals from the Ejin Banner, Nei Mongol (Inner Mongolia) and their stratigraphical significance.- Geological Review 31, 2: 118-124.- **FC** P 15-1.2, p. 36, ID=0828^**Topic(s):** **stratigraphy**; **Tabulata**; **Systematics:** **Cnidaria**; **Tabulata**; **Stratigraphy:** **Ordovician U**; **Geography:** **China, Nei Mongol**^ In this paper the author describes three genera and nine species and subspecies of Ordovician tabulate corals from Ejneqi, Inner Mongolia, including four new species and one new subspecies. According to tabulate corals the age of these strata belongs to Upper Ordovician. These tabulate corals are listed as follows: *Heliolites waicunensis* Lin et Chow, *Heliolites sinensis* Lin et Chow, *Heliolites ejneqiensis* Lin, sp.nov., *Propora primigenia* rara Lin, subsp.nov., *Propora taeniolitiformis* Lin, sp.nov., *Plasmoporella convexotabulata* maxima C.M. Yu, *Plasmoporella ejneqiensis* Lin, sp.nov., *Plasmoporella granulosa* Bondarenko.^1";
- 2756 s [2753] = "LIN BAOYU, ZOU XINGU (1980).- Some Middle Ordovician corals from Jiangshan County, Zhejiang.- Bulletin Chinese Academy geological

- Sciences II, 1, 1: 28-41.- FC&P 11-2, p. 25, ID=1821^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician M; Geography: China, Zhejiang^1";
- 2757 s[2754] = "LIN B., HUANG H. (1986).- Late Ordovician tabulate corals from Xinjiang and Ningxia.- Bulletin Chinese Academy geological Sciences 12: 127-144.- FC&P 16-2, p. 24, ID=2052^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: China, Xinjiang^The materials described here were collected from the Upper Ordovician (Ashgill Stage), the Bulongor Formation in Hobuskar county of the Xinjiang Uighur Autonomous Region and the Belguoshan Formation in Guyuan County of the Ningxia Hui Autonomous Region by Cao Xuanduo and Huang Hongping in 1983. Described are 13 genera (3 of them are new ones) and 20 species and subspecies (19 new ones). The taxa mentioned belong to the Agetolitidae (herein also Hemiagetolitella n.gen., characterized by mural pores besides corner pores), Sarcinulida (herein Cystosarcinula n.gen., having cystose tabulae), and Heliolitida. The new genus sinolites is assigned to the family Palaeoporitidae. The main characters are tabulae and diaphragms, thick columella and absence of perforate wall.^1";
- 2758 s[2755] = "LIN B., WANG B. (1986).- Upper Ordovician tabulate corals from western Junggar, Xinjiang, China.- Professional Papers of Stratigraphy and Palaeontology 16: 37-72.- FC&P 16-2, p. 24, ID=2053^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: China, Xinjiang^The Tabulata here described were collected from the Upper Ordovician Bulunggor Formation in Hoboksar County of Xinjiang Uygur Zizhiqu. The collections contain 18 genera and 47 species including 30 new species. The mentioned taxa belong to the Sarcinulida, Favositida, Halysitida, and most of them to the Heliolitida [part of summary].^1";
- 2759 s[2756] = "LIN B., WANG B. (1986).- Late Ordovician tabulate corals from the northern side of Borohoro Mountain, Xinjiang and its stratigraphical significance.- Bulletin Chinese Academy geological Sciences 13: 81-92.- FC&P 16-2, p. 24, ID=2054^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: China, Xinjiang^The tabulate corals dealt in this paper were collected from Late Ordovician in the northern side of Borohoro Mountain, Xinjiang. They contain six genera and eleven species, of which seven species are new, as follows: Agetolites jingheensis Lin et wang, sp.nov., Mesofavosites jingheensis sp.nov., M. dualis var. mutabilis Sokolov, M. sokolovi Barskaya, Eofletcheria xinertaiensis sp.nov., Reuschia kasakhstanica Kovalevskiy, Rhabdotetradium huochengense sp.nov., R. tianshanense sp.nov., R. borohoroense sp.nov., R. quadratum (Zhizhina), Paratetradium reticulatum sp.nov.^1";
- 2760 s[2757] = "LIN BAOYU, WANG BAOYU (1987).- Late Ordovician tabulate corals from Jiabosar district of Xinjiang and its stratigraphical significance.- Acta Palaeontologica Sinica 26, 5: 586-594.- FC&P 17-1, p. 26, ID=2137^Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: China, Xinjiang^The Late Ordovician tabulate corals under study collected from the Keziletesikela Formation, Jiabosar Formation and Basitawukuduke Formation of Fuyun county, Xinjiang are all well preserved and represented by 8 genera and 16 species (including 10 new species) which are recognized as follows: Keziletesikela Formation (early Late Ordovician): Catenipora fuyunensis Lin et wang; Jiabosar Formation (late Late Ordovician): Fletcheriella xinjiangensis sp.nov., Eofletcheriella primitiva Lin et Chow, Nyctopora qiakuertensis sp.nov., N. jiabosarensis sp.nov., N. raritabulata sp.nov., N. junggarensis Lin et Wang, Saffordophyllum junggarensis sp.nov., Rhabdotetradium nobile Sokolov, R. quadratum (Zhizhina), R. dichiforme sp.nov., Paratetradium dongjunggarensis sp.nov., Catenipora

- inordinata Kovalevskiy; Basitawukuduke Formation (Late Late Ordovician): Paratetradium tollinoidium sp.nov., Procatenipora xinjiangensis sp.nov., P. jiabosarensis sp.nov. [fragment of original summary]^1";
- 2761 s[2758] = "TCHI YONGYI (1982).- Some Upper Ordovician Tabulate and Heliolitidae from Da Hingan Ling, China.- Bulletin Shengyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 04: 62-66.- FC&P 13-1, p. 30, ID=0432^Topic(s): ; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Ordovician U; Geography: China, Da Hingan Ling^1";
- 2762 s[2759] = "RIGBY J.K., KESSEL B.J., RITTS B.D., FRIEDMANN S.J. (2006).- A new Ordovician Chiastoclonellid Sponge from Inner Mongolia, China.- Journal of Paleontology 80, 4: 775-779.- FC&P 35, p. 46, ID=2328^Topic(s): new taxa; Porifera, Chiastoclonellidae; Systematics: Porifera; Stratigraphy: Ordovician; Geography: China, Nei Mongol^1";
- 2763 s[2760] = "GUO SHENGZHE (1983).- The receptaculitid soanites from the Early Ordovician of China.- Mem. Ass. Australas. Palaeontols 1 [J. Roberts & P.A. Jell (eds): Dorothy Hill Jubilee Memoir]: 75-84.- FC&P 12-1, p. 12, ID=6175^Topic(s): ; Porifera Receptaculitida; Systematics: Porifera; Stratigraphy: Ordovician L; Geography: China^1";
- 2764 s[2761] = "LIN BAOYU, QIU HONGRONG, XU CHANGDENG (1984).- New observations of Ordovician strata in Shetai district of Urad Front Banner, Nei Mongol (Inner Mongolia).- Geological Review 30, 2: 95-105.- FC&P 13-1, p. 29, ID=0429^Topic(s): geology; geology; Systematics: ; Stratigraphy: Ordovician; Geography: China, Nei Mongol^1";
- 2765 s[2762] = "LI YUE, KERSHAW S., MU XINAN (2004).- Ordovician reef systems and settings in South China before the Late Ordovician mass extinction.- Palaeogeography, Palaeoclimatology, Palaeoecology 205, 3-4: 235-254.- FC&P 33-1, p. 89, ID=1193^Topic(s): reef systems; reefs stroms; Systematics: ; Stratigraphy: Ordovician; Geography: China S^Ordovician reefs of the South China Block occur chiefly in three stratigraphic units: (1) the middle Tremadoc Fenhsiang Formation and the upper part of the Lunshan Formation; (2) the late Tremadoc Hunghuayuan Formation; and (3) the middle Ashgill Xiazhen, Sanjushan and Daduhe Formations. The region therefore records part of the Early Palaeozoic reef expansion episode and permits a broader assessment of change in Ordovician reef facies. During middle Tremadoc time, lithistid sponge-bryozoan-Calathium-calcimicrobially dominated patch reefs of the Fenhsiang Formation occur in the high-energy belt of the central Yangtze Platform. Columnar nonskeletal stromatolites of the Lunshan Formation (coeval with Fenhsiang Formation) occur on the southeastern margin of the platform, where low diversity reef-attached organisms, and the generally fine-grained character of the sediment, are consistent with a depth below normal wave base. Calathium and lithistid sponges were the principal reef builders of late Tremadoc reefs and were widespread in the areas of Yichang (Hubei Province) and Dongzhi (Anhui Province), from the platform centre to its margin settings. Bryozoan reef builders occur only in the platform centre with a high diversity of reef dwellers such as brachiopods, trilobites and nautiloids. However, during the same time, at the platform margins, microbes played an important part in reef building together with Calathium and lithistid sponges. The middle-late Tremadoc lithistid sponge-bryozoan-Calathium-microbial community was replaced by a middle Ashgill coral-stromatoporoid community and shows that the succession of community replacement during the Ordovician took a relatively long time. Restricted by the black shales of the main part of the Yangtze region, middle Ashgill reef complexes can be found only on the northeast platform of Cathaysian Land, between the Yushan (Jiangxi) and Changshan (Zhejiang) regions. Carbonate mudmounds are present on the

- western margin of the Yangtze Platform. On the northeast platform of Cathaysian Land, patch reefs (some higher relief) with talus and biostromes of the Xiazhen Formation consist of high-diversity biotas of corals, stromatoporoids, calcimicrobes, brachiopods and gastropods. The Sanjushan Formation is age-equivalent to the Xiazhen Formation and contains carbonate mudmounds that are composed of abundant calcareous algae and calcimicrobia. Uplift forced a northward extension of Cathaysian Land and caused a regional relative sea-level fall, eliminating this reef complex prior to the first extinction event of the Late Ordovician. The Daduhe Formation carbonate mudmounds occur in the nearshore belt of Kangdian Land (western margin of the Yangtze Platform) and are paraconformably overlain by the Hirnantian Nancheng Formation. In total, the Ordovician reefs of south China show a range of habitats and controls on growth and demise. [original abstract]^1";
- 2766 s[2763] = "LI YUE, KERSHAW S., LI J., BIAN L., ZHANG J., XIA F. (2002).- Factors controlling the temporal and spatial distributions of Ordovician reefs in south China.- Journal of Stratigraphy 26, 1: 9-17.- FC&P 31-2, p. 55, ID=1713^Topic(s): reefs, distribution, ecology; reefs; Systematics: ; Stratigraphy: Ordovician; Geography: China S^^1";
- 2767 s[2764] = "CHEN XU, RONG JIAYU, QIU JINYU, HAN NAIREN, LI LUOZHAO, LI SHOUJUN (1987).- Preliminary investigation of the Late Ordovician Strata of Zhuzhai in Yushan of Jiangxi, their depositional features and environment.- Journal of Stratigraphy 11, 1: 23-34 [in Chinese, with English summary].- FC&P 16-2, p. 31, ID=2076^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Ordovician U; Geography: China, Jiangxi^The patch reefs contain tabulate corals (Agetolites, Catenipora, Plasmoporella), rugose corals (Favistina) and stromatoporoids (Clathrodictyon) as frame builders. Brachiopods, algae and trilobites are the accompanying reef organisms.^1";
- 2768 s[2765] = "OUYANG R., JIAO C.-L., BAI L.-H., CHANG H., WANG Y.-C. (2003).- The distribution and features of reef in Tazhong Area of Tarim Basin, Northwest China. [in Chinese].- Petroleum exploration and development 30, 2: 33-36.- FC&P 33-1, p. 97, ID=7241^Topic(s): reefs, ecology, paleontology; reefs; Systematics: ; Stratigraphy: Ordovician U; Geography: China, Tarim Basin^There are many different kinds of reef in Tazhong Area of Tarim Basin, Northwest China in age of Medium-Upper Ordovician. The main reef-building organisms are sponges, Calathium, stromatoporoids, corals, Crytalgaes, bryozoans, blue-green algae, chorophyte and rhodophyte in solenoporaceae. The reef can be divided onto calcilutite mound, framework reef and baffle reef. The analyzing on the reed encountered during the drilling shows that the calcitite mound is mainly formed in continental shelf are mainly in the shelf and the shelf margin. And by studying the sedimentary facies and the features of seismic reflection in this area, it can be predicted that reef with the distribution shapes of belt and discontinuous belt can be found in the shelf margin area of Tazhong Uplift and in the middle area of northern slope of Tazhong area. Especially, the areas at the west end of No. 1 fracture of Tazhong in west Shutuoguole block, up to now six anomaly reflection bodies have been found. Depending on the characters of environment and features of interior reflection they are very likely the reef mounds. It will have great effects on the oil and gas exploration of this area in case of that more play would have been processed. [original abstract]^1";
- 2769 s[2766] = "OSPANOVA N.K. (2001).- Raznoobraziye geliolitidnykh korallov Tsentralnogo Tadzhikistana v ordovikskom i silurijskom periodakh.- Bioraznoobrazie v istorii Zemli (Tezisy dokladov 47 sessii Paleont. obshchestva pri Rossiyskoy Akademii Nauk): 74-75; Sankt-Peterburg.- FC&P 31-1, p. 12, ID=7089^Topic(s): biodiversity; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician Silurian; Geography:

- Tajikistan^Biodiversity depends on the size biotope, discreting of environment conditions and capacity of organisms for variability. Heliolitida of Central Tajikistan have some peaks of diversity - in Middle Ashgillian, Late Llandoveryan - Early Wenlockian, Ludlovian and Pridolian.^1";
- 2770 s[2767] = "WANG HONGZHEN, HE YUANXIANG (1980).- Discussions of some rugose genera from the Silurian coral assemblages of China.- Acta Palaeontologica Sinica 19, 2: 136-142.- FC&P 9-2, p. 39, ID=0304^Topic(s): taxonomy, biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U - Silurian; Geography: China^One latest Ordovician and six Silurian coral assemblages are recognised. Borelasma, Dinophyllum, Maikottia (?syn. Qianbeilites), Idiophyllum and Shensiphyllum are discussed.^1";
- 2771 s[2768] = "SULTANBEKOVA Zh.S. (1983).- Novye rugozy iz verkhnego Ordovika i nizhnego Silura raiona khrebta Chingiz. [new Rugosa from the Upper Ordovician and Lower Silurian of the Chingiz Range; in Russian].- The Lower Paleozoic Stratigraphy and Palaeontology of Kazakhstan: 153-161.- FC&P 13-1, p. 36, ID=0452^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U - Silurian L; Geography: Kazakhstan^Four new taxa of rugosan corals are described - the new genera Tumanophyllum assigned to the Streptelasmataceae, and Tumsucophyllum to the Tryplasmataceae, as well as four new species: Tumanophyllum asiaticum, Brachyelasma carinatum, Calostylis curtiseptatum and Tumsucophyllum vetustum. They originate from Upper Ordovician (Dulankarinskian stage) and Lower Silurian (Alpenskian and Dzumakskian stage) deposits. The microstructure is described in detail, the fabric of which gives cause to the erection of new taxa.^1";
- 2772 s[2769] = "HE XINYI, CHEN JIANQIANG (2004).- Origin, dispersal and biogeographic affinity of the Middle-Late Ordovician and the Llandovery rugose corals in the Yangtze Region.- Acta Palaeontologica Sinica 43, 2: 179-191.- FC&P 33-1, p. 55, ID=1115^Topic(s): distribution, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician Silurian; Geography: China, Yangtze region^The Middle Ordovician - Llandovery rugose corals are abundant in the Yangtze region, especially in the Early Silurian. Altogether 123 genera of Rugosa, which contain 4 genera of Middle Ordovician, 25 genera of Late Ordovician, and 94 genera of Llandovery respectively, have been reported from this region, of which 30 genera first appeared in the Yangtze region and then dispersed to Europe and North America and other adjacent regions. The following may represent the earliest occurrence age of the referred genera: Calostylis in the Middle Ordovician (Llandeilo) of southern Sichuan; Aphyllum and Cantrillia in the middle Ashgill of western Zhejiang; the streptelasmataceae Briantelasma, Pycnactis and Tunguselasma in the late Rueddian of northeastern Guizhou; the columnariids Ceriaster, Stauria, Amplexoides and Synamplexoides, and the cystiphyllids Maikottia, Rhizophyllum among others in the Middle Llandovery of northeastern Guizhou, South China. Based on these data, we may regard that the Yangtze region may have been one of the origin centers for the Ordovician and Silurian rugose corals. This paper deals with the Middle Ordovician to Llandovery rugose coral faunas in the Yangtze region, especially with their palaeobiogeographic affinities. The Middle Ordovician Rugosa of this region are characterized by the calostylids Calostylis and Yohophyllum. The Late Ordovician (mid-Ashgill) rugosan fauna from the Sanjushan Formation of western Zhejiang Province contains some Australian elements (Hillophyllum, Bozoanophyllum), while the late Ashgill rugose fauna from the Guanyinqiao Bed in the Upper Yangtze region shows a high degree of similarity to that of North Europe, indicating that Yangtze and Europe have a close palaeobiogeographic affinity with each other. The Llandovery rugose fauna in the Yangtze region is much closer with that of Siberia, Kazakhstan and Australia.^1";

- 2773 s[2770] = "LAVRUSEVICH A.I. (1975).- Newly found ancient Rugosa from the Zeravshan-Hissar mountain region.- Vopr. paleont. Tadzhikistana 1975: 25-39.- FC&P 5-1, p. 31, ID=5376^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U - Silurian L; Geography: Tajikistan, Zeravshan-Hissar^[five (three new) species and one new subspecies of Grewingkia and two new species of the new genus Palaeolithostrotion are described from the Upper Ordovician and Lower Llandovery of the Zeravshan-Hissar mountain region in W Tadzhikistan]^1";
- 2774 s[2771] = "HE YUANXIAN (1978).- Rugosa. [in Chinese].- Atlas of Fossils of Southwest China, Sichuan Volume; pt 1: Sinian - Devonian. [atlas of fossils] - FC&P 9-1, p. 13, ID=5754^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian-pre; Geography: China, Sichuan^^1";
- 2775 s[2772] = "HE XINYI, CHEN JIANQIANG (2003).- New information on Late Ordovician and Early Silurian rugose corals in northern Guizhou Province. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 42, 2: 174-188.- FC&P 33-1, p. 55, ID=7171^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U, Silurian L; Geography: China, Guizhou^7 genera of rugose corals are reported from the middle Llandovery in northern Guizhou Province of China for the first time. They are Cantrillia, Neocantrillia, Prototryplasma, Pycnostylus, Dalmanophyllum?, Rheimaphyllum and Schlotheimophyllum. In addition, two species [Grewingkia cf. bilateralis (Neuman) and Brachyelasma cf. medioseptatum (Neuman)] collected from the late Ashgill Guanyinqiao Beds in the Shiqian County of northern Guizhou Province, and one species (Crassilasma sp.) from the early Ashgill Jiancaogou (Jiantaoshou) Formation in the same area are described. These data enrich further the content of the Late Ordovician and Early Silurian rugose coral fauna in Yangtze region, and are considerably significant for study on origin, evolution and disperse of some Early Paleozoic rugose corals. Altogether 18 species assigned to 13 genera are described. Among them 6 species are new. They are Crassilasma fenggangense sp.nov., C. crebrumseptatum sp.nov., Dinophyllum insolitum sp.nov., Neocantrillia sp.nov., Prototryplasma guizhouense sp.nov. and Schlotheimophyllum regeneranum sp.nov. [original abstract]^1";
- 2776 s[2773] = "DENG ZHANQIU (1986).- Notes on some early Palaeozoic corals.- Acta Palaeontologica sinica 25, 6: 648-656.- FC&P 16-1, p. 59, ID=1958^Topic(s): Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Ordovician Silurian; Geography: China^Three early palaeozoic coral species are described in this paper. The Ordovician rugose coral Favistina was not known in southeast China before. A fragment to be designated under the name of Favistina cf. burksae Flower (Brown, 1965) was collected for the first time from the Sanjushan Formation of Late Ordovician in Yushan area of Jiangxi, southeast China. This species is significant to indicate that the Ordovician coral fauna of southeast China corresponds roughly to that of North America. Two tabulate corals were collected from the Guandi Formation of Late Silurian in Qujing of Yunnan, southwest China, namely Parastriatopora rhizoides Sokolov and P. guandiensis sp.nov. The ramose corallum of the latter shows a clearly lamellar microstructure as pointed out by Plusquellec (1976). [part of original summary]^1";
- 2777 s[2774] = "WANG SHUBEI (1978).- Stromatoporoids. [in Chinese].- Atlas of Fossils of Southwest China, Sichuan Volume; pt 1: Sinian - Devonian; pp 11-36 + 539-544; pls 2-18. [atlas of fossils] - FC&P 12-1, p. 47, ID=5755^Topic(s): stroms; Systematics: Porifera; Stromatoporoida; Stratigraphy: Devonian-pre; Geography: China, Sichuan^A short summary of the morphology and microstructures of stromatoporoids starts this memoir. In the rest of the text a large number of new and old species of the following genera are described: (number of new speices in brackets) Labechia (1),

- Clathrodictyon (4), Intexodictyon (1), Anostylostroma (4), Atelodictyon (5), Hammatostroma (4), Actinostroma (0), Bifariostroma (1), Stromatopora (5), Ferestromatopora (4), Parallelopora (1), Hermatostroma (3), Synthetostroma (1), Clathrocoilon (0).¹¹;
- 2778 s[2775] = "LELESHUS V.L. (1972).- Silurian Tabulata from Tadjikistan.- Akademiya Nauk SSSR; 85pp [in Russian].- FC&P 2-1, p. 17, ID=4652Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U - Silurian L; Geography: TajikistanIn this monograph Lower Silurian and some Upper Ordovician Tabulata are described. New data on the morphology of Tabulata is exposed, notably on the numerical criteria of morphological features. Based on detailed paleontological and stratigraphical research, carried out by a team of geologists and paleontologists, the stratigraphical outlines of the Ordovician and Silurian of Tadjikistan are sketched out. The chapter "Paleozoogeography" gives the geographical distribution of Tabulata and Heliolitida. A paleozoogeographic regional zonation of the Ordovician, Silurian and Lower Devonian is obtained by aid of Ch. Lang mathematical formula.11;
- 2779 s[2776] = "PREOBRAZHENSKIY B.V. (1977).- Sarcinulidy severo-vostoka SSSR i Chukotskogo poluostrova. [Sarcinulidae of the Far East of the USSR and of the Chukchi peninsula; in Russian].- Trudy Instituta Geologii i Geofiziki AN SSSR (Sibirskoe Otdeleniye) /551: 64-72/ OBUT, A.M. (Ed.): Stratigrafiya i fauna Ordovika i Silura Chukotskogo poluostrova.- FC&P 7-1, p. 25, ID=0188Topic(s): ; Tabulata, Sarcinulidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician Silurian; Geography: Russia, Siberia, ChukotkaThe sarcinulid fauna, described herein, contains two genera: Calapoecia and Lyopora, with the following species: Calapoecia anticostiensis Billings 1865, C. anticostiensis mediana n.ssp., C. condensa n.sp., C. kanini n.sp., Lyopora spongiosa n.sp., L. coxi Bassler 1950). * The age of this fauna is Upper Ordovician, with the exception of the last mentioned lower Silurian species. Concerning the problems of systematics, the author refers to Preobrazhenskiy & Klaamann 1957 (see Fossil Cnidaria 6-2: 21. Moreover, he mentions the genus Coxia that he believes to be a synonym of Lyopora.11;
- 2780 s[2777] = "JIN CHUNTAI (1978).- Tabulata, Heliolitida, Chaetetida. [in Chinese].- Atlas of Fossils of Southwest China, Sichuan Volume; pt 1: Sinian - Devonian. [atlas of fossils] - FC&P 9-1, p. 13, ID=5753Topic(s): ; Tabulata, Heliolitida, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Heliolitida Chaetetida; Stratigraphy: Devonian-pre; Geography: China, Sichuan11;
- 2781 s[2778] = "LELESHUS V.L. (1989).- Organic world in Ordovician and Silurian of Middle Asia.- Paleontologicheskii Zhurnal 1989, 1: 25-35.- FC&P 23-1.1, p. 39, ID=4103Topic(s): ; paleontology; Systematics: ; Stratigraphy: Ordovician Silurian; Geography: Asia Central11;
- 2782 s[2779] = "LI YUE, KERSHAW S. (2003).- Reef reconstruction after extinction events of the latest Ordovician in the Yangtze Platform, South China.- Facies 48, 1, 269-284.- FC&P 33-1, p. 88, ID=7180Topic(s): ; reef reconstruction; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: China, Yangtze platformCarbonate sediments gradually developed into beds rich in brachiopods and crinoids in the lower part of Xiangshuyuan Formation, middle Rhuddanian. In the middle part of Xiangshuyuan Formation, biostromes, containing abundant and high diversity benthic faunas such as corals, crinoids and brachiopods, show beginnings of reconstruction of reef facies. Substantial reef recovery occurred in the upper part of Xiangshuyuan Formation, lower Aeronian, as small patch reefs and biostromes. During the late Aeronian, carbonate sediments, especially reefs and reef-related facies, expanded on the upper Yangtze Platform, and radiation of reefs occurred in Ningqiang Formation, upper Telychian. The long period of reef recovery,

- taking several million years, remains difficult to explain, because redistribution of any refugia faunas would be expected to take place soon after the extinction. Reefs and reef-related facies subsequently declined after Telychian time due to regional uplift of the major portion of the Yangtze Platform. Carbonate facies are therefore uncommon in South China during the rest of Silurian time. [last part of an extensive abstract]^1";
- 2783 s[2780] = "LAVRUSEVICH A.I. (1975).- The development of Rugosa of Southern Tien Shan in Ordovician, Silurian and Devonian.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 124-130.- FC&P 5-2, p. 6, ID=5403^Topic(s): biohistory; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician - Devonian; Geography: Tajikistan, Zeravshan-Hissar^A general account of composition of successive Ordovician to Devonian rugose coral faunas at the generic level.^1";
- 2784 s[2781] = "KONG LEI, HUANG YUNMING (1978).- Tetracoralla. [in Chinese].- Atlas of Fossils of Southwest China, Guizhou Volume; pt 1: Cambrian - Devonian. [atlas of fossils] - FC&P 9-1, p. 12, ID=5747^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician - Devonian; Geography: China, Guizhou^^1";
- 2785 s[2782] = "HUANG YUNMING (1978).- Stromatoporoids. [in Chinese].- Atlas of Fossils of Southwest China, Guizhou Volume; pt 1: Cambrian - Devonian. [atlas of fossils] - FC&P 9-1, p. 12, ID=5749^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician - Devonian; Geography: China, Guizhou^^1";
- 2786 s[2783] = "LELESHUS V.L. (1976).- Endemizm i kosmopolitizm ordoyikskikh, siluriyskikh i devonskikh Tabulyat i Heliolitoidey Sredney Azii. [endemism and cosmopolitanism of Ordovician, Silurian and Devonian Tabulata and Heliolitoidea of Middle Asia; in Russian].- Paleontologicheskii Zhurnal 1976, 4: 8-16.- FC&P 6-2, p. 21, ID=0157^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician Silurian Devonian; Geography: Asia Central^Eine palaeozoogeographische Charakteristik ordovizischer, silurischer und devonischer Tabulata und Heliolitoidea zeigt, daB das Maximum endemischer Gattungen (in Prozent angegeben) im spaten Ordoviz (45), im spaten Silur (40) und an der Grenze zum Devon (4Q) betragt. Minimale Prozente finden sich im Llandovery (0) und im Fransium (0). Im spateren Ordovizium haben die Tabulata und die Heliolitoidea Mittelasiens enge Beziehungen mit solchen von Kazachstan und China, im Silur mit denen des Urals, Kazachstans und des Altai-Sajan-Gebietes und im Devon mit dem Ural und dem Altai-Sajan Eistrikt.^1";
- 2787 s[2784] = "LELESHUS V.L. (1991).- Subclass Tabulata (tabulates).- Atlas of fossil fauna and flora of Tajikistan. Ordovician, Silurian, Devonian, pp. B-11: 48-52; 167-171; pls. 11-28; Donish, Dushanbe. [atlas of fossils] - FC&P 23-1.1, p. 40, ID=4109^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician - Devonian; Geography: Tajikistan^^1";
- 2788 s[2785] = "anonymous (1979).- Palaeontological Atlas of Northern China. II. Corals, Bryozoa, Trilobites, Grapholitoidea, Fossil Plants.- Nanjing Institute Geology Paleontology, Academia Sinica, Qinghai Institute Geosciences.- FC&P 9-1, p. 43, ID=0276^Topic(s): atlas of fossils; atlas of fossils; Systematics: Cnidaria; Rugosa Tabulata Scleractinia; Stratigraphy: Ordovician - Jurassic; Geography: China N^A considerable number of rugose, tabulate and scleractinian corals ranging from Ordovician to Jurassic time are described and figured. In addition to many new species and subspecies, the following new genera have to be noted: Agetolinus Deng & Li (family Theciidae) from Ordovician; Qinghaipora Deng & Li (family Multithecoporidae) from

- Carboniferous.^1";
- 2789 s[2786] = "LIN BAOYU (1988).- Silurian Corals from Banga County, Xizang (Tibet).- ???.- FC&P 17-1, p. 13, ID=2106^Topic(s):; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: China, Tibet^^1";
- 2790 s[2787] = "OSPANOVA N.K. (1978).- Novye Silurijskie Geliolitoidei Tadzhikistana. [new Silurian Heliolitida of Tajikistan; in Russian].- Izvestiya Akademii Nauk Tadzhikskoy SSR, otdeleniye biologicheskikh Nauk 71, 2: 49-54.- FC&P 9-1, p. 48, ID=0289^Topic(s):taxonomy; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Tajikistan^Four new species of Heliolitidae are described from Silurian deposits of Tadzhikistan and are assigned to the genera Thaumalolites Yanet in Sokolov 1955, and ? Bogimbailites Bondarenko 1966. The new species are: Th. cylindricus, Th. turkestanicus, Th. relictus and B. tangisaicus. The diagnosis concerning Thaumalolites is amended and precisely defined. Diagnosis (Thaumalolites): coralla small, pear-, bowl-shaped or cylindrical. Corallites either without own or with interrupted walls. In the first case they are confined by coenenchymal vesicles which sporadically show vertical orientation in the area of the corallites though forming a corallite tube. In the second case the walls appear interrupted or as an almost closed, compact line which stands out against the remaining skeletal elements due to thickening. Tabulae horizontally and only rarely emanating from each other. Coenenchyme consisting of convex, frequently merging vesicles of different size and shape. Thorns may be recognized in the coenenchyme. These are absent in corallites.^1";
- 2791 s[2788] = "OSPANOVA N.K. (1979).- Novyj rod geliolitoidej i ego znachenie dlja sistematiki.- Paleontologicheskij Zhurnal 1979, 2: 16-22.- FC&P 9-1, p. 49, ID=0291^Topic(s):systematics; Heliolitida, Helioplasmolites; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Asia^The new genus Helioplasmolites takes an intermediate position between the Proporida and Heliolitida. During the initial growth stage and locally as well as zonally it shows a proporid coenenchyme which is replaced by a heliolitid coenenchyme during further growth of colony. This indicates that the Heliolitida are derived from the Proporida and not from the Protareida as was presumed before. New informations are presented regarding morphology, phylogeny and systematics of the family Plasmoporidae. The new species H. communicata from the Silurian (Lower Wenlockian) of Central Asia (Zeravshan mountains) is described being the type species of the new genus. Diagnosis of Helioplasmolites: corallum semi-globular to bowl-shaped; corallites closely situated, in places touching each other; connecting canals may develop between the corallites; tabulae horizontal, bent or emanating from each other; septal formations absent or thorn- or tubercle-shaped; around the corallites there is an aureole consisting of 12 coenenchymal tubes, polygonal in outline and differing in size; diaphragm horizontal, oblique, conical or vesicular; during initial stage of colony and locally, e.g. in some zones, there is a proporid (vesicular) coenenchyme which leads to a typical heliolitid one during further growth of the colony, showing zigzag-shaped, bent walls; walls of coenenchyme and corallites thick.H. communicata Ospanova n.sp.: corallum 30 to 150 mm; corallites rounded, 0.8 to 1.3 mm in diameter, distance between corallites 0 to 1.0 mm; distance of tabulae 0.1 to 0.9 mm; thickness of wall 0.0? to 0.05 mm; between the corallites 1, rarely 2 to 3 rows of polygonal coenenchymal tubes of 0.1 to 0.6 mm in diameter, arranged in an aureole of 12 coenenchymal tubes; distance of their diaphragms 0.015 to 0.02 mm; the new species differs from H. regularis (Dun, 1927), the diameter of which is also 0.8 to 1.3 mm, by the greater numbers of connecting canals and a lesser development of coenenchyme (H. regularis is found in the Silurian of New South Wales, Australia).^1";

- 2792 s[2789] = "OSpanova N.K. (1983).- Nekotorye novye Geliolitoidy i ikh znachenie dlya morfologii korall'ov. [some new Heliolitids and their significance for the morphology of corals; in Russian].- Paleontologicheskii Zhurnal 1983, 2: 114-118.- FC&P 13-1, p. 44, ID=0494Topic(s): systematics; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian Ludl; Geography: Asia Central^From the Central Asian Ludlow the new genus Oskaria is described together with the type species O. islamovi. Characteristic is the feature of development of some kind of "dissepimentatum" around the corallites. Oskaria is assigned to the Innaeporidae Ospanova 1979 (suborder Proporina) as well as Innaepora Leleshus 1974, and Rotalites Leleshus 1974, with which Oskaria is also compared.^1";
- 2793 s[2790] = "OSpanova N.K. (1998).- Novye dannye o proiskhozhdenii roda Helioplasmodites (Heliolitidy). [new data on the origin of the genus Helioplasmodites; in Russian].- Doklady Akademii Nauk Respubliki Tadjikistan 41, 8: 18-24.- FC&P 31-1, p. 63, ID=1638Topic(s): systematics; Heliolitida, Helioplasmodites; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: Kazakhstan^[The following taxa of the family Helioplasmoditidae Ospanova, fam. nov., are described: * Ohrutschevipora Ospanova gen. nov., type-species Propora obrutschevi Kovalevskiy, 1968, upper Llandovery, L. Silurian, Kazakhstan, Tchingiz-Range, Mountain Donenjal; * Prohelioplasmodites Ospanova gen. nov., type-species P. kovalevskiyi Ospanova, gen. et sp.nov., Lower Silurian, upper Llandovery, Donenjal Series; Kazakhstan, Mountain Donenjal; * Helioplasmodites Chekhovich, 1955, type-species H. nalivkini Chekhovich, 1955, Lower Silurian; Middle Asia, Nuragatau Range, Mountain Merishkov.]^1";
- 2794 s[2791] = "OSpanova N.K. (1990).- Ducdoniidae - novoe semeystvo geliolitid iz nizhnego Silura Tadjikistana [Ducdoniidae - a new family of Heliolitids from the Lower Silurian of Tadjikistan; in Russian].- Novye vidy fanerozoyskoy fauny i flory Tadjikistana [Dzhalilov M. R. (ed.)]: 62-70, 6 figs., pls. 15-20; Donish, Dushanbe.- FC&P 19-1.1, p. 51, ID=2664Topic(s): taxonomy; Heliolitida, Ducdoniidae; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian L; Geography: Tajikistan^The new family Ducdoniidae contains the herein described genera and species: Ducdonia Leleshus 1974 (type species D. interrupta), and Farabites Ospanova gen. nov. (type species F. farabicus Ospanova sp.nov.) both from the Lower Silurian of the central Tadjik SSR.^1";
- 2795 s[2792] = "OSpanova N.K. (1980).- Novyi rod vetvistykh geliolitoidy iz verknego silura Sredney Azyi. [new Upper Silurian genus of ramose heliolitids from Central Asia; in Russian].- Dokl. AN Tajik SSR 1980, 23, 6: 325-329.- FC&P 10-1, p. 41, ID=5963Topic(s): new taxa; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian U; Geography: Asia Central^^1";
- 2796 s[2793] = "HE XINYI, CHEN JIANQIANG (2004).- Late Silurian rugose coral fauna from the Qujing District, East Yunnan.- Acta Palaeontologica Sinica 43, 3: 303-324.- FC&P 33-1, p. 56, ID=1116Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Ludl Pri; Geography: China, Yunnan^Late Silurian (Late Ludlow - Early Pridoli) rugose coral fauna from the Qujing district, east Yunnan are studied in detail, and some rugosan genera and species are reviewed, especially the coral faunacharacters and their distribution of the Guandi Formation and Miaogao Formation are discussed. Altogether the 22 genera and 44 species of rugose occurred in Late Silurian (including Guandi, Miaogao and Yulongsi Formation) of Qujing, east Yunnan (see table I, II). Among them, cystiphylloids Holmophyllum, Cystiphyllum and Kytrophyllum are dominant. The columnariidskyphophyllum, Micula and Pilophyllum and others are present. Only three genera Brachyelasma, Rukhinia and Phaulactis have been found for the first time from east Yunnan. As a

- whole, the Late Silurian rugosan coral fauna of east Yunnan has an affinity with contemporary west Qinling forms, and shows to a certain extent similarity to those of contemporaneous beds of Ural. Altogether 23 species comprising 17 genera of Rugosa are described, among them 3 species are new, namely *Cystiphyllum minutum* sp.nov., *Ketophyllum qujingense* sp.nov. and *Phaulactis vesicularis* sp.nov.¹;
- 2797 s[2794] = "CHEN JIANQIANG, HE XINYI, TANG LANG (2005).- Early Silurian (Telychian) Rugose coral fauna of Dagan Area, Northern Yunnan.- *Acta Palaeontologica Sinica* 44, 2: 229-246. [English translation].- FC&P 34, p. 30, ID=1225^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Tel; Geography: China, Yunnan^The late Early Silurian (Telychian) rugose coral fauna from Dagan area, northeast Yunnan is studied by the present authors. The Lower Silurian Series in the Dagan region may be divided into the following units: overlaying strata: Lower Devonian Cuifengshan Formation disconformity Telychian-Rhuddanian, Lower Silurian: Caitianwan Formation (mid-late Telychian) Daluzhai Formation (mid-late Telychian) Sifengya Formation (early Telychian) Huanggexi Formation (mid-late Aeronian) Longmaxi Formation (Rhuddanian-early Aeronian) conformity Upper Ordovician: Guanyinqiao Formation Wufeng Formation. In the Huanggexi Formation rugose corals are scarce, but the Sifengya Formation (early Telychian) yields numerous rugosans. Up to now, 18 genera and 34 species are reported in the Sifengya Formation, while the Daluzhai Formation merely contains rugosans including 9 genera and 11 species (Table 1). Altogether 9 species assigned to 12 genera are described in this paper, among them 1 genus and 5 species are new. They are: *Protoketophyllum daganense* gen. et sp.nov., *Crassilasma huanggexiense* sp.nov., *Pseudophaulactis heae* sp.nov., *P. convolutus* sp.nov. and *Shensiphyllum minor* sp.nov. In addition, the coral fauna characters of the Sifengya and Daluzhai are briefly discussed.¹;
- 2798 s[2795] = "STOLBOVA V.P. (2002).- Novye ruzozy iz verkhnego silura Zapadnogo Pribalkhashya.- *Paleontologicheskii Zhurnal* 2002, 2: 30-31.- FC&P 31-1, p. 60, ID=1628^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: Kazakhstan^Two new species, *Calostylis propria* and *Calostylis veriiseptatum*, from the Akkan Horizon of Kazakhstan (western Balkhash Region) are described.¹;
- 2799 s[2796] = "HE XINYI, CHEN JIANQIANG (1986).- On the genus *Idiophyllum*.- *Acta Palaeontologica Sinica* 25, 5: 525-530.- FC&P 16-1, p. 60, ID=1950^Topic(s): ; Rugosa, *Idiophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: China^In this paper, the morphological features of the rugose coral genus *Idiophyllum* Cao 1975 are discussed in detail. The generic diagnosis is emended and its systematic position revised. *Idiophyllum* may be referred to the rugose family *Arachnophyllidae* Dybowski 1873 on the basis of its morphological characteristics. This genus is probably affined to *Sumsarophyllum* Lavrusevich 1971 and *Nanshaophyllum* Yu 1956, but all the three are independent genera. The diagnosis for the genus *Idiophyllum* is emended as follows: Corallum solitary or fasciculate-massive. Septa displaying pinnate arrangement with continuous chain-like or reticulate structure; tertiary septa incomplete; all septa including second and tertiary ones serial in arrangement. Four new species are described from the Middle Silurian Hingqiang Formation in Dazhuba and Erlangba, Hingqiang County, Shaanxi, namely: *Idiophyllum massulatum* Chen (sp.nov.), *I. tenuiseptatum* Chen (sp.nov.), *I. major* Chen (sp.nov.) and *I. shaanxiense* Chen (sp.nov.).¹;
- 2800 s[2797] = "TANG LAN, HE XINYI, CHEN JIANQIANG (2007).- New information on Silurian Rugosan genus *Pilophyllia* Ge et Yu, 1974 in northeastern Guizhou.- *Acta Palaeontologica Sinica* 46, 1: 98-112.china.jst.go.jp/D/C2080A/07A0904646.html.- FC&P 35, p. 59, ID=2356^Topic(s): ; Rugosa, *Pilophyllia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography:

- China, Guizhou^Rugosan genus *Pilophyllia* Ge et Yu, 1974 possesses typical amplexoid septa belonging to the Family Amplexidae. This genus is widespread in Llandovery strata in the upper Yangtze region, China. Numerous specimens of *Pilophyllia* collected from the Xiangshuyuan and Leijiatun formation (Aeronian) in the Shiqian area, northeastern Guizhou are studied in the present paper. The diagnosis of this genus is emended, and its geological distribution are discussed in detail. Nine species are described and illustrated here for the first time. Among them, 6 species are new. They are: *Pilophyllum vesiculosa* Tang sp. n., *P. conica* Tang sp.nov., *P. ultima* Tang sp.nov., *P. stylaris* Tang sp.nov., *P. raritabulata* Tang sp.nov. and *P. leijiatunensis* Tang sp.nov. In addition, the characteristics of the *Pilophyllia* species population from the Xiangshuyuan and Leijiatun formations in the Shiqian district are briefly discussed and compared with those of the Nngqiang Formation (Telychian), southern Shaanxi and northern Sichuan.^1";
- 2801 s[2798] = "PAVLOVA A.P. (1975).- Rugose Corals from the Dal#039;yan horizon of the Turkestan range.- Paleontologicheskii Zhurnal 1975, 2: 35-40.- FC#038;P 4-2, p. 60, ID=5287^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Ludl; Geography: Turkestan Mts^D#039;après la faune de Tetracoralla, le niveau de Dal#039;yan serait d#039;âge uniquement Ludlowien (et non Wenlock-Ludlow, comme précédemment admis). Description de cinq espèces nouvelles. Création de *Columnolasma* gen. nov. de Ketophyllidae.^1";
- 2802 s[2799] = "GUO SHENGZHE (1978).- Late Silurian Tetracorals from Northern Bailingmiao of the Autonomous Region of Inner Mongol. [in Chinese].- Professional Papers of Stratigraphy and Palaeontology 06: 50-72.- FC#038;P 9-1, p. 11, ID=5740^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U; Geography: China, Nei Mongol^^1";
- 2803 s[2800] = "SYTOVA V.A. (1979).- Nekotorye ruzozy (korally) iz siluriyskikh otlozheniy opornogo razreza "Elegest" (Tuva). [some rugose corals of "Elegest" deep borehole, Tuva; in Russian].- Voprosy paleont. 8: 29-37.- FC#038;P 9-1, p. 40, ID=5798^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Russia, Tuva^[*Pseudopilophyllum*, *Phaulactis*, *Altaja*, *Entelophyllum*, *Cyathactis*, *N????liphylum*, *Tenuiphyllum*, *Evenkiella*, *Strombodes*, *Sokoloviella* gen.n. (type species *S. delicata*), *Leptelasma* gen.n.(type species *Tabularia oblonga* Zheltonogova 1960)]^1";
- 2804 s[2801] = "WANG HONGZHEN, HE XINYI (1980).- Discussions of some rugose genera from the Silurian coral assemblages of China. [in Chinese, with English summary].- Acta Palaeontologica Sinica 19, 2: 136-142.- FC#038;P 10-1, p. 21, ID=5884^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: China^^1";
- 2805 s[2802] = "WANG HONGZHEN, HE XINYI (1981).- Silurian rugose coral assemblages and paleobiogeography of China.- Geol. Soc. America Special Paper 187: 55-63.- FC#038;P 12-2, p. 36, ID=6223^Topic(s): biostratigraphy, biogeography; Rugosa assemblages; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: China^^1";
- 2806 s[2803] = "HE XINYI, CHEN JIANQIANG (1999).- Early Silurian rugose coral fauna of Tewo Area, West Qinling. [in Chinese, with English summary].- Acta Palaeontologica Sinica 38, 4: 423-434.- FC#038;P 29-1, p. 56, ID=7046^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: China, Qinling^The Early Silurian rugose coral fauna of Tewo area, West Qinling was first reported in 1990. Recently, the fauna has been researched in detail, including 9 families, 13 genera and 18 species. In this paper 11 genera and 12 species (of which 5 are new) are described. They are: *Brachyelasma* sp., *Paramplexoides* sp., *Kodonophyllum* cf. *leijiatunensis* Ge et Yu, *Eostauria minor* (Chen),

Amplexoides chaoi (Grabau), *Tryplasma* cf. *multitabulata* Nikolaeva, T. sp., *Aphyphyllum tewoense* sp.nov., *Cystocantrillia silurica* sp.nov., *Cystiphyllum yiwaense* sp.nov., *Gyalophylloides simplex* sp.nov., and *Pseudamplexus intermedius* sp.nov. All the specimens are collected from the upper member of Lalong Formation (M. Llandovery) in Tewo area, west Qinling. This fauna may be correlated with the Leijiatus Formation (M. Llandovery) of northeastern Guizhou, indicating the Early Silurian rugosan fauna from west Qinling to be close to those of Yangtze region in biogeographical affinity, and it may belong to the Yangtze Province. [original summary]^1";

2807 s[2804] = "CHEN JIANQIANG, HE XINYI (2004).- Early Silurian (Llandovery) rugose coral recovery and radiation in the Upper Yangtze region. [in Chinese, with English abstract].- Biotic Mass Extinction and Recovery of the Paleozoic in South China [Rong Jiayu & Fang Zhongjie (eds)]: chapter 2, part 7, pp 185-205; Hefei Science and Technology Press.- FC&P 33-1, p. 48, ID=7170^Topic(s): recovery, radiation, post O/S; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Llan; Geography: China, Yangtze region^Upper Yangtze region contains many complete sections through the Upper Ordovician and Lower Silurian (Llandovery). Three macroevolutionary stages, including survival interval (early and middle Rhuddanian), recovery interval (late Rhuddanian to early Aeronian), and radiation interval (mid-to late Aeronian), are recognized based on rugose coral data, with the redefinition and modification of some genera and statistical analysis of the range and distribution of the rugosan genera, including rugose coral 44 genera, assigned to 3 orders and 13 families from the Lower Silurian (Llandovery) of the Upper Yangtze region. It is discussed that the feature, pattern, and control factors of the macroevolutionary stages and their fauna. The rugose coral fauna of the survival interval are composed of 6 genera, assigned to 2 orders and 3 families, and are characterized by a few survival and Lazarus genera. During the recovery interval the rugose coral fauna are possessed of 15 genera from 3 orders and 8 families, and are dominated numerically by the small, solitary *Streptelasmata* (10 genera: 61%), with first appearing abundance debutantes taxa and endemic forms. Forty-two rugose coral genera are recorded from the radiation interval. Some genera in the radiation interval extended up from the recovery interval, whereas many genera occur first in the form of the debutantes taxa and radiation taxa. One of the most striking differences between the recovery and radiation interval is a rapid generic increase of the *Cystiphyllida* (13 genera; 31%), the *Streptelasmata* (19 genera; 45%) and the *Columnariida* (10 genera: 24%), with 14 new genera first appearing from the radiation interval. In addition, the radiation interval is of many colonial forms (12 genera: 29%) and occur the small reef composed of the rugose corals, tabulate corals and stromatoporoids. It should be emphasized that typical Silurian rugose corals are known to occur during the recovery interval and the radiation interval in Yangtze region. They include representatives of the crisis progenitor taxa, debutantes taxa and radiation taxa. It is recognized that the beginning of the 3 orders (*Cystiphyllida*, *Streptelasmata*, *Columnariida*), with differential recovery and radiation rates for each group, were different respectively. In the recovery interval and radiation interval, the beginning of *Cystiphyllida* and *Streptelasmata* were earlier than the order *Columnariida*. It is indicated that the conditions of the ecological environments or ecosystem during the Early Silurian were more adaptable for diversity of the *Cystiphyllida* and *Streptelasmata* which were more primitive rugose corals than the *Columnariida* which was more advanced group with rapidly development after Silurian. The debutantes taxa are subdivided into three kinds of the endemic-debutantes, the emigrant-debutantes and the immigrant-debutantes. [original abstract]^1";

2808 s[2805] = "TANG L., HE X.-Y., CHEN J.-Q. (2008).- Revisions of genera

- and species of Silurian Stauriid corals from Yangtze Region. [in Chinese, with English summary].- Acta Palaeontologica Sinica 47, ??: 427-443.- FC&P 36, p. 68, ID=6467^Topic(s):revision; Rugosa Stauriida; Systematics:Cnidaria; Rugosa; Stratigraphy:Silurian; Geography:China, Yangtze region^^1";
- 2809 s[2806] = "DONG DEYUAN, YANG JINGZHI (1978).- Lower Silurian Stromatoporoids from northeastern Guizhou.- Acta Palaeontologica Sinica 17, 4: 421-438.- FC&P 8-1, p. 49, ID=0203^Topic(s):stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian Llan; Geography:China, Guizhou^Species of Rosenella, Forolinia, Ludictyon, Clathrodiction, Labechia, Pachystylostroma, Pseudolabechia, Schistodictyon, Intexodictyon, and Plexodictyon are described from Upper Llandoveryan rocks.^1";
- 2810 s[2807] = "WANG SHUBEI (1982).- Stromatoporoids.- The Silurian Stratigraphy and Paleontology in Guanyinqiao, Qijiang, Sichuan. People's Publishing House of Sichuan, 84 pp.- FC&P 13-1, p. 49, ID=0532^Topic(s):stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian; Geography:China, Sichuan^The new genus Pleostylostroma is described, with type species P. shiniulanense (wang); other species are: P. coalitum wang, P. triangulatum wang, P. rarum wang, Clathrodiction qijiangense wang, C. variolare (Rosen), Labechia qijiangensis wang and Ecclimadictyon macrotuberculatum (Riabinin).^1";
- 2811 s[2808] = "JOHNSON M.E., RONG JIAYU, WANG CHUNGYUAN, WANG PUNG (2001).- Continental island from the Upper Silurian (Ludfordian Stage) of Inner Mongolia: implications for eustasy and paleogeography.- Geology 29, 10: 955-958.- FC&P 31-1, p. 71, ID=1652^Topic(s):reefs, eustacy, biogeography; stroms, reefs; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian Ludf; Geography:China, Nei Mongol^An unconformity between the Silurian Xibiehe Formation and Ordovician igneous rocks marks the perimeter of a small paleoisland near Bateer Obo in north-central Inner Mongolia, 180km northwest of the provincial capital of Hohhot. The stratigraphic position of the lower part of the Xibiehe Formation is correlated by means of conodonts with the upper part of the Ancoradella ploeckensis Zone in the basal Ludfordian Stage (corresponds to mid-Ludlovian Epoch, ca. 421 Ma). Elongate in plan (610m x 200m), the exhumed diorite core rises 30m above the lowest elevations of surrounding Silurian strata. Paleoshores along the principal axis of the inlier delineate contrasting facies. Robust stromatoporoids are in growth position within silty limestones, some directly encrusting the unconformity surface of the sheltered southeast margin. A basal conglomerate of diorite cobbles and boulders characterizes the high-energy northwest margin. The depositional constraints and timing of transgressive facies associated with this continental paleoisland have implications for the eustatic and paleogeographic history of the parent Sino-Korean plate. Burial of the island corresponds to the beginning of a global rise in sea level that peaked in late Ludlovian time. Our interpretation of windward and leeward facies requires an approximate 90° clockwise rotation of the parent plate to accommodate the dominant pattern of low-latitude trade winds and storms. [original abstract; see also Rong J.-Y. et al. in Chinese Science Bulletin 46: 238-241)]^1";
- 2812 s[2809] = "YANG JINGZHI, DONG DEYUAN (1980).- Discussion on the early Silurian strata in southwestern Hubei and northeastern Guizhou in the light of fossil stromatoporoids.- Acta Palaeontologica Sinica 19, 5: 393-404.- FC&P 10-1, p. 60, ID=1866^Topic(s):stratigraphy; stratigraphy; Systematics:Porifera; Stromatoporoidea; Stratigraphy:Silurian L; Geography:China, Hubei, Guizhou^[sixteen species of stromatoporoids are described and illustrated including those of Labechia (1), Clathrodiction (7, 3 new) Ecclimadictyon (1), Intexodictyon (1 new),

- Clavidictyon (2 new), Plexodictyon (3 new)]^1";
- 2813 s[2810] = "KARIMOVA F.S., LESSOVAYA A.I. (2007).- Silurian System: stromatoporoids.- Palaeontological Atlas of Phanerozoic Faunas and Floras of Uzbekistan [A.I. Kim, F.A. Salimova, I.A. Kim & N.A. Meschankina (eds.)], volume I. Republic of Uzbekistan State Committee on Geology and Mineral Resources, Tashkent; pp 76-78, pl. 10, figs. 3-4, pl. 11, figs. 1-3. [book chapter] - FC&P 36, p. 32, ID=6396Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: Uzbekistan^[Five species are described: (1) Clathrodictyon vesiculosum Nicholson & Murie, 1878 from the Upper Wenlock; (2) Ecclimadictyon schalynicum Lessovaya & Karimova, sp.nov. Upper Wenlock; (3) Ecclimadictyon schachriomonum Lessovaya, 1978 from the Llandovery-age Juzhnosumsar Formation; (4) Densastroma podolicum (Yavorsky, 1929) from the Wenlock-age Kuturak Formation; and (5) Simplexodictyon podolicum (Yavorsky, 1929) from the Wenlock. The illustrated specimen of S. podolicum appears to lack the wide medial light zone in the laminae, typical of the genus; however, the authors report that "a light strip 0.05-0.08 mm wide can be traced in the laminae" (p. 78).]^1";
- 2814 s[2811] = "RONG JIAYU, JOHNSON M.E., BAARLI B.G., LI WENGO, SU WENBO, WANG JIAN (2001).- Continental island from the Upper Silurian (Ludlow) Sino-Korean plate.- Chinese Science Bulletin 46, 3: 238-241.- FC&P 31-1, p. 73, ID=1654Topic(s): facies, geography; microcontinental paleoisland; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Silurian U; Geography: China, Nei Mongol^Recent field studies on Upper Silurian stratigraphy and paleontology in the Inner Mongolia Autonomous Region (for short, Inner Mongolia) near BATER OBO (=BATEAOBAO) resulted in the discovery of a small continental island with fossil invertebrates preserved as encrusters (stromatoporoids and corals) attached directly to a rocky shore surface and buried by silty clay mud. The BATER ISLAND (named herein) is 610 m x 200 m in size and is composed of Ordovician diorite. Limestone strata dating from the Ludlow epoch (about 420 Ma) surround the island and dip away from the igneous core in a radial pattern. The encrusting fossils occur on the sheltered (south and southeast) side of the island, whereas the north side was exposed to stronger wave activity based on a basal conglomerate unit composed of diorite boulders. This is the first record of an ancient island in China and the first report worldwide of stromatoporoids as members of a rocky shore community. The island clearly shows distinct windward and leeward deposits comparable to geologically younger islands from the Mesozoic and Cenozoic outside China. (original abstract)The taxa mentioned in the text are: unidentified species of Plexodictyon, Actinostromella slitensis, Hexastylstroma sp., Syringostromella sp., and Clathrodictyon? microstriatellum.^1";
- 2815 s[2812] = "ZHOU XIYUN (1983).- A preliminary study on the Biostratigraphy of Silurian Tabulata in Guizhou Province.- Acta Geologica Sinica 1983, 4: 347-357.- FC&P 13-1, p. 30, ID=0435Topic(s): zonation; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: China, Guizhou^^1";
- 2816 s[2813] = "JIN CHUNTAI (1984).- Silurian tabulate corals succession in Huanggexi of Dagan, Yunnan.- Acta palaeontologica Sinica 23, 1: 1-19.- FC&P 13-2, p. 41, ID=0558Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: China, Yunnan^The Silurian tabulate corals in the Huanggexi range of Dagan from Early Silurian Huanggexi and Sifengya Formations to Middle Silurian Hangjiadian and Daluzai Formations are recorded. Four tabulate assemblages in descending order are established and are as follows: * 4. Erlangbapora-Carneia assemblage in the Daluzai Formation contains Favosites, Pachyfavosites, Alveolites, Marginofistula, Fletcheriella, Acanthohalysites,

- Heliolites, Ningguangolites and Propora. * 3. Mesofavosites, assemblage in the Hanjiadian Formation bears Mesofavosites jiunguanensis, M. angustus irregularis, M. confertus, M. maowenensis and M. daguanensis. * 2. Multisolenia-Subalveolites assemblages in the Sifengya Formation yields Laceropora, Palaeofavosites, Parastriatopora, Halysites and Propora. * 1. Palaeofavosites-Mesofavosites assemblage in the Huanggexi Formation contains Halysites and Propora.¹";
- 2817 s[2814] = "OSPANOVA N.K., LELESHUS V.L. (1988).- O pervoy nakhodke Adetopora (Tabulata) v nizhnem Silurii Tadzhikistana [first occurrence of Adetopora (Tabulata) in the Lower Silurian of Tadzhikistan; in Russian, with Tadzhik summary].- Dokl. Akad. Nauk Tadzh. SSR 31, 2: 134-136.- FC&P 19-1.1, p. 51, ID=2665Topic(s): ; Tabulata, Adetopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: TajikistanAdetopora is well known in the Devonian of the Kuznetsk Basin and Minusinsk Basin as well as in the Carboniferous of the western Ural Mountains. Silurian species were first described by Ospanova in 1976 from the central Tadzhik SSR. Herein the new species Adetopora musapharova Ospanova & Leleshus is described, derived from the Lower Silurian.¹";
- 2818 s[2815] = "LELESHUS V.L. (1974).- Ainia n.g. - eine tabulate Koralle aus dem Obersilur Mittelasiens.- N. Jb. Geol. Palaont. Mb. 1974, 10: 593-599.- FC&P 4-1, p. 34, ID=5117Topic(s): ; Tabulata, Ainia; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Ludl; Geography: Asia CentralAinia varians n.g., n.sp. was found in deposits of Ludlowian age in the Tien-shan. It belongs to the order Auloporida, but differs from other representatives of Auloporida by having connecting pores in those parts of the coralla in which the corallites are united.¹";
- 2819 s[2816] = "ZHOU XIYUN (1983).- New material of Silurian Tabulata from Guizhou, with note on the classification and evolution of the Theciidae.- Papers Stratigraphy Palaeontology Guizhou 1: 53-68.- FC&P 13-1, p. 28, ID=0412Topic(s): phylogeny; Tabulata, Theciidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: China, Guizhou¹";
- 2820 s[2817] = "DENG ZHANQIU (1990).- Sponges and Receptaculitids from Ningqiang Formation (Late Llandovery) of Guangyuan, Sichuan.- Acta Palaeontologica Sinica 29, 5: 581-591.- FC&P 20-1.1, p. 72, ID=2857Topic(s): ; Porifera Receptaculitida; Systematics: Porifera; Stratigraphy: Silurian Llan; Geography: China, SichuanThe present study is based on the materials collected from Xuanhe, a small village in Guangyuan County, NW Sichuan by the writer in 1987. The collection contains sponges (a new subspecies Calycocoelia profunda sichuanensis) and receptaculitids (Calathium sp. indet). According to their restudy of the biostratigraphy of Ningqiang and Guangyuan in recent years, the Chinese geologists suggested a late Early Silurian (Telychian) age for the Ningqiang Formation. In the past, Silurian sponges and receptaculitids have not yet been reported in Chinese palaeontological literature. It is interesting that the Silurian sponges and receptaculitids from the Yangzi Platform are used as supplementary evidence for Silurian biostratigraphic correlation between East Asia and North America.¹";
- 2821 s[2818] = "JIN CHUNTAI, YE SHAOHUA, HE YUANXIANG, WAN ZHENGQUAN, WANG SHUBEI, ZHAO YUTING, LI SHANJI, XU XINGQI, ZHANG ZHENGQI (1982).- The Silurian stratigraphy and paleontology in Guanyinquao, Qijiang, Sichuan.- The Silurian stratigraphy and paleontology in Guanyinquao, Qijiang, Sichuan.- FC&P 13-1, p. 38, ID=0459Topic(s): stratigraphy, fossils; stratigraphy, fossils; Systematics: ; Stratigraphy: Silurian; Geography: China, Sichuan¹";
- 2822 s[2819] = "LI YUE, KERSHAW S., CHEN XU (2002).- Biotic structures and morphology of patch reefs from South China (Ningqiang Formation, Telychian, Llandovery, Silurian).- Facies 46, 1: 133-148.- FC&P 31-2, p. 54, ID=1710Topic(s): reefs, geology, biota; reefs;

- Systematics: ; Stratigraphy: Silurian Llan; Geography: China S^Ningqiang Formation (late Telychian, Llandoverly, Silurian) characterized by nearly 3000 m of shales intercalated with carbonates, is situated between Ningqiang (S. Shaanxi Province) to Guangyuan (N. Sichuan Province) adjacent to the northwest margin of the Yangtze Platform. The high diversity "Xiushan Fauna";, and abundant reef development, illustrate a relatively warm and persistent shallow marine environment in these early Silurian sediments. The sequence shows reef radiation after recovery from the end of Ordovician mass extinction events. Multiple horizons of reef-building occurred within a relative short geological interval and resulted in more than 30 patch reefs up to 2000 m in diameter and 1-50 m vertically, composed of abundant fossils. Reef biota include frame-building corals, stromatoporoids, bryozoans, and microbiolites, and reef-associated organisms such as crinoids, brachiopods, trilobites, gastropods, nautiloids and ostracods. Three reef-related biotic associations are recognized: a) reefs dominated by framework with crinoids and microbiota; b) crinoid-dominated facies. Seven representative reef examples illustrate different morphologies and growth styles. A high terrigenous debris input and shallow epicontinental ramp, which lacked obvious topographic variation, were major controls which resulted in rather simple reefs; sedimentation was apparently the main constrain on lateral and vertical extension of reefs, and prevented large-scaled reef complexes developing.^1";
- 2823 s[2820] = "LI YUE, MU XINAN, KERSHAW S. (2002).- Microbialites and calcareous algae from reefal facies of the Ningqiang Formation (Telychian, Silurian), South Shaanxi and North Sichuan.- Acta Micropalaeontologica Sinica 19, 2: 170-177.- FC&P 31-2, p. 55, ID=1712^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian Tel; Geography: China, Shaanxi, Sichuan^^1";
- 2824 s[2821] = "LELESHUS V.L. (1991).- Paleogeograficheskie mikroprovincii Silura Srednej Azii. [paleozoogeographical microprovinces in Silurian of Middle Asia; in Russian] .- Izvestiya AN SSSR, ser. geol., 1991, 2: 82-89.- FC&P 23-1.1, p. 40, ID=4106^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Silurian; Geography: Asia Central^^1";
- 2825 s[2822] = "LELESHUS V.L. (1981).- Paleogeografiya Sredney Azyi v Siluriyskom periode. [paleogeography of Central Asia during Silurian period; in Russian].- Izv. AN SSSR, ser. paleont. 6: 97-106.- FC&P 11-1, p. 58, ID=6307^Topic(s): biogeography; geography; Systematics: ; Stratigraphy: Silurian; Geography: Asia Central^^1";
- 2826 s[2823] = "HE XINYI (1990).- Silurian and Devonian rugose corals and tabulates of the Ngari Area.- In: Yang Zunyi, Nie Zetong et al. (eds): Paleontology of Ngari, Tibet (Xizang): 33-36.; China Univ. Geosci. Press. [in Chinese, with English summary].- FC&P 20-2, p. 61, ID=2951^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Devonian; Geography: China, Tibet^[new taxa are: Thamnopora zandaensis n.sp., Lower - Middle Silurian; Meandrothamnopora n.gen. (M. tibetensis n.sp.), Middle Devonian]^1";
- 2827 s[2824] = "BONDARENKO O.B. (1975).- Heliolitoidei.- Materialy Geologii Centralnogo Kazakhstana 12 [V.V. Menner (ed.): Kharakteristika fauny pogranichnykh sloev silura i devona Centralnogo Kazakhstana]: 50-61.- FC&P 6-1, p. 24, ID=5516^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian / Devonian; Geography: Kazakhstan^The following species of heliolitoid corals are described: Heliolites kuznetskiensis, H. subdecipiens and H. balkhashensis. The latter one is a nomen novum and was formerly named H. lindstromi by Kovalevskiy in 1960. But this name was [pre]occupied already by H. porosus var. lindstromi Angelin 1901. * In chapter III of this work evolutionary trend - concerning

- especially the coenenchyme, the thickness of the vertical skeletal elements etc. – of the late Silurian and lower Devonian heliolitoid corals of Central Kazakhstan are discussed.¹¹;
- 2828 s[2825] = "WANG HONGZHEN, LI ZHIMIN, WANG ZHIPING (1984).– Silurian and early Devonian rugose coral biogeography of China.– *Palaeontographica Americana* 54: 423-426 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].– FC&P 14-1, p. 47, ID=0986Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian L; Geography: China¹¹";
- 2829 s[2826] = "LIAO wei-Hua (1981).– A preliminary study of the rugose corals from the Wase Group of Dali, western Yunnan.– *Geological Society of America, Special Paper* 187: 65-75.– FC&P 11-2, p. 26, ID=1831Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U, Devonian L; Geography: China, YunnanRugose corals, including new species of Entelophyllum, Tabularia and Chalcidophyllum, suggest a late Silurian to early Devonian age for the Wase Group.¹¹";
- 2830 s[2827] = "CAO XUANDAO, OUYANG XUAN (1987).– Late Silurian and Devonian rugose corals from Luqu and Tewo regions, west Qinling Mountains.– *Stratigraphy and palaeontology of late Silurian and Devonian, west Qinling Mountains, vol 1*, pp 139-202, pls. 14-37; Nanjing University Press.– FC&P 18-2, p. 31, ID=2471Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U, Devonian L; Geography: China, Qinling Mts¹¹";
- 2831 s[2828] = "LI WUDIN (1980).– Novye vidy rugoz iz verkhnesiluriyskikh i devonskikh otlozheniy Severo-vostochnoy Fergany. [new species of Upper Silurian and Devonian rugosans of NE Ferghana; in Russian].– *Paleontologicheskii Zhurnal* 1980, 3: 28-33.– FC&P 10-1, p. 50, ID=5990Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U, Devonian; Geography: Ferghana[the new species are Kodonophyllum (?) curovesense, Phaulactis shaldyrakensis, Loyolophyllum savitskyi, Xystriphyllum caratashense and X. carauncurens]¹¹";
- 2832 s[2829] = "STOLBOVA V.P. (2001).– Razvitie rugoz v pozdnem silure i rannem devone Tsentral'noy Kazakhstana. [The development of Rugosa in the Upper Silurian and Lower Devonian of Central Kazakhstan; in Russian].– *Sbornik dokladov 2. Mezhdunarodnogo Simpoziuma "Evolyutsiya zhizni na Zemle"*, Tomsk 2001.– FC&P 32-1, p. 23, ID=7143Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U - Devonian L; Geography: Kazakhstan central¹¹";
- 2833 s[2830] = "STOLBOVA V.P. (2001).– Rugozy i biostratigrafiya verkhnego silura i nizhnego devona Tsentral'noy Kazakhstana. [Rugosa and biostratigraphy of the Upper Silurian and Lower Devonian of Central Kazakhstan; in Russian].– *Sankt-Peterburg State University: unpublished abstract of "dissertatsiya na soiskanie uchenoy stepeni kandidata geologo-mineralogicheskikh nauk"*; 19 pp., 2 tabs.– FC&P 32-1, p. 23, ID=7144Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U - Devonian L; Geography: Kazakhstan central¹¹";
- 2834 s[2831] = "LIAO wei-Hua, SOTO F. (1999).– Middle Paleozoic calceolid corals from China.– *Acta Palaeontologica Sinica* 38, 2: 155-167.– FC&P 29-1, p. 56, ID=1445Topic(s): ; Rugosa Calceolidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: ChinaThere are some peculiar calceoloid corals appeared in the Siluro-Devonian. Corallum is semicircular in transverse section and the calyx is with an operculum of one or four plates of dense sclerenchyme. The nomenclature of actual systematics is as follows (Weyer, 1996): Family Calceolidae King, 1846, Subfamily Calceolinae King, 1846, Genus Rhizophyllum Lindstrom, 1866, Genus Calceola Lamarck, 1799, Genus Goniophyllum Milne-Edwards &

Haime, 1850. * Among these three genera, Goniophyllum is pyramidal in shape and has four plates of operculum. It is very easy to distinguish it from the two other. Rhizophyllum differs from Calceola in its lumen which is filled with numerous cystose dissepiments, but the latter is completely filled by sclerenchyme. * There exist also some differences on their geological ranges between Rhizophyllum and Calceola. The former appears from Llandovery (Lower Silurian) to Emsian (Lower Devonian) and the latter occurs only in the Lower and Middle Devonian. Moreover, Rhizophyllum has a global geographical distribution. It is found in Europe, Asia, North America and Australia (Hill, 1981), but Calceola is not known from North America up to now (Oliver, 1964). * Some geologists used to consider the genus Rhizophyllum as a typical silurian coral. However, its real geological range is from Llandovery (Early Silurian) to Emsian (Early Devonian). [introductory part of the original summary]^1";

- 2835 s[2832] = "LESOVAYA A.I. (1977).- Some paleontological observations on the Silurian and early Devonian stromatoporoids of Middle Asia [in Russian].- Akademiya Nauk SSSR, Sibirskoye Otdeleniye, Trudy Instituta Geologii i Geofiziki 302: 11-21 [Sreda i Zhyzn v Geologicheskoy Proshlom - Environment and life in the Geological Past].- FC&P 6-2, p. 17, ID=0140^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian L; Geography: Asia Central^^1";
- 2836 s[2833] = "DONG DEYUAN (1984).- Silurian and Lower Devonian Stromatoporoids from Darhan Mumingan Joint Banner, Inner Mongolia [in Chinese, with English summary].- Silurian and Devonian rocks and faunas of the Bateaobao Area in Darhan Mumingan Joint Banner, Inner Mongolia: 57-77 [Li wen-guo, Rong Jia-yu & Dong De-yuan (eds)].- FC&P 15-1.2, p. 44, ID=0781^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Devonian L; Geography: China, Nei Mongol^The new genus Hexastylstroma is established (type species, H. neimongolense) for stromatoporidae with long, cellular coenosteles hexagonal in section. 29 species of 14 genera are described of which species of Syringostromella, Parallelostroma, Clathrodictyon. Plexodictyon, Intexodictyon, Syringostromella, Parallelostroma, Climacostroma, are new.^1";
- 2837 s[2834] = "DENG ZHANQIU, YANG DAORONG (1984).- Silurian and Devonian tabulate corals from Darhan Mumingan Joint Banner, Inner Mongolia.- Silurian and Devonian rocks and faunas of the Bateaobao Area in Darhan Mumingan Joint Banner, Inner Mongolia: 103-143 [Li wen-guo, Rong Jia-yu & Dong De-yuan (eds)].- FC&P 15-1.2, p. 33, ID=0820^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Devonian; Geography: China, Nei Mongol^Silurian-Devonian rocks of Central Inner Mongolia are mainly exposed in Darhan Mumingan Joint Banner. The rocks consist of neritic clastolites and carbonatites and bear numerous zoolites. Recently the junior writer and his colleagues collected a number of tabulate corals and heliolitids from the Bateaobao Formation (S2-S3), the Xibiehe Formation (S3), the Qaganhebu Formation (D1?), and the Alugong Formation (D1). The collections described in this paper contain 19 genera and 58 species (including 1 new genus and 17 new species). Stratigraphical range and geographical distribution of the species studied are indicated in Table 7 of the Chinese text. According to the characteristic features of the tabulate corals and heliolitids from the Xibiehe Formation, the Silurian faunas have affinities with those of Kitakami, Jilin, Altai, Sayan, Tien Shan, Kazakhstan, Podolia and Estonia.^1";
- 2838 s[2835] = "KOVALEVSKIY O.P. (1975).- Tabulata.- Materialy Geologii Centralnogo Kazakhstana 12 [V.V. Menner (ed.): Kharakteristika fauny pogranychnykh sloev silura i devona Centralnogo Kazakhstana]: 50-51.- FC&P 6-1, p. 22, ID=5511^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian

- / Devonian; Geography: Kazakhstan^The following tabulate corals are described: family Favositidae: Mesofavosites proximus n.sp., Favosites tachlowwitziensis, F. kelleri, F. maubasensis, F. horribilis, F. mikhnevichi, F. pactum, F. weissermeli; family Michelinidae: Pleurodictyum mongolicum; family Coenitidae: Axuolites borissiakae, A. moribundus. * In chapter III of this work evolutionary trends - concerning especially the increase of the wall-thickness, the development of higher porosity, the forming of a fibrous wall instead of a lamellar one etc. - of the late Silurian and lower Devonian tabulate corals of Central Kazakhstan are discussed.^1";
- 2839 s[2836] = "LI YAOXI (1983).- Silurian and Devonian Tabulate coral assemblages in the Beishan area, Gansu province. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 22, 1: 71-81.- FC&P 12-2, p. 37, ID=6225^Topic(s): zonation, biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Devonian; Geography: China, Gansu^Six Silurian and Devonian tabulate coral assemblages are recognized in the so-called Beishan area which covers the vast territory north to the Hexi Corridor and west to the weak Stream in Gansu Province. (1) Paleofavosites-Hexismia Assemblage (Lower Silurian Xieshan Group); (2) Favosites-Multisolonia-Halysites Assemblage (Middle Silurian Gongpoquan Group); (3) Hemithecia-Romingerella-Alveolites Assemblage (Upper Silurian Salinhaolai Formation); (4) Parastriatopora-Favosites-Squamiteofavosites Assemblage (Upper Silurian-Lower Devonian Shuishishan Group); (5) Neoyacutiopora-Squamites Assemblage (Late Lower Devonian Qinghegou Formation); (6) Thamnopora-Parastriatopora Assemblage (Early Middle Devonian Hazhu Formation). * The first two assemblages are distributed in the southern Beishan while the other four are in the northern Beishan. The genera Hemithecia, Romingerella, Rachopora, Crenulipora and Squamites found in the northern Beishan are known to be restricted to a belt extending from Kazakhstan, Beishan, Inner Mongolia to Heilungjiang. In the southern Beishan, however, most genera are cosmopolitan and similar in specific composition to those in the Qilianshan. It seems that there exist two different biogeographic provinces in this area, the Kazakhstan-Xingan Province in the North and the Qinling-Qilian Province in the South. [original summary]^1";
- 2840 s[2837] = "Xi'an Institute of Geology and Mineral Resources & Nanjing Institute of Geology and Palaeontology, Academia Sinica (1987).- Late Silurian-Devonian Strata and Fossils from Luqu - Tewo area of west Qinling Mountains, China.- Vol. 1-2, Nanjing (University Press).- FC&P 18-2, p. 17, ID=2464^Topic(s): atlas of fossils; paleontology; Systematics: ; Stratigraphy: Silurian U, Devonian; Geography: China, Qinling Mts^^1";
- 2841 s[2838] = "LIAO Wei-Hua, RONG JIAYU (1995).- Silurian-Devonian biostratigraphy, synecology and palaeobiogeography from central Jilin.- Journal of Stratigraphy 19, 4: [pp?].- FC&P 24-2, p. 41, ID=4544^Topic(s): biostratigraphy, ecology, biogeography; stratigraphy; Systematics: ; Stratigraphy: Silurian Devonian; Geography: China, Jilin^^1";
- 2842 s[2839] = "LI WENGUO, RONG JIAYU, DONG DEYUAN, SU YANGZHENG (1982).- New knowledge on the Siluro-Devonian biostratigraphy of the Bateabao area, Damao Qi, south Inner Mongolia.- Acta Stratigraphica Sinica 6, 2: pp ???.- FC&P 12-1, p. 47, ID=6198^Topic(s): stratigraphy; stratigraphy, stroms; Systematics: ; Stratigraphy: Silurian / Devonian; Geography: China, Nei Mongol^^1";
- 2843 s[2840] = "YU CHANGMING, LIAO Wei-Hua, DENG ZHANQIU (1978).- The sequence and distribution of Devonian coral assemblages in South China II.- Pap. Int. Symp. Devonian System 1978: 7 pp; Nanjing Institute Geology Paleontology, Academia Sinica.- FC&P 8-1, p. 55, ID=0237^Topic(s): biostratigraphy; coral assemblages; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian;

Geography: China **S**The paper summarizes the sequence and distribution of the Devonian coral faunas in South China. Corals are proliferated and very diversified in the shallow sea which, during Devonian time, covered major parts of South China. They may roughly be divided into two faunas, namely the western and the eastern fauna. In the early Devonian they differ considerably from each other. The western fauna mainly developed in the miogeosynclinal region of western Yunnan, western Szechuan and West Tsingling. Regarding this fauna, Tabulata are prevalent. Five rugose complexes are established ranging from Upper Lochkovian to Zlichkovian (see Yu & Liao 1978). The eastern part of South China is characterized by a sedimentary prevailing system of platform type (nearshore shallow water environment). Corals, for the first time, appeared in the transgressive marine carbonate deposits and continued to develop until the Late Devonian. Both, Rugosa and Tabulata are abundant in this sequence. From this type, rich in corals, the faunal sequence of the Lower and Middle Devonian may be taken as a standard of reference. The following [assemblages] are recognized in ascending order: the Nahkaoling fauna (Upper Lochkovian / Lower Pragian), the Yukiang fauna (Middle / Upper Pragian), and the Ertang fauna (Zlichovian); the Beiliu fauna of the early Middle Devonian (Dalejan / Eifelian) probably equivalent to the Szepai and the Yingtang faunas, the Tungkangling fauna of the late Middle Devonian (Givetian), and the Shetienchiao fauna of the early Late Devonian (Frasnian). Representatives of the successive faunas are listed in two tables, and their characteristic features are briefly discussed.^1";

- 2844 s[2841] = "LELESHUS V.L. (1982).- Ekologiya rannedevonskikh korallov Shishkata (Centralnyi Tadjhikistan). [ecology of Lower Devonian corals from Central Tadjhikistan].- Paleontologicheskii Zhurnal 1982, 3: 3-8.- FC&P 13-1, p. 21, ID=0397^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L; Geography: Tajikistan, Shishkat^Living conditions of early Devonian corals from Shishkata are described. It is observed that in "polycarpic" species almost all coral polyps are not dying of natural ageing but of hostile ecological living conditions. In some species of colonial corals the surviving curve of the polyps is in analogy with the living curves of non -ageing organisms. Between the Tabulata "monocarpic" species occurred in edition, the natural life-span of which did not outlive one year. A. WEISSMANN's theory is confirmed herewith.^1";
- 2845 s[2842] = "LIAO Wei-Hua (2000).- The Biogeography and Synecology of Devonian corals from China.- Acta Palaeontologica Sinica 39, 1: 126-135.- FC&P 29-1, p. 51, ID=1443^Topic(s): biogeography, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: China^It is generally recognized that there were three first-level marine, biographic divisions of the Devonian world:1. The Old world Realm, which includes Eurasia, Australia, North Africa and western and Arctic North America.2.The Eastern Americas Realm (or Appalachian Realm), which includes most of eastern North America and northern South America.3. The Malbvinokaffric Realm, which includes southern South America, southern Africa and Antarctica.The Old world Realm occupied the ancient tropics, the Malvinokaffric Realm was located near the anccient South Pole and the Eastern Americas Realm was situated probably in the southern temperature zone. [first part of extensive summary]^1";
- 2846 s[2843] = "LIN BAOYU (1988).- Devonian Corals from Xianza County, Xizang (Tibet).- ???.- FC&P 17-1, p. 13, ID=2107^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: China, Tibet^^1";
- 2847 s[2844] = "TANG ZHENGXIU, DONG ZHENCHANG, TANG XIAOSHAN (1988).- The Qiziqiao Limestone.- Journal of Stratigraphy 11, 2: 77-90 [in Chinese,

- with English summary].- FC&P 18-1, p. 34, ID=2236^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv?Fra; Geography: China, Hunan^The Qiziqiao (Chitzechiao) limestone widely distributed in Hunan is a diachronous lithostratigraphic unit. It extends from the Dunggangling stage to the top of Shetianqiao stage in stratigraphic range. Its upper boundary lies below the Shetianqiao stage in the typical section located in Qiziqiao of Xiangxiang, Hunan. It is possibly changed into the Shale, Dinghechong, Xinshao, Longkouchong formations and "Shetianqiao bed" in the horizontal direction. Sinodisphyllum and Pseudozaphrentis occur in the late middle Devonian rather than the early upper Devonian. The Grypophyllum mackenziense zone is regarded as belonging to the middle Devonian.^1";
- 2848 s[2845] = "HOU HONGFEI (ed.) (1988).- Devonian Stratigraphy, Paleontology and Sedimentary facies of Longmenshan, Sichuan.- Geological Publishing House; Beijing.- FC&P 18-2, p. 17, ID=2463^Topic(s): biostratigraphy, ecology; stratigraphy, ecology, fossils; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: China, Sichuan^^1";
- 2849 s[2846] = "XU SHAOCHUN, LIN BAORYU (1995).- Devonian tabulatormorph corals from Northern Badain Jaran of Nei Mongol.- Professional Papers of Stratigraphy and Palaeontology 25: 1-26.- FC&P 25-1, p. 6, ID=2991^Topic(s): tabulatomorpha; corals tabulatomorpha; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: China, Nei Mongol^^1";
- 2850 s[2847] = "LIAO wei-Hua (1993).- Biogeographic provinces of the Devonian corals in China.- Journal of Stratigraphy 17, 4: [pp?].- FC&P 24-2, p. 41, ID=4542^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: China^^1";
- 2851 s[2848] = "KATO M. (1972).- Le Dévonien de Corée. [en japonais] .- J. geol. Soc. Jap. 1972, 78, 10: 541-544.- FC&P 4-1, p. 33, ID=5113^Topic(s): ; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian [?!Moscovian]; Geography: Korea^[coral fauna of the Moscovian of Korea]^1";
- 2852 s[2849] = "LIAO wei-Hua, DENG ZHANQIU (2009).- Age re-assessment of the Longdongshui Member (Middle Devonian) in Southern Guizhou on the basis benthic fossils. [in Chinese, with English summary].- Acta Palaeontologica Sinica 48, 4: 637-645.- FC&P 36, p. 129, ID=6584^Topic(s): biostratigraphy; stratigraphy, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Eif; Geography: China, Guizhou^^1";
- 2853 s[2850] = "SHEN JIANWEI (1993).- Devonian Rugose Corals, Conodonts and Microfacies of Carbonate Platform and Reef Complexes in Guilin, Guangxi / China.- Nanjing [University?] Ph.D. Thesis: 248 pp., 57 figs, 18 tabs, 41 pls.- FC&P 23-1.1, p. 37, ID=6833^Topic(s): geology; corals, geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: China, Guilin, Guangxi^A detailed taxonomic study on the Devonian rugose corals in Guilin resulted in the description of 20 genera and 51 species, based on more than 1100 thin sections, and in the recognition of four rugose coral assemblages in the interior-platform subfacies, including the Temnophyllum waltheri-Sunophyllum assemblage, the Pantophyllum-Disphyllum liumaense assemblage and the Cystophrentis assemblage. Four rugose coral assemblages in the platform margin subfacies also can be recognized as the Disphyllum-Argutastrea assemblage, the spinophyllum-Kwangxiastraea assemblage, the Pseudozaphrentis assemblage and the Caninia-Dorlodotia assemblage. [excerpt from the summary]^1";
- 2854 s[2851] = "LIAO wei-Hua (1977).- On the Middle and Upper Devonian boundary by tetracorals in Dushan District, southern Guizhou.- Acta Palaeontologica Sinica 16, ??: 37-52.- FC&P 6-2, p. 16,

- ID=0125^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M/U; Geography: China, Guizhou^Brief description of fauna with four new species (Chinese with Engl. summary).^1";
- 2855 s[2852] = "YU CHANGMING, LIAO Wei-Hua (1978).- Lower Devonian Rugose corals from Alengchu of Lijiang, Northwestern Yunnan.- Acta Palaeontologica Sinica ??, 3: 245-265.- FC&P 8-1, p. 52, ID=0222^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: China, Yunnan^The paper deals with 17 genera and 26 species (10 of them are new ones) of rugose corals from the Lower Devonian miogeosynclinal deposits of Alengchu of Lijiang, N.W. Yunnan (western part of South China). Five rugose coral assemblages are preliminarily recognized ranging from the Upper Lochkovian to Zlichovian. The new species (briefly described in the English summary) are: Siphonophrentis alengchuesis, Pseudoblothrophyllum elegans, Fasciphyllum minor, Pseudochonophyllum laticystosum, P. liniangense, Gurievskiella subconica, Embolophyllum alengchuense, Stereoxylodes yunnanensis and Spongophyllum liujiangense.^1";
- 2856 s[2853] = "YU CHANGMING, KUANG GUODUN (1980).- Rugose corals from the Devonian Ertang Formation of Central Guangxi.- Acta Palaeontologica Sinica 19, 3: 175-181.- FC&P 9-2, p. 46, ID=0305^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: China, Guangxi^Rugose corals have been reported for the first time from the Ertang Formation of Central Guangxi. Here described and illustrated are Lyrielsma guangxiense sp.nov., L. guangxiense crassum sp. et subsp.nov., L. guangxiense gracile sp. et subsp.nov., Xiangzhouphyllum minor gen. et sp.nov. Besides this, the species of Tryplasma, Heterophrentis, Zonophyllum, Pseudomicroplasma and "wedekindophyllum" are only identified. The Ertang Formation, about 433m in thickness, is composed of thin-layered limestones intercalated with shales, calcareous mudstones and argillaceous limestone. This formation occurs over a large expanse of area, extending from south of the Wuxian district northward to the north of the Xiangzhou district. It is overlain by the Sipai Formation and underlain by the Yukiang Formation respectively, with the poorly fossiliferous dolomite beds in between. Known as the Lyrielsma guangxiense fauna, the new assemblage is found at the base of the upper member of the Ertang Formation and is considered to be Lower Devonian in age. The established sequence of Lower to early Middle Devonian coral faunas in central Guangxi is shown in Table 2 of the Chinese text. ^1";
- 2857 s[2854] = "YU CHANGMING, KUANG GUODUN (1982).- Late Middle Devonian rugose corals from Liujing, Heng Xian, Guangxi and their paleoecological significance.- Bulletin Nanjing Institute Geology and Palaeontology, Academia Sinica 1982, 4: 241-278.- FC&P 12-2, p. 32, ID=0469^Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Guangxi^Late Middle Devonian deposits containing faunas of distinct palaeoecological character are well developed in Liujing, Heng Xian of Central Guangxi. These are called Mintang Formation, about 112m in thickness, lying above the Najiao Formation and ranging from Early Devonian to early Middle Devonian in age. Overlying the Mintang Formation is a limestone bed of Late Devonian, Frasnian, with conodonts that belong to the upper hermanni-cristatus Zone and lower asymmetricus Zone. Rugose corals are associated with tabulate corals, brachiopods, crinoid stems and stromatoporoids in the Mintang Formation. * The rugose corals, described in this paper, include 30 species referred to 17 genera and subgenera. Among them two subgenera and 22 species are new. * The new subgenera are: Temnophyllum (Truncicarinulum) and Haplothecia (Kuangxiastraea).^1";

- 2858 s[2855] = "YU CHANGMING, CAI ZHENGQUAN (1983).- Early Middle Devonian rugose corals from the Lure Formation of Diebu in Gansu Province.- Gansu Geol. 1: 1-77.- FC&P 12-2, p. 31, ID=0470^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: China, Gansu^The paper includes descriptions of 45 species assigned to 24 genera, among which four genera, three subgenera and 22 species are new. * The new forms are: Utaratuia (Subutaratuia), Dendrostella (Ceristella), Spongastraea, Leurelasma, Curtastrum, Gansuastraea and Brevisseptophyllum (Spissophyllum). They are briefly characterized together with their type species in the English summary.^1";
- 2859 s[2856] = "WANG GENXIAN, XIA ZHIFEN (1983).- Discovery of Cystophrentis in eastern Hunan and western Jiangxi and Stratigraphical division of the Aikuanian Stage.- Journal of Stratigraphy ., 3: 191-200.- FC&P 13-1, p. 37, ID=0556^Topic(s): new records, biostratigraphy; Rugosa, Cystophrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China, Hunan, Jiangxi^[illustrated are Caninia dorlodoti Salee, Zaphrentis sp., Cystophrentis kolahoensis Yu, Neozaphrentis ? sp., Zaphrentites parallelus (Carruthers), Pseudodouralina cf. irregularis Yu, Kueichoupora kwangsiensis Lin, K. kushanensis major Lin]^1";
- 2860 s[2857] = "ZHANG ZHIPENG (1985).- Early Middle Devonian Rugose Coral Biogeography of China.- Journal of Wuhan College Geology, Earth Sciences 1985, 10: 55-69.- FC&P 15-1.2, p. 29, ID=0804^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: China^^1";
- 2861 s[2858] = "BIRENHEIDE R., LIAO WEI-HUA (1985).- Rugose Korallen aus dem Givetium von Dushan, Provinz Guizhou, S-China. 3: Einzelkorallen und einige Koloniebildner.- Senckenbergiana lethaea . ????.- FC&P 15-1.2, p. 25, ID=0859^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Guizhou^With the present third part, a preliminary completion of our investigations on rugose corals of the Tushan Formation of Dushan County, Province Guizhou in the People's Republic of China is attained. This part deals with descriptions and illustrations of solitary corals of the Cyathophyllina and Ptenophyllina which are very abundant in that region, and also with some colonial species of the same suborders. 27 species and subspecies have been recognized within our material, in which we refer to 17 different genera. The following species and subspecies are described by us as new: Dendrostella tunshangensis n.sp., Jipaolasma sinense n.sp., Tabulophyllum quasiexpansum n.sp., Grypophyllum convolutum dahekouense n. ssp., Sociophyllum ? guizhouense n.sp., and Sociophyllum jumuwanense n.sp. Furthermore a new genus, Jipaolasma, with the type species Jipaolasma sinense, is established. - With the exception of some species which are known up to now only from S.China, there are also many in our present fauna which have been recorded at a lot of localities in the world, especially from the Givetian of Europe (together with the Russian Platform), of the Urals, and even of N. America. - In the Tushan Formation of the Dushan Section as a whole we find the following characteristic reference genera: Dendrostella in the lower part (Tunshang Member), Endophyllum and Spinophyllum in the upper part (Chiwochai Member), whereas Temnophyllum is present in the middle (Chipao Member) as well as at the top of the Givetian where it reaches its acme. -Some Chiwochai Member species as Mictophyllum shawoziense, Tabulophyllum quasiexpansum, and perhaps also Spinophyllum hejiazhaiense suggest already remarkable Upper Devonian elements in our coral fauna.^1";
- 2862 s[2859] = "LIAO Wei-Hua, BIRENHEIDE R. (1985).- Rugose korallen aus dem Givetium von Dushan, Provinz Guizhou, S-China. 2: Kolonien der Columnariina.- Senckenbergiana lethaea 65: 265-295.- FC&P 14-1, p. 46, ID=0970^Topic(s): ; Rugosa; Systematics:

- Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Guizhou^1";
- 2863 s [2860] = "LIAO Wei-Hua, SOTO F. (2004).- Rugose corals from the Arpishmebulaq Formation (Early Devonian, Lochkovian) of South Tianshan in Xinjiang.- Acta Palaeontologica Sinica 43, 3: 366-376.- FC&P 33-2, p. 19, ID=1120^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Lochk; Geography: China, Xinjiang^The Arpishmebulaq Formation is exposed at the eastern South Tianshan of Xinjiang and was originally proposed by E. Norin (1937, 1941), a Swedish geologist. It consists mainly of limestone and shales with a thickness about 400 m and yields abundant corals, brachiopods, ostracods, stromatoporoids and conodonts. Norin subdivided it into 6 divisions (A, B, C, D, E, F). There are some different opinions about the geological age of the Arpishmebulaq Formation: 1. Norin (1937, 1941) and Regnell (1941) first regarded most of formations (division A to division E) of Late Silurian age, while the top part (division F) of possibly Early Devonian age; 2. Zhang, Yu et al (1959) as well as Hou, Wang and al. (1988) recognized it as of the Lower Devonian; 3. Wang (1988) and Wang (1990) considered it as belonging to the Late Silurian; 4. Liao and others (1990, 2001), Liao and Xia (1996), Xia (1997), Deng (2001), Soto and Liao (1998, 1999, 2001) believed that it (from division B to division F) would be the age of late Lochkovian (Early Devonian) in the light of some index conodonts *Amydrotaxis praejohnsoni*, *Pandorinellina optima*, *Ozarkodina remscheidensis*. The rugose corals described and illustrated comprise 17 species within 7 genera: *Cystiphyllodes corniculum* (Regnell, 1941), *C. cf. laticystis* (Regnell, 1941), *C. cf. macrocystis* (Schlüter, 1889), *Tryplasma cf. tomtchumyshensis* Zheltonogova, 1961, *T. hercynica* (Peetz, 1901), *T. aequabile* Lonsdale, 1845, *Pseudotryplasma sp. A*, *Dubrovia sp. A*, *D. sp. B*, *D. aff. dubroviensis*, *Salairophyllum cf. angustum* (Zheltonogova, 1961, *Neomphyma sp.*, *Rhizophyllum hedini* (Regnell, 1941), *R. cf. enorme* Etheridge, 1903, *R. extensum* Soto and Liao, 1998, *R. sp. A*, *R. sp. B*. Among these rugose corals, *Tryplasma cf. tomtchumyshensis*, *T. hercynica* and *T. aequabile* closely resemble some Lower Devonian forms from the Urals, Salair and Altay Mountains. Although genus *Rhizophyllum* is usually recorded from Silurian but *R. cf. enorme* is somewhat related to *R. enorme* from the Lower Devonian of eastern Australia, Salair, Altai and the Urals. *Dubrovia aff. dubroviensis* and *Salairophyllum cf. angustum* closely resemble their holotypes from the Lower Devonian of the Salair, Russia respectively. Besides, the tabulate corals *Dictyofavosites multitabulata* Dubatolov, *D. nagorskyi* Mironova, *Favosites terrejaeensis* Tchernychev and *Cladopora rectilineata* Simpson have also been recorded from the Lower Devonian of Salair. Taken as a whole, they all indicate an Early Devonian age (Lochkovian), obviously bearing a much closer relationship with those of Salair, Altay and the Urals of Russia. ^1";
- 2864 s [2861] = "ZHANG YUBAO, SUN YUANLIN, LIU JIAOBO, HAN BAOFU (2004).- A new species of *Aphraxonia* from the Upper Middle Devonian of the South Tianshan Area, Xinjiang, China.- Acta Palaeontologica Sinica 41, 3: 118-123.- FC&P 33-1, p. 65, ID=1137^Topic(s): new taxa; Rugosa, *Aphraxonia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Xinjiang^*Aphraxonia*, a rare Middle-Late Devonian rugosa coral genus with columella structure, was previously only known from two localities: Upper Devonian of Anatolia area, Turkey and the Qiziqiao Formation (Givetian) of Hunan Province, China (Ünsalner 1951; Jia et al. 1977), including two species: *Aphraxonia salaner* and *Aphramonia zhuzhouensis* (Jia). *Aphraxonia zhuzhouensis* (Jia) was originally described by Jia (see Jia et al. 1977) under the genus *Hunanaxonia*. After comparing the main features of *Aphraxonia* Ünsalner 1951 and *Hunanaxonia* Jia 1977, Hill (1981) thought that [there are] no basic differences between the two genera and, thus, she put *Hunanaxonia* under

the subjective synonyms *Aphramonia Unsalaner* 1951. In this paper, we report a new species of the genus, namely *Aphraxonia wuqiaensis* sp.nov., collected from the Middle Devonian of the South Tianshan area, Xinjiang. This new species represents an intermediate form between *Aphraxonia taurensis* Unsalaner and *Aphramonia zhuzhouensis* (Jia) in the internal morphological features. It is the first to confirm the existence of *Aphraxonia* outside the Anatolia area of Turkey and Hunan Province of China. This discovery demonstrates that *Aphraxonia* has wide geographical distribution during the Middle to Late Devonian period although it is rare in the fossil record. It also suggests that the South Tianshan area had close biogeographical relationship with both Turkey and southern China during the Devonian. [first part of extensive summary; numerous misspellings !]^1";

2865 s[2862] = "LIAO Wei-Hua (2006).- Biodiversity of Devonian Rugose Corals from South China.- Originations, Radiations and Biodiversity Changes - Evidences from the Chinese Fossil Record [Rong Jiayu et al. (eds); Beijing Science Press]: 417-428 + 889-890.- FC&P 34, p. 33, ID=1233^Topic(s): biodiversity; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: China S^^1";

2866 s[2863] = "LIAO Wei-Hua, MA XUEPING, SUN YUANLIN (2006).- Some Devonian rugose corals from Panxi, Huaning County, Yunnan Province.- Earth Science Frontiers 13, 6: 234-246.- FC&P 34, p. 33, ID=1235^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: China, Yunnan^Eastern Yunnan, southwest China, especially the Panxi (Poshi) area, has been one of the most important areas for the study of the neritic Devonian in South China. Fossiliferous Devonian deposits in the Panxi region have been well known for a long time. The Devonian in the Panxi section is mainly composed of carbonate rocks, which contain abundant benthic fossils (rugose corals, stromatoporoids and brachiopods). Significant biostratigraphic works on these Devonian rugose corals have been made by Wang Hong-zhen, who assigned them to 36 species in 19 genera, including 19 new species. He subdivided them into 7 horizons (in ascending order: G, C, K, E, T, P, D). The rugose corals described and illustrated in this paper comprise 15 species within 14 genera: *Cystiphyllodes tungshanensis* (wang), *Mesophyllum panxiense* (Yu, Liao Deng), *Dendrostella trigemme*, *Neosyringaxon huaningense* sp.nov., *Endophyllum panxiense* sp.nov., *Grypophyllum tenue* wedekind, *Disphyllum* sp., *Spinophyllum hejiazhaiense* (Kong in Kong Huang), *Temnophyllum waltheri* Yoh, *Truncicarinum temeniophylloides* (wang), *Pseudozaphrentis* cf. *difficile* Sun, *Thamnophyllum sinense* Yu, Liao Deng, *Mictrophyllum intermedium* Liao, *Axophyllum vughani longiseptatum* Wu Zhao, *Axophyllum zhanyiense* Wu Zhao. Among them, *Grypophyllum tenue*, *Temnophyllum waltheri*, *Thamnophyllum sinense*, *Cystiphyllodes tungshanensis* and *Spinophyllum hejiazhaiense*, the species in the Kutsing and Poshi Formations, as well as the genera *Endophyllum* and *Neosyringaxon* are characteristic of the Givetian in South China, Russia and Germany. *Pseudozaphrentis difficile* and *Mictrophyllum intermedium*, the former is from the upper part of the Itate Formation and the latter is from the Zaijie Formation, usually recorded from the Frasnian of South China. *Dendrostella trigemme*, from the Nanpanjiang Formation, is commonly found in the upper Eifelian to lower Givetian. The overlying strata yield Lower Carboniferous corals *Axophyllum zhanyiense* and *Axophyllum vughani longiseptatum*. Both species were originally reported from the Lower Carboniferous of western Guizhou and eastern Yunnan. The boundary between Carboniferous and Devonian in Panxi area may be disconformable. [original abstract]^1";

2867 s[2864] = "LIAO Wei-Hua (2003).- Devonian Biostratigraphy of Dushan, Southern Guizhou and its coral Extinction events. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 42, 3: 417-427.- FC&P 33-1, p. 58, ID=1384^Topic(s): biostratigraphy, extinctions; Rugosa; Systematics: Cnidaria; Rugosa;

Stratigraphy: Devonian; **Geography:** China, Guizhou^The shallow marine Devonian is well developed in Dushan, southern Guizhou and rich in fossil corals. The Devonian corals in Dushan flourished in a nearshore shallow water environment and all coral communities fall in the range of BA3 and BA4 (equivalent of the upper part of subtidal) in the Pedder and McLean's benthic assemblage scale. * On the basis of study of the Devonian rugose corals in Dushan section, 7 assemblages have been established. (1) Of which the Utaratuia-Sociophyllum Assemblage of Longdongshui Member is correlated with the coral assemblage of Hume Formation (Eifelian) from northwestern Canada. (2) The Columnaria-Dendrostella Assemblage from Tunshang Member may be correlated with the late Eifelian coral assemblages in Germany. (3) The Paramixogonaria-Jipaolasma Assemblage from Chipao Member together with the (4) Endophyllum-Sunophyllum-Argutastraea Assemblage from Chiwochai Member should be equivalent to European Givetian coral assemblages. (5) The Sinodisphyllum-Pseudozaphrentis-Mictophyllum Assemblage from Hejiazhai Member and the (6) Wapitiphyllum-Pseudozaphrentis-Disphyllum Assemblage from Lujiazhai Member are approximately equivalent to the Frasnian coral assemblages in northwestern Canada. (7) The Cystophrentis Assemblage in Kolaoho Formation should be approximately contemporaneous with the European Strunian (latest Famennian) coral assemblages. * Four-times bio-events have been found from the Devonian in Dushan recently. (I) The first occurred at the top of the Longdongshui Member, in which all of Favosites disappeared, it may be correlated with the mid-Eifelian event (Oliver and Pedder, 1994). (II) The second appeared at the top of Chiwochai Member, in which a lot of cystimorph corals and Stringocephalus died out, it is approximately equivalent to the end-Givetian event (Oliver and Pedder, 1994). (III) The third happened at the bed about 80m above the lower boundary of Yaoso Formation, a large number of shelly benthos, such as tentaculites, Atrypacea, the characteristic Devonian corals, stromatoporoids, bryozoans and reefs were killed, it should be equivalent to the F-F mass extinction (Kellwasser event in Germany). (IV) The fourth found near at the top of Kolaoho Formation, many Strunian (latest Devonian) fauna were replaced by the Tournaisian (earliest Carboniferous) taxa. It should be equivalent to the D-C extinction (Hangenberg event in Germany). [original summary]^1";

- 2868 s[2865] = "RODRIGUEZ S., LIAO Wei-Hua (2003).- A restudy of Cystophrentis Yu, 1931 (Rugosa) from the uppermost Famennian (Strunian) of South China.- Geobios 36, 4: 407-419.- FC&P 32-2, p. 59, ID=1387^Topic(s): revision; Rugosa, Cystophrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China S^The genus Cystophrentis, first described by Yü, 1931 occurs in South China, Tibet, Viet Nam and Armenia. Its geological age is Strunian (latest Famennian). It forms the basis for the order Mesocorallia Yü, 1963, regarded as intermediate between the Rugosa and the Scleractinia based on the presence of metasepta between the counter septum and the counter-lateral septa. The genus Kailingophyllum Yu and Lin, 1984 was described as being similar to Cystophrentis, but the apparent differences between these genera are no more than ontogenetic variations. Consequently, Kailingophyllum is regarded here as a synonym of Cystophrentis. Three species from six localities in South China and Tibet are described: Cystophrentis kolaohoensis Yu, 1931; Cystophrentis simplex (Yu and Lin in Yu, Lin and Fan, 1984) and Cystophrentis grandis Kuang in [Jia et al., 1977]. Serial sections and external septal grooves of the corals studied show no insertion of metasepta between the counter septum and the counter-lateral septa in Cystophrentis. Thus there is no basis for the recognition of the order Mesocorallia Yü, 1963. [original abstract]^1";
- 2869 s[2866] = "SOTO F., LIAO Wei-Hua (1998).- Rhizophyllum Lindström, 1866 (Rugosa) del Devonico inferior (Lochkoviense) en el SE de las Montanas de Tian-Shan (NO de China).- Revista Espanola de Paleontologia 13, 2: 197-206.- FC&P 30-2, p. 20, ID=1566^Topic(s):

Rugosa, Rhizophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Lochk; Geography: China, Tien-Shan^En el presente trabajo se describen varias especies del género Rhizophyllum Lindström, procedentes de la Formación Arpishmebulaq (Lochkoviense), en el SE de las Montañas de Tian-Shan (provincia de Xinjiang, NO de China). Las descripciones realizadas comprenden cinco especies, de las cuales Rhizophyllum extensum se propone como nueva, R. sp. A y R. sp. B son también, probablemente, nuevas, pero la falta de material más abundante y mejor conservado hace que las mantengamos, por el momento, en nomenclatura abierta. R. hedinii (Regnell) era conocida solo por su morfología externa y ahora se describen por primera vez sus estructuras internas. Finalmente, R. cf. enorme (Etheridge) no había sido citada nunca en China y su presencia en el área de Arpishmebulaq confirma relaciones biogeográficas durante el Lochkoviense con los Montes Urales, Salair, Asia Central (Altai) y Este de Australia. [original abstract]^1";

2870 s[2867] = "SOTO F., LIAO Wei-Hua (2001).- Corales rugosos (Tryplamataidae, Mucophyllidae y Cystiphyllidae) de la Formación Arpishmebulaq (Lochkoviense) en el SE de las Montañas de Tian-Shan (NO de China).- Revista Española de Paleontología 16, 2: 255-268.- FC&P 30-2, p. 20, ID=1568^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Lochk; Geography: China, Tien-Shan^In the present paper seven species of the rugose coral genera Tryplasma Lonsdale, 1845, Pseudotryplasma Ivaniya, 1958 and Mesophyllum Schlüter, 1889 {subgenus Mesophyllum (Cystiphylloides) Chapman, 1893, sensu Birenheide, 1974} from the Arpishmebulaq Formation (Lochkovian) in the south east of the Tian-Shan Mountains (Xinjiang province, NW China) are described. with the exception of the species Mesophyllum (Cystiphylloides) corniculum (Regnell, 1941) and M. (C.) cf. laticystis (Regnell, 1941), which are known up to now only in the SE of the Tian-Shan Mountains (NW China), the other described species/subspecies, Tryplasma aequabile Lonsdale, 1845, T. hercynica (Peetz, 1901), T. cf. tomtchumyshensis Zheltonogova, 1961, Pseudotryplasma sp. A and Mesophyllum (Cystiphylloides) macrocystis cf. macrocystis (Schlüter, 1889) have been recorded at several localities, specially in the Russian Federation. Thus, the geographical and stratigraphical distributions of the mentioned species confirm strong biogeographical relationship during the Lochkovian age with the Ural Mountains, Altay and Salair, as well as with NE China (Jilin province). Also, such relationship, in a less degree, could have existed among NW China (Tian-Shan Mountains) and Tadjikistan, Kazakhstan, eastern Australia and E of North America (Nevada and Yukon). This relationship was previously confirmed by the authors (Soto y Liao, 1998, 1999) in relation to different taxa of rugose corals from the same formation and locality.^1";

2871 s[2868] = "SOTO F., LIN BAoyu (2000).- Corales rugosos de la Formación Hongguleleng (Famenniense) en el N de Sinkiang (NO de China).- Geobios 33, 5: 527-541.- FC&P 30-2, p. 20, ID=1569^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China, Xinjiang^Famennian rocks with deep water facies are very well developed in the northern part of Junggar Basin, Northern Sinkiang (NW China). The Hongguleleng Formation yields abundant rugose corals of the "Cyathaxonia fauna" associated with a lot of brachiopods, some ammonoids (Clymenids) and some conodonts. The assemblages of these fossils indicate a Famennian age for the Hongguleleng Formation. The descriptions herein include fifteen species, among them two are new, belonging to ten genera. Some genera such as Amplexus, Guerichiphyllum, Hebukophyllum, Nicholsoniella, Cyathaxonia, Ufimia, Caninia and Petraiella are common in north Sinkiang and they show a close relationship during the Famennian with those of the NE of Siberia (Omolon Region), E of Inner Mongolia (Central Great Hinggan Mountains, NE China), Kazakhstan (Russian Federation), the Urals (Russian Federation), Holy Cross

- Mountains (Poland) and Thuringia Mountains (Germany).^1";
- 2872 s[2869] = "SCHRODER S., LELESHUS V.L. (2002).- First records of Givetian and Frasnian (Devonian) Rugosa from the Pamir Mountains, Tadjikistan.- Alcheringa 26, 1: 127-142.- FC&P 31-2, p. 41, ID=1680^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Tajikistan, Pamirs^Rugose corals are described for the first time from the Givetian and Frasnian of the central Pamir Mountains near the Rabatakbatayal area, Tadjikistan. In addition to Hexagonaria reedi sp.nov., Radiophyllum ?, Temnophyllum and Disphyllum are recorded. The occurrence of a new species of Hexagonaria and a probable Radiophyllum suggest a possible faunal affinity with species known from Iran and Australia.^1";
- 2873 s[2870] = "YU CHANGMING, LIAO Wei-Hua (1982).- Discovery of Early Devonian tetracorals from Xainza, northern Xizang (Tibet).- Acta Palaeontologica Sinica 21, 1: 96-107.- FC&P 11-2, p. 27, ID=1820^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: China, Tibet^A small fauna of Western province affinities including three new species.^1";
- 2874 s[2871] = "KUANG GUODUN (1982).- Early Middle Devonian rugose coral distribution in Guangxi and its relationship to sedimentary facies.- ??? [in Chinese].- FC&P 12-1, p. 31, ID=1899^Topic(s): distribution, facies; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: China, Guangxi^^1";
- 2875 s[2872] = "YU CHANGMING, KUANG GUODUN (1982).- Biostratigraphy, biogeography and paleoecology of Devonian Rugose corals from the Beiliu formation in Beiliu, Guangxi.- Bulletin Nanjing Inst. Geol. Palaeont. 5: 41-82.- FC&P 12-1, p. 36, ID=1909^Topic(s): taxonomy, zonation, biogeography; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: China, Guangxi^Devonian rugose corals including 34 species assigned to 21 genera are described from the Beiliu Formation, typically exposed in Beiliu, Guangxi, South China, where the formation is about 475 m thick and composed mainly of thick carbonate layers. One new genus is established: Beiliucyathus, which is characterized by two new species: the type species B. gracilis as well as B. carinatus. The other new species are as follows: Siphonophrentis asperetus, Sinospongophyllum undulatum, S. giganteum, S. beiliuense, Heliophyllum beiliuense, Dohmophyllum beiliuense, Xystriphyllum densum, Embolophyllum infundibulare, E. intortum, E. beiliuense, Grypophyllum psilatatum, Stringophyllum beiliuense, Sociophyllum crassum, and Atelophyllum crassoseptatum. Representatives of the genera Heliophyllum and Siphonophrentis indicate a remarkable mixture of taxa belonging to the eastern North America realm in the Beiliu fauna. [first fragments of extensive summary] ^1";
- 2876 s[2873] = "KONG LEI (1981).- Middle Devonian Rugose corals from Dachang of Nantan district, Guangxi.- 12th Annual Conf. Palaeont. Soc. China, selected papers: 50-60.- FC&P 12-1, p. 38, ID=1914^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: China, Guangxi^^1";
- 2877 s[2874] = "YU CHANGMING, BIRENHEIDE R. (1987).- Devonian massive rugose corals from central Guangxi, South China.- Courier Forschungsinstitut Senckenberg 92: 123-159.- FC&P 16-2, p. 23, ID=2051^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems - Giv; Geography: China, Guangxi^The well exposed Devonian rocks along the Da-yao-shan Mountains in central Guangxi yield abundant fossil corals and other benthic organisms. Especially the Upper Lower Devonian (Emsian) and Middle Devonian Subdivisions in Dale section, Xiangzhou and adjacent regions have been selected as the standard exposures of marine Devonian in South China, of which some massive rugose corals of

Emsian and Upper Eifelian age are systematically described herein. The descriptions include the following 12 new or revised species belonging to 6 different genera: *Xystriphyllum daleense* n.sp., *Xystriphyllum guangxiense* n.sp., *Xystriphyllum* sp., *Disphyllia xiangzhouensis* n.sp., *Disphyllia regularis* n.sp., *Disphyllia* ? sp., *Gaynaphyllum sinense* n.sp., *Columnaria* ? *zhongpingensis* n.sp., *Spongonaria simplex* (Yoh 1937), *Spongonaria daleensis* (Yoh in Yoh et Bai 1978), *Spongonaria gracilis* (Yu et Liao 1974) and *Exilifrons varians* n.sp. The genera *Exilifrons* Crickmay 1968 and *Gaynaphyllum* Pedder 1980 are reported for the first time from South China. The definition of *Disphyllia* He 1978 is revised. A biostratigraphical division framework by means of Devonian corals and its correlation with the brachiopod and conodont successions in central Guangxi is presented; two assemblage zones, indicated as S and X, are recognized as new.^^1";

- 2878 s[2875] = "WANG CHENGYUAN (1987).- On the age of Cystophrentis Zone.- Journal of Stratigraphy 11, 2: 120-125 [in Chinese, with English summary].- FC&P 17-1, p. 20, ID=2119^Topic(s): Cystophrentis zone, biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China^Cystophrentis zone has been considered by all the Chinese geologists to be Early Carboniferous since it was established in 1931. But Cystophrentis was commonly associated with *Icriodus costatus*, *I. raymondi*, *Polygnathus obliquicostatus* (conodonts), *Quasiendothyra kobeitusana*, *Q. radiata*, *Q. communis*, *Q. konensis* (foraminifers), *Valliatisporites pusillites*, *Retispora lepidophyra* (spores). All the fossils listed above indicate that the Cystophrentis Zone is undoubtedly Late Devonian.^^1";
- 2879 s[2876] = "LIAO Wei-Hua, CAI TUCI (1987).- Sequence of Devonian rugose coral assemblages from northern Xinjiang.- Acta Palaeontologica Sinica 26, ??: 689-707.- FC&P 17-1, p. 21, ID=2122^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: China, Xinjiang^^1";
- 2880 s[2877] = "WEYER D. (1988).- *Duncanella* Nicholson 1874 (Anthozoa, Rugosa) im Unterdevon des Zeravshan-Hissar-Gebirges (Tianshan, Tadjikistan, UdSSR).- Zeitschrift der geologischen Wissenschaften 16: 503-514.- FC&P 18-1, p. 36, ID=2238^Topic(s): Rugosa, *Duncanella*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Tajikistan, Zeravshan-Hissar^^1";
- 2881 s[2878] = "WU WANGSHI, LIAO Wei-Hua (1988).- Some Famennian Rugose Corals from Yishan, Guangxi.- Acta Palaeontologica Sinica 27, 3: 269-277.- FC&P 18-1, p. 41, ID=2276^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China, Guangxi^The Famennian rugose corals described in the present paper were collected from the Yishan county of Guangxi, comprising 7 species in 6 genera, namely: *Neaxon cheilos* Weyer 1984, *N. longiseptatum* sp.nov., *Kielcephyllum guangxiense* sp.nov., *Ufimia xiakouensis* sp.nov., *Prosmilia?* *yishanensis* sp.nov., *Yishanophyllum bellum* gen. et sp.nov. and *Zaphriphyllum* sp. Although a majority of the above-mentioned corals are new species, however, they all bear obviously a much closer relationship with those of the Holy Cross Mountains of Poland and the Thuringian Mountains of GDR. Since the latest Devonian (Famennian) corals have rarely been reported in China, a brief description of these fossils seems desirable. [*Kielcephyllum guangxiense* ?] Corallite solitary, about 11-18 mm in diameter. In adult stage, major septa long, extending to the centre, numbering 24-30; minor septa short or rudimental; dissepiments variable in cross section. In later stage, major septa withdrawing from the centre, about half as long as the radius; cardinal septum shortened with cardinal fossula clear. Tabulae incomplete and cystose, dissepiments elongate or semiglobular. Remarks: *Kielcephyllum cupulum* Rozkowska differs from the present new species in its wider peripheral cystose [zone] and differentiated tabulae.^^1";

- 2882 s[2879] = "LIAO Wei-Hua, MA X.P. (2007).- The assemblage sequences and characteristics of the Devonian Givetian and Frasnian rugose corals in near-shore facies from South China.- Acta Palaeontologica Sinica 46, ??: 213-224.- FC&P 35, p. 54, ID=2339^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: China S^1";
- 2883 s[2880] = "SCHRODER S. (2007).- Colonial Rugosa from the Early Devonian (Pragian) of the Zeravshan Range, Tajikistan.- Alcheringa 31, 2: 121-151.- FC&P 35, p. 57, ID=2349^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Prag; Geography: Tajikistan, Zeravshan Mts^The colonial rugose corals of the Shishkat fauna (Pragian, Kshtut Formation) from the Zeravshan Mountains are compiled and redescribed according to current taxonomic standards. The fauna can be categorized as a so-called 'Carlinastraea-Fauna', and a generally comparable generic composition is recognized on a global scale. Some Silurian relictual genera such as Maikottia or Pycnostylus are recorded. Of the 15 taxa discussed, Australophyllum soghdianum sp.nov. is described. All other specimens are assigned to known species or discussed in the context of open nomenclature. The Shishkat-fauna is clearly dominated by the Ptenophyllina (especially Carlinastraea and Spongophyllum), and Ptenophyllidae (Australophyllum, Xystriphyllum and in particular Lyriellasma). A remarkable occurrence of Vepresiphyllum indicates a weak faunal relation to eastern Australia. All other taxa show close affinities to coeval associations in the Urals, but especially to those from the Turkestan Range and the south Fergana Valley. The treatment of the Fasciphyllidae is supplemented by a short redescription of the Turkestan Fasciphyllum maikottaense Lavrusevich, 1972 because its type material is lost.^1";
- 2884 s[2881] = "LIAO Wei-Hua, BIRENHEIDE R. (1989).- Rugose corals from the Frasnian of Tushan Province Guizhou, South China.- Courier Forschungsinstitut Senckenberg 110: 81-103.- FC&P 18-2, p. 32, ID=2477^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: China, Guizhou^The present paper deals with descriptions and illustrations of 12 species of 8 genera of the rugose coral family Cyathophyllidae, subfamilies Columnariinae and Zaphrentinae sensu Birenheide 1978. Their reference material is taken from collections of the localities Lujiazhai and Balhupo, near the county town Tushan, Province Guizhou, People's Republic of China. Geologically it was taken from beds of the Lujiazhai Member of the Wangchengpo Formation. The Frasnian of the Lujiazhai Member is concluded by means of brachiopods and the corals described herein; its proof by means of conodonts is not yet executed. The following two compound rugose coral species are new Wapitiphyllum balhupoense n.sp., and Spongonaria frechi n.sp. The stratigraphical and facial sequence of the Upper Devonian part of the Tushan Section are described and illustrated. The relations between the Givetian and Frasnian coral faunas of the Tushan section, as described by Liao & Birenheide 1984, 1985, this paper, and that of the Rhenish Realm are discussed by comparison of the respective genera and species.^1";
- 2885 s[2882] = "GUO SHENGZHE (1989).- Early and Middle Devonian rugose corals from Toudaoqiao district of Central Da Hinggan Ling (Mts.).- Bulletin Shenyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 18: 25-36.- FC&P 20-1.1, p. 54, ID=2821^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L M; Geography: China, Gt Khingan Mts^The Devonian strata are widespread with numerous fossil corals in the central Da Hinggan Ling (Mts.). In 1979, the author took a field trip in the Toudaoqiao district, about 150 km south of Hailar City of Inner Mongolia (see the locality map), and collected abundant fossil corals and stromatoporoids from the Wunur formation. 16 genera with ... species, including 1 new genus, 5 new species and 1 new subspecies, of the Wunur formation studied in the present paper are as follows: -

Calceola sandalina weinaheensis (subsp.nov.), *Cystiphyllodes robertense* (Stumm), *Siphonophrentis elongata* (Rafinesque & Clifford), *Briantelasma brevisseptata* (sp.nov.), *Metriophyllum* sp. indet., *Acanthophyllum* 1 sp. indet., *Leptoinophyllum* sp., *Grypophyllum* cf. *carinatum* (Soshkina), *G.* cf. *graciliseptatum* Pedder, *Lyrielasma chapmani* Pedder, *Hinganophyllum polygonalis* (gen. et sp.nov.), *Fasciphyllum obesum* (sp.nov.), *Chalcidophyllum* cf. *recessum* (Hill), *Exilifrons hinganesis* (sp.nov.), *Hexagonaria toudaoqiaoensis* (sp.nov.), *Thamnophyllum* cf. *stachei* Penecke, *Glossophyllum* sp.indet. Obviously, the genetic group of the fauna is composed mainly of the common genera of Eurasian continent added with some North American types and an endemic genus, and the species is also a mixture of the European and Australian species with the North American forms, except the endemic one. The age of the coral fauna is considered to be early Middle Devonian that may be correlated with the Heitai formation in eastern Heilong-jiang province and with the Wendurobot formation of central Inner Mongolia, and furthermore, may be corresponding to the Shandin-Mamontov formations of Salair of USSR, with which together to construct the Late Paleozoic folded belt in the southern margins of the Siberian plate. A few beds of gray-yellow and gray-green siltstone containing some small solitary corals is bound by fault with the wunur formation in the stratigraphic section. These corals are identified as to be *Neaxon curta* (Pocta) which is very common in the Lower Devonian (Lochkovian to Pragian stage) in our region. The new genera *Hinganophyllum* and its type species *H. polygonalis* are described in the English abstract.^{^1};

- 2886 s[2883] = "GUO SHENGZHE (1990).- Frasnian-Famennian extinction and late Devonian rugose corals from Great Xing'an ranges, NE China.- *Acta Palaeontologica Sinica* 29, 4: 427-446.- FC&P 20-1.1, p. 54, ID=2822^Topic(s): extinctions, F/F; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra/Fam; Geography: China, Gt Khingan Mts^Data on occurrences of Late Devonian rugose corals suggest a major worldwide extinction of platform- and reef-dwelling corals occurring near the end of Frasnian time. The basin-dwelling corals, however, were virtually unaffected by the Late Frasnian event. The Daminshan district in the central Great Xing'an Ranges of NE China is one of the very rare localities in the world, where the Frasnian shallow-water corals and the Early Famennian basinal corals were well-developed. The Frasnian sediments called the Lower Daminshan Formation containing the corals *Hexagonaria zambinskiensis* (Ivania), *Temnophyllum rectum* (Walther), *T. densum* sp.nov., and *Hinganastrea daminshanensis* gen. nov., while in the Famennian strata called the Upper Daminshan Formation, the corals are small and solitary with thin and simple skeletal elements, reflecting a semipelagic basinal environment, such as *Petraiaella* sp., *Barrandeophyllum zhadenheense* sp.nov., *Guerichiphyllum daminshanense* (Guo), *Friedbergia sinensis* sp.nov., *Amplexocarinia* sp., *Gorizdronia simplex* (Guo), *G. minor* sp.nov., *Kozlowskinia sinensis* sp.nov., *Tabulophyllum tenuis* sp.nov., *Famennelasma sinensis* sp.nov., etc. Their age may be bounded by the associated ammonoids corresponding to the *Cheiloceras* and *Platyclymenia* zones. The collisional suture between the Sino-Korean and the Siberian plates extends roughly along the border line of China with Mongolia, about 350 km south of the Daminshan district. In the author's (1986) interpretation, the convergence of the two paleoplates in Late Devonian, and so the orogenic movement and volcanic activities caused by the collisional process might be the direct reason of the Late Frasnian extinction in this region. Of course, this requires further study on the stratigraphic sections to find the iridium anomaly and determine the isotopes. [original summary] The following new genera and species are described in the English abstract: *Barrandeophyllum zhadenheense* sp.nov., *Friedbergia sinensis* sp.nov., *Gorizdronia minor* sp.nov., *Kozlowskinia sinensis* sp.nov., *Tabulophyllum tenuis* sp.nov., *Temnophyllum densum* sp.nov.,

- Hinganastraea n.gen. (type species *Billingsastraea daminshanensis* Guo 1980), *Famennelasma sinensis* sp.nov.^{^1};
- 2887 s[2884] = "COEN-AUBERT M. (1995).- Contribution a l'etude des Rugueux frasnien de la Province de Hunan en Chine.- Bulletin de la Societe belge de Geologie 103, 1-2: 161-169.- FC&P 25-1, p. 3, ID=2985^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: China, Hunan^In the upper part of the Frasnian from the Hunan Province, *Pseudozaphrentis difficilis* Sun, 1955 and *Scruttonia carinata* (Jia & Xu 1975) were collected from the Qihjiang Formation, near Xinshao. Moreover, the latter species and *Disphyllum duyunense* Kong, 1978 were observed at the top of the overlying Laojiangchong Formation, south of Lengshuijiang. These three species are described herein and the definition of the genus *Pseudozaphrentis* Sun 1958 is emended.^{^1};
- 2888 s[2885] = "LIAO Wei-Hua, LI DAQING (1991).- Species of rugose corals from Xihanshui Group of Qinling Mts.- Acta Palaeontologica Sinica 30, 5: 601-615.- FC&P 21-1.1, p. 43, ID=3215^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Gansu, Qinling Mts^The rugose corals described and illustrated in the present paper were collected by the Regional Geological Survey Team of Gansu from the Xihanshui Group in Dangchang county, Gansu province (belonging to the northern Qinling region), comprising 11 species in 9 genera, namely: *Cystiphyllodes fraternus* (Wedekind & Vollbrecht); *Cystiphyllodes secundum* (Goldfuss); *Disphyllum* cf. *hsianghsienense* Yoh; *Grypophyllum tenue* Wedekind; *Sinodisphyllum litvovitschae* (Soshkina); *Sinodisphyllum* sp.; *Synaptophyllum dangchangense* sp.nov.; *Tabulophyllum annulatum* Wang; *Truncicarinulum?* sp.; *Thamnophyllum xiaoyigouense* sp.nov. and *Zelophyllum gansuensis* sp.nov. Among them, *Temnophyllum waltheri*, *Grypophyllum tenue*, *Tabulophyllum annulatum* and *Disphyllum hsianghsienense* are characteristic of the Givetian in South China, USSR, and Germany. [taken from extensive summary]^{^1};
- 2889 s[2886] = "YU CHANGMING (1997).- Additional Material of the Rugosan Genus *Kuangxiastraea*.- Coral Research Bulletin 05: 265-274.- FC&P 27-1, p. 79, ID=3817^Topic(s): topotypes new; Rugosa, Kuangxiastraea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: China, Guangxi^Additional material of forms referred to *Kuangxiastraea* from the type locality and other localities in Guangxi, China are described. The diagnostic characters of the genus which distinguish it from allied genera are emphasized. Evidence reveals that forms referred to this genus are widely distributed hi localities assigned to the Devonian Old World realm are mostly found in uppermost Givetian rocks (locally in the lower Upper Devonian) and mostly occur in fore reef or fore slope facies in the interfingering portion between changing facies.^{^1};
- 2890 s[2887] = "SHEN JIANWEI, YU CHANGMING (1997).- Devonian *Smithiphyllum* and its representatives in Guilin, South China.- Coral Research Bulletin 05: 221-228.- FC&P 27-1, p. 76, ID=3886^Topic(s): ; Rugosa, Smithiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: China, Guilin^Three species referred to *Smithiphyllum* are described for the first time from the Devonian reef complexes in Guilin. The species with well developed dissepiments and presepiments has been found in a Frasnian bafflestone constituting a small patch reef; whereas the species in the back reef or platform margin facies are commonly represented by small colonies with slender corallites and less development of the dissepiments and presepiments. A revision of the Chinese species formerly referred to *Smithiphyllum* is made; only 5 species including those from Guilin are accepted.^{^1};
- 2891 s[2888] = "KUANG GUODUN (1994).- Devonian tetracoral assemblages and their distribution in Guangxi, China.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]:

7-13.- FC&P 23-1.1, p. 12, ID=4058^Topic(s): biostratigraphy; Rugosa assemblages; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: China, Guangxi^Within the Devonian rocks of Guangxi Province 17 tetracoral assemblage biozones can be recognised, which are very important for the subdivision and correlation of Devonian strata in that area. The development and evolution of the tetracoral assemblages varies with changes in sedimentary environments and can be divided into two main stages. 1. From the Lianhuashan to Yujiang epochs (Pragian - early-middle Emsian), a shallow shelf environment without obvious facies differentiation developed and very similar tetracoral assemblages occur in different areas of the Guangxi Devonian. 2. In the second stage, post-Yujiang to Rongxian epoch (late Emsian - Famennian), a carbonate platform developed in Guangxi. With the accompanying differentiation of sedimentary environments, two distinct tetracoral communities developed. In the open platform facies the tetracoral faunas are characterized by dense phaceloid and massive colonies. Eight assemblage biozones can be distinguished, represented by Spongionaria, Brevisseptophyllum, Disphyllum, Hexagonaria, etc. In the platform margin facies tetracorals are solitary or loose fasciculate colonies. Six assemblage biozones can be recognised, represented by taxa such as Grypophyllum, Stringo-phyllum, Temnophyllum, Sociophyllum, Neocolumnaria, etc. They form reefs in association with tabulates and stromatoporoids or algae.^1";

2892 s[2889] = "YU CHANGMING (1994).- Distribution of rugose corals in Devonian reef complexes in South China.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 77-86.- FC&P 23-1.1, p. 14, ID=4065^Topic(s): distribution within reefs; Rugosa, reef complexes; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Prag - Giv; Geography: China S^An attempt is made to determine the environments of the Pragian to Givetian rugose corals of the South China carbonate platform. Six different facies have been recognized in which Devonian rugose corals occur. Evidently most of the Devonian rugose corals in South China can be found in argillaceous limestones and marls containing terrigenous material; this facies indicates a nearshore shelf or a protected open shelf environment. Late Emsian and Eifelian corals show a greater diversification of taxa and distribution than Pragian coral faunas. The maximal diversification of rugose corals was attained in Givetian time, corresponding with maximum reef development. There were no deep water corals in the Devonian sea of South China.^1";

2893 s[2890] = "WANG XUNLIAN (1994).- The rugose coral fauna from the upper part of the Heyuanzhai Formation in western Yunnan, China.- J. Fac. Sci. Hokkaido Univ. IV, 23, 3: 343-552.- FC&P 23-2.1, p. 37, ID=4233^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: China, Yunnan^The material studied here is from the Malutang-Heyuanzhai region of Shidian County, Yunnan Province, China. In this region Devonian is well developed and may be divided into eight formations. They include the Lower Devonian Xiangyangsi Formation, the Wangjiacun Formation, the Shabajiao Formation, the Middle Devonian Xibiantang Formation and Malutang Formation, the upper Middle to lower Upper Devonian Heyuanzhai Formation and the Upper Devonian Dujiacun Formation. Rugose corals are known from the Malutang Formation and the Heyuanzhai Formation. The Malutang Formation yields abundant brachiopods and a few rugose corals, while the Heyuanzhai Formation is rich in both rugose corals and brachiopods. This paper only deals with the rugose corals of the Heyuanzhai Formation. [part of extensive summary]^1";

2894 s[2891] = "LATYPOV Yu.A. (1975).- Premières données sur les Rugueux dévoniens de la Tchoukotka.- Trudy AN SSSR, Sib. Otd. 220: 19-28.- FC&P 4-2, p. 58, ID=5277^Topic(s): new records;

- Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Chukotka^ [description of 10 species of the genera Aulacophyllum, Disphyllum, Macgeea, Acanthophyllum, Neostrophophyllum, Plasmophyllum]^1";
- 2895 s [2892] = "GORYANOV V.B. (1978).- Granica nizhnego i srednego devona v sredney Azyi po dannym izucheniya rugoz. [Lower / Middle Devonian boundary in Central Asia as marked by rugose corals; in Russian].- Voprosy stratigrafii paleozoya (devon, karbon): 34-40; Nauka, Leningrad.- FC&P 8-2, p. 31, ID=5694^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L/M; Geography: Asia Central^^1";
- 2896 s [2893] = "YU CHANGMING, LIAO Wei-Hua (1978).- Middle Devonian corals of Longdongshui Member, Houershan Formation from Dushan District, Guizhou.- Mem. Nanjing Inst. Geol. Palaeont. 12: 107-147.- FC&P 8-2, p. 39, ID=5714^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: China, Guizhou^[38 species and subspecies belonging to 24 genera, including Houershanophyllum gen. nov., Pseudomicroplasma (Choanoplasma) subgen. nov. and 20 new species, are described]^1";
- 2897 s [2894] = "WU WANGSHI, ZHAO JIANGMING, JIANG SHUIGEN (1981).- Corals from the Shaodong Formation (Etroeungt) of South China. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 20, 1: 1-14.- FC&P 10-2, p. 66, ID=5984^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China S^The corals described in the present paper were chiefly collected in 1976 and 1977 from the Shaodong formation in Central Hunan, northern Guangdong and northern Guangxi. Consisting of seven genera and fifteen species, they may be differentiated into two assemblage zones: the lower one is called the Ceriphyllum elegantum assemblage zone, dominated by such endemic forms as Ceriphyllum and Complanophyllum; and the upper one, the Caninia dorlodoti assemblage zone, characterized by the presence of Caninia patula Michelin, Diphyphyllum antiquatum (sp.nov.) and Dematophyllum hunanense (gen. et sp.nov.), etc. * The Shaodong formation with Caninia dorlodoti and Zaphrentoides delanouei may correspond to the Etroeungt limestone of western Europe, which is generally believed to be of early Lower Carboniferous age. Caninia dorlodoti, reported from Novaya Zemlia is also of Lower Carboniferous age. * Three new genera, each with a new species, are described: Ceriphyllum Wu & Zhao (C. elegantum n.gen. et n.sp.), Complanophyllum Wu & Zhao (C. compressum n.gen. et n.sp.); Dematophyllum Wu & Zhao (D. minor n.gen et n.sp.). [original summary]^1";
- 2898 s [2895] = "WANG ZHIPING (1983).- Two genera of Middle Devonian Rugose corals from Guizhou. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 22, 1: 66-70.- FC&P 12-2, p. 30, ID=6210^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: China, Guizhou^In the present paper two new genera of Middle Devonian Rugose corals including six new species are described. They were collected by the writer in 1963 from Dushan and Puan, Guizhou Province. Puanophyllum (gen. nov.) was found in the Middle Devonian at Guanziyan of Puan, western Guizhou, and forms a characteristic assemblage along with Calceola in the Lijiawan Formation. Jiangzhaiphyllum (gen.nov.) occurs in the limestone of the Bongzhai Formation and in the lower part of the Dushan Formation of Dushan, southeastern Guizhou. * The dilated septa and the presence of cystose dissepiments in the peripheral zone are of special interest in regard to the origin and evolution of the latter genus. [original summary]^1";
- 2899 s [2896] = "ZHANG ZUQI (1983).- On the Occurrence of Aulacophyllum and Hallia (Rugose corals) in Western part of Southern Qinling Range. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 22, 2: 163-169.- FC&P 12-2, p. 32, ID=6211^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:

- Devonian Ems; Geography: China, Qinling Mts^Aulacophyllum and Hallia described in this paper were found in the Early Devonian Emsian deposits in the western part of southern Qinling Range. These rugose corals are recorded for the first time in China; but outside this country more than 30 species of Aulacophyllum and about ten species of Hallia, so far known to the writer, have been described mainly from Onesquethawan stage in the central-eastern part of the USA, occasionally from the Devonian in England, Germany and Spain of west Europe, Sahara and Mauritania of N Africa, Ural, Russian platform and Armenia of USSR, Northern Shan State of Burma and NSW of Australia. * The Early Devonian Emsian deposits in this area may be compared with the Onesquethawan stage of the USA in the abundance of fossils. Nevertheless, the coral-bearing beds are thought to be lower in stratigraphic position than those at other places of the world. [original summary]^1";
- 2900 s[2897] = "LIAO W.-H., MA X.-P. (2008).- The assemblage sequences and biogeographic provinces of the Eifelian rugose corals in near-shore facies from South China. [in Chinese, with English summary].- Acta Palaeontologica Sinica 47, ??: 39-46.- FC&P 36, p. 60, ID=6450^Topic(s): biozonation, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif; Geography: China S^^1";
- 2901 s[2898] = "LIAO W.-H., MA X.-P., SUN Y.-L. (2008).- The Famennian rugose coral assemblages in near-shore facies from South China. [in Chinese, with English summary].- Acta Palaeontologica Sinica 47, ??: 419-426.- FC&P 36, p. 60, ID=6451^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China S^^1";
- 2902 s[2899] = "YU CHANGMING (2010).- Further study on Devonian rugose coral Heterophaulactis Yu 1947 from Lower Emsian Yujiang Formation in Guangxi, China. [in English, with Chinese summary].- Acta Palaeontologica Sinica 49, 1: 29-43.- FC&P 36, p. 73, ID=6475^Topic(s): revision; Rugosa Heterophaulactis; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: China, Guangxi^The Devonian rugose coral genus Heterophaulactis from Lower Emsian Yujiang Formation in Guangxi, previously not fully described, is thoroughly examined and described in this paper. The main characteristics of this genus are also diagnosed. Based on the characters displayed in the holotype and additional type materials, the description of its type species, Heterophaulactis semicrassa is made in detail with full illustrations. A new species of this genus, Heterophaulactis yujiangense sp.nov. is erected with detailed description and full illustration. The genus is compared with other relevant genera in different aspects. It is interesting to note that a number of genera from the Lower Devonian in western Qinling mountainous region are of close affinity to Heterophaulactis. Some species referred to those genera may be assigned to Heterophaulactis, indicating that the distribution of Heterophaulactis is not restricted in south China, but extended to northwest China. The family assignment of Heterophaulactis is discussed and concluded that Heterophaulactis may be derived from Silurian Pycnactis - Phaulactis evolutionary lineage. The subfamily Miroelasmatinae Cao 1983 is emended to include Heterophaulactis and its relevant genera and the family assignment of this subfamily is herein switched from Family Halliidae Chapman 1893 by Cao et al. (1983) to Family Lykophyllidae wedekind 1927. [original abstract]^1";
- 2903 s[2900] = "ZHANG Y.-J., CHENG L.-R., ZHANG Y.-C. (2003).- New material of coral fossils in Lower Devonian, Daerdong Formation of Xainza, Tibet. [in Chinese, with English abstract].- Global Geology 22, 4: 313-318.- FC&P 33-1, p. 66, ID=7213^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: China, Tibet^Some coral fossils newly collected from Lower Devonian Daerdong Formation of Xainza, Tibet have

- been systematically described. There are 7 species of Rugosa including one new species, 4 species of tabulatomorphic corals including 2 new species. The three new species are Hunanaxonia xizangensis sp.nov., Pachycanalicula sparcula sp. Nov. and Paraheliolites zakangensis sp.nov. The discovery of these corals in this area is beneficial for more understanding the symbiotic assemblage, evolution of the corals and their biogeography in Early Devonian. [original abstract]^1";
- 2904 s[2901] = "MA X.P., SUN Y.L., HAO W.C., LIAO W.H. (2002).- Rugose corals and brachiopods across the Frasnian-Famennian boundary in centre Hunan, South China.- Acta Palaeontologica Polonica 47, 2: 373-396.- FC&P 31-2, p. 39, ID=1676^Topic(s): ; Rugosa; Systematics: Cnidaria Brachiopoda; Rugosa; Stratigraphy: Devonian Fra/Fam; Geography: China, Hunan^we present taxonomic revision of rugose corals and brachiopods from several Frasnian-Famennian (F-F) boundary sections in central Hunan Province, China. Diversity of shallow-water rugose corals gradually increased during the Frasnian, but ended with sudden extinction near the end of Frasnian. Ostracods were abundant during the Frasnian; their extinction coincided with anoxic deposition of the end-Frasnian black shale deposits. The early Famennian ostracod fauna is of low diversity. The brachiopod fauna of the late Frasnian (Palmatolepis rhenana and Pa. linguiformis zones) is dominated by atrypids, small-sized cyrtospiriferids, and the rhynchonellid Hunanotoechia. All atrypids disappeared before the F-F boundary with highest rates of extinction below the boundary (probably low in the Pa. linguiformis Zone). The Frasnian cyrtospiriferid fauna is also of low diversity and dominated by small taxa. All but one of the cyrtospiriferid taxa crossed the F-F boundary. The early Famennian post-extinction recovery brachiopod fauna was the result of rapid radiation of new forms shortly after the terminal Frasnian event. The early Famennian fauna is characterized by diverse cyrtospiriferids, abundant Yunnanellina and productoids. Above the early recovery fauna another fauna was recovered, with brachiopods Hunanospirifer and Yunnanella and is correlated with the late or latest Pa. crepida Zone. Sinalosia rugosa gen. et sp.nov. (Productida) is erected. ^1";
- 2905 s[2902] = "LIAO Wei-Hua, ZHENG CHUNZI (1986).- Early Devonian Carlinastraea fauna from Erhtaokou Formation of Jilin.- Acta Palaeontologica Sinica 25, 6: 622-635.- FC&P 16-1, p. 57, ID=1952^Topic(s): ; Rugosa, Carlinastrea fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: China, Jilin^^1";
- 2906 s[2903] = "LIAO Wei-Hua, BIRENHEIDE R. (1984).- Rugose korallen aus dem Givetium von Dushan, Provinz Guizhou, S-China. 1: "Cystimorpha". - Senckenbergiana lethaea 65: 1-25.- FC&P 14-1, p. 46, ID=0969^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Guizhou^^1";
- 2907 s[2904] = "SOTO F., LIN BAOYU (1994).- Afinidades bioestratigraficas y biogeograficas de los corales rugosos cistimorfos devonicos del SO de las Montanas de Qinling (Provincia de Gansu, China).- Coloquios de Paleontologia 46: 31-41. [in Spanish, with English abstract].- FC&P 24-2, p. 85, ID=4576^Topic(s): biostratigraphy, biogeography; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: China, Gansu^In the present work the stratigraphical and geographical distributions of the cystimorph rugose corals (Cayugaea Lambe, Mesophyllum Schlueter and Mesophyllum (Cystiphyllodes) Chapman) coming from the SW of the Qingling Mountains (Tewo District, Gansu province, Central China) are studied in detail; the material belongs to the Dangduo (Upper Emsian) and Lure (Eifelian) Formations. The results of this study let us to reach a series of conclusions. On one hand the presence of the Cayugaea genus is reaffirmed in Central China. On the other hand, and on the basis of the analysis of the geographical

- distribution of the cystimorph taxa, new data are given supporting the paleobiogeographical hypothesis proposed by other authors. Finally, a relationship among Central China, NW Canada, W and E Europe and S China, during the Upper Emsian-Eifelian, is evidenced.¹¹;
- 2908 s[2905] = "SOTO F., LIN BAOYU (1995).- Corales rugosos Cistimorfos del Devonico del Suroeste de las Montanas de Qinling (Provincia de Gansu, China).- Geobios 28, 3: 293-315. [in Spanish, with French and English abstract].- FC&P 24-2, p. 85, ID=4577^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: China, Gansu^In this work different species and subspecies of cystimorph Rugose corals coming from the lower half of the Dangduo Formation (Upper Emsian) and Lure Formation (Eifelian), Tewo District (Gansu Province, Central China), are described in detail. Five taxa, Cayugaea aff. gansuensis Cao, C. aff. cylindrica (Bulvanker), Mesophyllum (Cystiphyllodes) secundum ssp. A, M. (C.) secundum ssp. B and Mesophyllum (Mesophyllum) aff. arrectum (Yu & Cai) probably correspond to new forms. Regarding the rest of the species and subspecies, Mesophyllum (Cystiphyllodes) fongi (Yoh), M. (C.) caespitosum (Schlueter) and M. (C.) cf. macrocystis macrocystis (Schlueter), the stratigraphical range in China is extended. The rest of the species had been cited and described before by other authors from the same district. Finally, on the basis of the analysis of the stratigraphical and geographical distribution of the taxa studied, new data are given which support the paleobiogeographical hypothesis proposed by other authors. A relationship among Central China, NW Canada, Europe and S China, during the Upper Emsian-Eifelian, is shown.¹¹;
- 2909 s[2906] = "ONOPRIENKO Yu.I. (1979).- K voprosu o vzaimootnoshenii rodov Endophyllum i Tabulophyllum (Rugosa) [on the question of relationships of genera Endophyllum and Tabulophyllum (Rugosa)].- Iskopaemye bespozvonochnye Dalnego Vostoka: 29-32; Vladyvostok.- FC&P 9-1, p. 40, ID=0475^Topic(s): classification; Rugosa, Endophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Russia, Far East^[Pseudoendophyllum gen.n., with type species Endophyllum nalivkini Gorskiy 1935]^11";
- 2910 s[2907] = "SOTO F., LIAO Wei-Hua (2002).- Laccophyllidae Grabau 1928 (Rugosa) from the Hongguleleng Formation (Devonian, Lower Famennian) at the northwestern margin of Junggar Basin (Northern Xinjiang, NW China).- Coral Research Bulletin 7: 209-220. [Dieter weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 34, ID=7105^Topic(s): ; Rugosa Laccophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: China, Xinjiang^The Famennian Laccophyllidae (rugose corals) described in the present paper were collected in the Hongguleleng Formation, at Hoboksar (northwestern margin of Junggar Basin, Northern Xinjiang Uygur Autonomous Region, NW China). They are represented by six species, referred to three genera, some of them are redescribed in this paper after their original description in Liao & Cai (1987). Neaxon kullmanni and Guerichiphyllum hebukeense are new, Amplexocarinia tenuiseptata Liao & Cai 1987 is reassigned to the genus Catactotoechus Hill 1954 and Guerichiphyllum sinense Liao & Cai 1987 is described, refigured and its diagnosis amended. Finally, Catactotoechus sp. A and C. sp. B are considered also as new, but the scarcity of specimens does not allow the establishment of new species at the present time. This rugose coral assemblage and, especially, the presence of conodonts could be stratigraphically correlated with those of the Lower Famennian from the Holy Cross Mountains in southern Poland. The geographic distribution of the genera mentioned for the Junggar Basin during the Famennian confirms a close relationship with Inner Mongolia (Grand Khingan Mountains Range), Germany (Variscan Thuringian Mountains), western Australia (Canning Basin) and Poland

- (Holy Cross Mountains). [original summary]^1";
- 2911 s[2908] = "SOTO F., LIAO Wei-Hua (1999).- Ptenophyllidae (Rugosa) solitarios de la Formacion Arpishmebulaq (Lochkoviense) en el SE de las Montanas de Tian-Shan (NO de China).- Trabajos de Geologia 21: 353-362; Oviedo.- FC&P 30-2, p. 20, ID=1567^Topic(s): ; Rugosa, Ptenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Lochk; Geography: China, Tien-Shan^En el presente trabajo se describen los corales rugosos pertenecientes a la familia Ptenophyllidae de la Formación Arpishmebulaq (Lochkoviense), en el SE de las Montañas de Tian-Shan (provincia de Xinjiang, NO de China). Se han reconocido tres géneros y cinco especies, de las que Dubrovia aff. dubroviensis Zheltonogova, D. sp. A y D. sp. B son, probablemente, nuevas, pero se mantienen en nomenclatura abierta dada la escasez de ejemplares, mientras que Salaiophyllum cf. angustum (Zheltonogova) y Neomphyma sp. se citan también ahora por primera vez en esta región. La distribución geográfica de estos taxones permite afirmar la existencia de relaciones paleobiogeográficas durante el Devónico Inferior (Lochkoviense) entre el SE de Tian-Shan y otras regiones asiáticas (Kazakhstan, parte E de los Urales, Altai y Salair). Estas relaciones son apreciables así mismo con el E de Norte América (Nevada y Yukón). [original abstract]^1";
- 2912 s[2909] = "LAVRUSEVICH A.I. (1972).- Nouveaux Tryplasmata à écailles épithécales du Dévonien inférieur de la région montagneuse Zeravshan-Hissar. [en russe] .- Paleontologicheskii Zhurnal 1972, 2: 42-46.- FC&P 3-2, p. 39, ID=4957^Topic(s): new taxa; Rugosa, Tryplasmata; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Tajikistan, Zeravshan-Hissar^Description de 5 espèces ou sous-espèces nouvelles: Kitakamiphyllum turkparidens sp.nov., K. zeravshanicum sp.nov.; Hillophyllum septatum sp.nov.; Rhabdacanthia rugosa (M. E. & H.); Holmophyllum cayugaeiformis sp. Nov.^1";
- 2913 s[2910] = "KONG LEI (1979).- Studies on the Middle Devonian Zonophyllids from Dushan in Southern Guizhou. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 18, 5: 491-503.- FC&P 9-1, p. 11, ID=5741^Topic(s): ; Rugosa, Zonophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: China, Guizhou^^1";
- 2914 s[2911] = "DONG DEYUAN (1984).- Paleozoic Stromatoporoids from Markam of Xizang and Batang of Sichuan. [in Chinese with English summary].- ???.- FC&P 13-2, p. 47, ID=0568^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M U; Geography: China, Tibet, Sichuan^A total of 18 species belonging to 10 genera are described from Middle and Upper Devonian rocks. One species doubtfully from Silurian rocks is identified. No new taxa are included.^1";
- 2915 s[2912] = "LESOVAYA A.I. (1986).- Novye nizhnedevoevskie stromatoporati zeravshanskogo khrebta [new Lower Devonian Stromatoporata of Zeravshan Ridge].- Paleontologicheskii Zhurnal 1986, 1: 12-17.- FC&P 15-2, p. 44, ID=0747^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Tajikistan, Zeravshan Mts^Collections made by the author during the years 1960-70 from the SW part of the state geological preserve (in the Bursyichirman and Chauzm-Zram)^1";
- 2916 s[2913] = "LESOVAYA A.I. (1986).- Stromatoporaty pozdnego famena chatkago-kuraminskogo regiona (Sr. Aziya) [Upper Famennian Stromatoporata of Chatka-Kuraminsk region, central Asia].- Ezhegodnik vsesoyznogo Paleontologicheskogo Obshchestva 29: 54-73.- FC&P 15-2, p. 44, ID=0748^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Asia Central, Chatka-Kuramin^The stromatoporoids come from 3 suites: Karatagatinsk, Drichmullinsk, and the central Tien-Shan. In total 16 species distributed in 7 genera are described. Three new species are established.^1";

- 2917 s[2914] = "WANG SHUBEI, HUANG YONGQIANG (1985).- Middle Devonian stromatoporoids from Qijia, Debao Guangxi. [in Chinese, with English summary].- Acta Micropalaeontologica Sinica 02, 4: 409-412.- FC&P 15-2, p. 46, ID=0759^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: China, Guangxi^Stromatoporoids from the Debao and Donggangling formations include 7 species assigned to Anostylostroma, Actinostroma, Stromatopora, and Amphipora. Three species of Amphipora (A. vacuete, A. rhapida, A. amphusa) and one species of Anostylostroma (A. qingjiense) are new.^1";
- 2918 s[2915] = "DONG DEYUAN (1984).- Lower Devonian Stromatoporoids from NE Nei Mongol. [in Chinese].- Acta Micropalaeontologica Sinica 01, 2: 183-192.- FC&P 15-1.2, p. 45, ID=0782^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: China, Nei Mongol^^1";
- 2919 s[2916] = "WANG SHUBEI, DONG DEYUAN, FU JINGHUA (1986).- Upper Devonian stromatoporoids from Luocheng and Rong'an of Guangxi [in Chinese with English summary].- Acta Micropalaeontologica Sinica 03, 1: 69-80.- FC&P 15-1.2, p. 46, ID=0791^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: China, Guangxi^A Frasnian fauna of 14 species (1 subspecies) and 8 genera is described and illustrated. New species of Hammatostroma (H. pervesiculatum), Atelodictyon (A. luochengensis), Parallelostroma (P. longanense) and Parallelopora (P.obscurum) are established.^1";
- 2920 s[2917] = "LESOVAYA A.I., SHAMGUNOV K.K., SHAKIROV T.I., YAKUBOV.M. (1982).- Znachenije stromatoporat dlya raschleneniya i korrelyatsii osadochnykh tolshch na primere izucheniya famena chatkalo-kuraminskoy gornoy oblasti [importance of stromatoporoids for division and correlation of deposits as exemplified in the study of the Famennian in the Chatkal-Kurama fold-belt].- Paleontologiya i detal'naya stratigraficheskaya korrelyatsiya, Chast' I [Kruchinina N. V. (ed.); AN SSSR; Vsesouznoye Paleontologicheskoye Obshchestvo]: 45-46.- FC&P 14-1, p. 56, ID=1046^Topic(s): biostratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: Asia Central, Chatka-Kuramin^^1";
- 2921 s[2918] = "DONG DEYUAN, WANG CHENGYUAN (1982).- Devonian Stromatoporoids of Eastern Yunnan.- Bulletin Nanjing Institute Geology and Palaeontology, Academia Sinica 4: 1-40.- FC&P 14-1, p. 58, ID=1065^Topic(s): taxonomy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: China, Yunnan^The purpose of this paper is to describe the stromatoporoids collected from the lower Middle Devonian Gumu and Qingmen Formations in Wenshan and Zhaotong, the upper Middle Devonian Donganling, Huaning or Zhaotong Formations in Wenshan, Huaning and Zhaotong, the Upper Devonian Mage or Zajie Formations in Wenshan and Huaning. After identification they contain 19 genera and 76 species, in which 3 genera (Eostachyodes, Taeniosstroma and Columdictyon) 27 species and 3 subspecies are recognized as new taxa. By judging from the stromatoporoid aspects, some forms are very similar to those from the equivalent deposits in central and eastern Guangxi, southern Guizhou and northern Sichuan, some elements have been reported to occur in the contemporaneous deposits of Europe and Russia, and a few species have been known in North America. But it is to be noted that the new genera (Eostachyodes, Taeniosstroma and Columdictyon) are evidently endemic forms, which have so far not been found elsewhere. [from original summary]^1";
- 2922 s[2919] = "DONG DEYUAN (1981).- Devonian stromatoporoids from the counties of Harkam and Rutog in Xizang.- Paleontology of Xizang, book III; The Scientific Expedition to the Qinghai-Xizang plateau: 101-114.- FC&P 11-2, p. 35, ID=1851^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy:

- Devonian; Geography: China, Tibet^Twenty one species from Middle and Upper Devonian rocks are described of which four are new: Paramphipora mangkamensis, P. zhuogedongensis, Gerronostroma xizangense, Actinodictyon rutogense.^1";
- 2923 s[2920] = "LESOVAYA A.I. (1984).- Stromatoporaty.- Kim A. (ed): Biostratigraphiya devona zeravshano-gissarskoy gornoy oblasti. Ministerstvo Geologii Uzbekskoy SSR, Tashkent, pp 31-38.- FC&P 17-1, p. 40, ID=2162^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Tajikistan^[species described include: Parastylostroma ruschaica n.sp., Stromatoporella loutouguini, Anostylostroma variabile, Actinostroma asiatica n.sp., Hermatostroma tyrganense, Trupetostroma sp., Stachyodes costulataforme n.sp., Stellopora gloriosa, Amphipora socialisforme n.sp.]^1";
- 2924 s[2921] = "ZHANG XIAODONG, ZHANG YONGLU (1989).- Ecology of two stromatoporoid communities from Middle Devonian (Givetian) Huaning Formation, in Panxi, eastern Yunnan.- Acta Palaeontologica Sinica 28, 3: 376-390.- FC&P 19-2.1, p. 43, ID=2784^Topic(s): ecology, guild structures; strom biocoenoses; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: China, Yunnan^This paper applies the guild concept extended by Bambach (1983) to the study of the level-bottom community. The organisms of the residual fossil communities - for example the Stromatopora-Scoliopora community - are assigned to 15 guilds. For correctly understanding the functions and trophic structures of organisms in a community, the concept of biovolume is used. Since the volume-sample method is not suitable to limestone, we have compared the dominance of each species by determining the volume of each population in the same bedding plane. [part of extensive summary]^1";
- 2925 s[2922] = "DONG DEYUAN (1989).- Devonian stromatoporoids from Ninglang of Yunnan.- Acta Micropalaeontologica Sinica 06, 2: 171-178.- FC&P 20-1.1, p. 77, ID=2873^Topic(s): taxonomy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L M; Geography: China, Yunnan^Seven genera and 13 species are described from the late Early Devonian to early Middle Devonian Dacaozi Formation and the late Middle Devonian to early Late Devonian Lagude Formation. A new species of Amphipora (A. ninglangensis) and a new subspecies of Paramphipora (P. raritatis variabilis) are described.^1";
- 2926 s[2923] = "DONG DEYUAN, WANG SHUBEI, FU JINGHUA et al. (1989).- Devonian stromatoporoid biota of northern Guangxi and mountlike superimposed bioherm of Huanjiang County - with remarks on the distribution of the Devonian and Sedimentary Paleogeography in this area. [in Chinese with English summary] .- Nanjing Institute of Geology and Palaeontology, Academia Sinica, 26, 25, 11: 235-290.- FC&P 20-1.1, p. 77, ID=2874^Topic(s): distribution, biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M U; Geography: China, Guangxi^[Facies associated with these middle and late Devonian reefs are described and maps of their distribution are plotted. Most of the paper is a description of 87 species of stromatoporoids distributed in 22 genera. Twenty-one species are new, but these are not described in the English summary. New species of the following genera are described: Actinodictyon. Actinostroma. Gerronostroma, Trupetostroma, Argostroma, Stromatopora, Salairella, Stachyodes, Amphipora and Paramphipora.]^1";
- 2927 s[2924] = "WANG SHUBEI (1988).- Stromatoporoids.- In: Devonian stratigraphy, paleontology, and sedimentary facies of Longmenshan, Sichuan; Geological Publishing House: 159-165.- FC&P 20-1.1, p. 80, ID=2881^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: China, Sichuan^[New species of the following genera are proposed in this paper: Cystostroma (1), Labechia (1), Platiferostroma (3), Pachystylostroma (1), Anostylostroma (2),

- Schistodictyon (1), Gerronostroma (3), Salairella (2), Parallelostroma (1), Idiostroma (2).]^1";
- 2928 s[2925] = "MISTIAEN B. (1996).- Stromatoporoids from the Late Devonian (Strunian) Menggongao Formation, China.- Memoires Institut Geologique de l'Université Catholique de Louvain 36: 141-152.- FC&P 26-2, p. 80, ID=3770^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: China, Hunan^Five species of labechiid Stromatoporoids are studied from the Late Devonian (Strunian) Menggongao Formation of central and south-central Hunan. This fauna from the Hunan province much resembles that described by Dong Deyuan (1964) from Guangxi and Guizhou. It also typically corresponds with the cool water, labechiid-rich assemblage 2 of Stearn (1987) and does not present any relation with the Strunian stromatoporoid fauna of western Europe.^1";
- 2929 s[2926] = "DONG DEYUAN, LIU LI (1992).- Middle Devonian Stromatoporoids from the Chitzechia Formation of Shaodong, Hunan and their ecological environment.- Acta Micropalaeontologica Sinica 9, 2: 165-176.- FC&P 27-1, p. 107, ID=3859^Topic(s): ecology; stroms; Systematics: Porifera; stromatoporoidea; Stratigraphy: Devonian M; Geography: China, Hunan^^1";
- 2930 s[2927] = "YANG JINGZHI, DONG DEYUAN (1979).- Devonian stromatoporoids from central and eastern parts of Guangxi, China. [in Chinese, with English summary of new genera].- Palaeontologia Sinica 157, NS B, 14: 1-84.- FC&P 9-1, p. 53, ID=5843^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: China, Guangxi^[stromatoporoids from Emsian to late Devonian rocks are described, with 185 species (110 new) of 32 genera (5 new: Argostroma, Cubodictyon, Climacostroma, Glyptostroma and Atopostroma)]^1";
- 2931 s[2928] = "DONG DEYUAN (1982).- Devonian stromatoporoids of eastern Yunnan.- Nanjing Inst. Geology & Paleontology Bulletin, Acad. Sinica 4. ???.- FC&P 12-1, p. 46, ID=6194^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: China, Yunnan^^1";
- 2932 s[2929] = "KARIMOVA F.S., LESSOVAYA A.I. (2007).- Devonian System: stromatoporoids.- Palaeontological Atlas of Phanerozoic Faunas and Floras of Uzbekistan [A.I. Kim, F.A. Salimova, I.A. Kim & N.A. Meschankina (eds.)], volume I. Republic of Uzbekistan State Committee on Geology and Mineral Resources, Tashkent; pp 152-158, pl. 12, figs. 1-6, pl. 13, figs. 1-2, pl. 14, figs. 1-5, pl. 15, figs. 1-4. [book chapter] - FC&P 36, p. 32, ID=6397^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Uzbekistan^[Eighteen species are described from throughout the Devonian. Six are from the Lower Devonian: (1) Actinostroma effectum Lessovaya & Karimova, sp.nov. from the Lochkovian-age Bursykhirman Regional Stage; (2) Hermatostroma bonem Yavorsky, 1955 also from the Bursykhirman Regional Stage; (3) Idiostroma marius Lessovaya & Karimova, sp.nov., named in honor of Marius Lecompte, also from the Bursykhirman Regional Stage; (4) Stromatopora aff. radiata Yavorsky, 1967, also from the Bursykhirman Regional Stage; (5) Gerronostroma perangustum Lessovaya & Karimova, sp.nov. from the Emsian-age Norbonek Beds; and (6) Amphipora anomalis (Lessovaya, 1962) from the Lower Devonian-undifferentiated. Three are from the Givetian Stage of the Middle Devonian: (1) Atelodictyon astrictum Karimova, sp.nov. from the Auliekudzhumdy Formation; (2) Stromatopora cooperi Lecompte, 1952 also from the Auliekudzhumdy Formation; and (3) Amphipora regularis Lessovaya, 1962 from the Beshachshik Formation. Nine are from the Upper Devonian: (1) Actinostroma orbiculatum Karimova, 2002, from the Frasnian-age Kolsuyuk Formation; (2) Trupetostroma nitida Karimova, 2002 also from the Kolsuyuk Formation; (3) Stachyodes fibrosum Karimova 2002 also from the Kolsuyuk Formation; (4) Amphipora corrupta

- (Yavorsky, 1967) from the Frasnian-age Belikuduk Formation; (5) *Novitella tachussovensis* (Yavorsky, 1955) also from the Belikuduk Formation; (6) *Rosenella irregularis* Yavorsky, 1957 from the Famennian-age Dzhanahmet Formation; (7) *Parastylostroma rara* Lessovaya & Karimova, sp.nov. from the Famennian-age Aznek Formation; (8) *Pennastroma muruntaica* Lessovaya & Karimova sp. nov also from the Aznek Formation; and (9) *Anostylostroma dominatum* Lessovaya, 1986 from the Famennian-age Auliekudzhumdy Formation.]^1";
- 2933 s[2930] = "TCHI YONGYI (1982).- Some Middle Devonian Tabulate Corals from Unur Formation at Zhaduhe District of Da Hinggan Ling.- Bulletin Shengyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 03: 169-186.- FC&P 13-1, p. 30, ID=0431^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: China, Da Hinggan Ling^^1";
- 2934 s[2931] = "ZHOU XIYUN (1983).- Preliminary study on the Devonian Tabulata-bearing strata in Guizhou.- Papers Stratigraphy Palaeontology Guizhou 1: 105-121.- FC&P 13-1, p. 30, ID=0436^Topic(s): geology; geology; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: China, Guizhou^^1";
- 2935 s[2932] = "WANG BAoyu (1983).- Devonian Pseudofavosites in Northern Xinjiang.- Acta Palaeontologica Sinica 22, 6: 701-705.- FC&P 13-1, p. 44, ID=0496^Topic(s): new taxa, stratigraphy; Tabulata, Pseudofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: China, Xinjiang^Pseudofavosites (Tabulata), as one characteristic genus of the Permian, was first reported by Gerth (1921) who described only one species from Timor. Since then, Yakovlev (1939) and Sokolov (1955) have described two species of the genus from the Lower Permian from the Ural in the USSR. In recent years, Pseudofavosites has also been found in the Carboniferous and Devonian of Guangxi and Xinjing. Lin Bao-yu, for instance, described two species of the genus from the Carboniferous in Guangxi. Six new species of Pseudofavosites: *P. giganteus* sp.nov., *P. kakesuensis* sp.nov., *P. longispinus* sp.nov., *P. transitorius* sp.nov., *P. barkolensis* sp.nov. and *P. rarus* sp.nov. are described from the Lower Devonian in Barkol of Xinjiang. They are preserved in bioclastic limestone (Dananhu formation and Taheier-basitaw formation). These species are associated with other Tabulata (Squameofavosites, Favosites, Steatothamnopora, Striatopora), Rugosa (Syringaxon, Barrandeophyllum), brachiopods (Mucrospirifer), and trilobites (Odontochile), indicating an early-middle Early Devonian age (Gedinnian and Siegenian).^1";
- 2936 s[2933] = "WANG BAoyu (1986).- The Devonian tabulate coral assemblages of Northern Xinjiang with remarks on subdivision of the Lower Middle Devonian.- Journal of Stratigraphy 01, 1: 34-40.- FC&P 15-2, p. 36, ID=0723^Topic(s): assemblages; Tabulata, communities; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: China, Xinjiang^During the past two decades, a large number of Devonian tabulate corals were gathered from many localities in northern Xinjiang. On the basis of study on these corals, five Devonian coral assemblages of northern Xinjiang are established as follows: Upper Devonian: Aulopora-Striatopora Assemblage; Middle Devonian: Alveolites-Trachporea Assemblage, Pachyfavosites polymorphus-Tyrganolites-Xinjiangolites Assemblage; Lower Devonian: Squameofavosites-Placocoenites-Pseudofavosites Assemblage, Aulocystis-Steatothamnopora-Pleurodictyum Assemblage. In the light of the tabulate coral assemblages mentioned above, the author suggests that the Lower Devonian of marine facies may be subdivided into two parts, namely, the Utubulake (including Menger) and Taheierbasitaw (or Asushan) Formations in the lower part; the Mongkelu, Zuomubasitaw (or Tuoranggekuduke) and Dananhu Formations in the upper. The Middle Devonian may be also subdivided into two parts, namely, the Kulumudi (or Sawuershan), Altai, Wulusubasitaw (or Beitashan) and Baixinde Formations in the lower part; the Zhifang Formation in the

- upper. The author also suggests that the first occurrence of Pachyfavosites polymorphus, Tyrganolites, Xinjiangolites is considered as the beginning of the Middle Devonian.¹¹;
- 2937 s[2934] = "DENG ZHANQIU, ZHENG CHUNZI (2000).- Tabulatomorphic corals from the Erhtaokou Formation of Jilin Province.- Acta Palaeontologica Sinica 39, 2: 217-229.- FC&P 29-1, p. ???, ID=1455Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: China, Jilin¹¹";
- 2938 s[2935] = "DENG ZHANQIU (2000).- Tabulatomorphic corals from the Early Devonian Arpishmenulaq Formation and their biogeographic significance.- Acta Palaeontologica Sinica 40, 2: 219-223.- FC&P 30-2, p. 24, ID=1578Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Lochk; Geography: China, Tien-Shan^{In eastern South Tianshan, the age of the Arpishmehulaq Formation with Tabulata is defined again as Late Lochkovian, Early Devonian. The corals from the Arpishmehulaq Formation differ from those of equivalent horizons in the Junggar-Hingan biogeographic region but are similar to those from the Shanjiang Formation in Lijiang County, Yunnan, the Xiaputonggou Formation in Zoige County, Sichuan, the Alugong Formation in Darhan Mumingan Joint Banner, Inner Mongolia and the Erhtaokou Formation near Jilin City, Jilin. During early Early Devonian in China, a big biogeographic region is situated to the south of the Junggar-Hingan biogeographic region, and this region, including South Tianshan, Central Jilin, south Inner Mongolia, west Qiling Mountains and northwest Yunnan etc., should belong to the Palaeotethyan Province of the Old world Realm.¹¹}";
- 2939 s[2936] = "LELESHUS V.L. (1972).- Microalveolites n.g., eine tabulate Koralle aus dem Unterdevon des Zeravshan-Gebirges (Tadzikistan).- N. Jb. Geol. Palaeont. Mh. 9: 538-545.- FC&P 1-2, p. 15, ID=4651Topic(s): ; Tabulata, Microalveolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Tajikistan, Zeravshan Mts^[key words: New description, Tabulata (Microalveolites), Lower Devonian; Tien Shan (Zeravshan-Mountains)]The new alveolitid genus from the Lower Devonian of Central Asia is characterized by very small corallites, comparatively thick walls and other features.¹¹";
- 2940 s[2937] = "DENG ZHANQIU (1979).- Middle Devonian Tabulate corals and chaetetids from Dushan, Southern Guizhou. [in Chinese, with English abstract].- Acta Palaeontologica Sinica 18, 2: 160-166.- FC&P 9-1, p. 11, ID=5739Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: China, Guizhou¹¹";
- 2941 s[2938] = "CHI YONGYI (1982).- Some tabulate corals from late Middle Devonian in Baijingshan district of Dahinganling. [in Chinese, with English summary].- Acta Palaeontologica Sinica ??, 4: 485-490.- FC&P 12-1, p. 40, ID=6178Topic(s): taxonomy, stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: China, Gt Khingan Mts^{The present paper deals with the tabulate corals collected from the late Middle Devonian in the Baijingshan district of Dahinganling (Mts. greater Khingan). Among them are six genera and eleven species (including four new species) as listed below: Favosites aff. intermedius Stewart, Thamnopora aff. reticulata (Blainville), T. absurda Yanet, Alveolites levis Chernyshev, Crassialveolites mirus Dubatolov, Coenites tenella Guerich, C. dubatolovi Yanet, C. lunatus sp.nov., Tyrganolites fungosus sp.nov., T. mixtus sp.nov., and T. extensus sp.nov. * In accordance with these elements, the tabulate coral-bearing rocks may be assigned to the late Middle Devonian, approximately corresponding to the Givetian Stage in the Kuznetsk Basin and the Urals of the USSR and in North America as well. [original summary]¹¹}";
- 2942 s[2939] = "BARSKAYA V.F. (1980).- Znachenije tabulatomorfnykh korallov

- v stratigrafii devona Srednego Prikolymiya i Momskogo khrebta. [tabulatomorphic corals in Devonian stratigraphy of Kolyma region and Momsk range; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 41, ID=5802^Topic(s): stratigraphy; tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Far East^^1";
- 2943 s[2940] = "TCHI YONGYI (1984).- Middle Devonian Tabulate Corals and Chaetetids from Zhenan and Xunyang, Shaanxi Province, China.- Professional Papers of Stratigraphy and Palaeontology 11: 49-57.- FC&P 13-1, p. 30, ID=0434^Topic(s): Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian M; Geography: China, Shaanxi^^1";
- 2944 s[2941] = "DENG ZHANQIU (1978).- Middle Devonian Tabulate corals and Chaetetids from Dushan, southern Guizhou. [in Chinese, with English summary].- Acta Palaeontologica Sinica 18, 2: 131-160.- FC&P 8-2, p. 44, ID=5718^Topic(s): Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Devonian M; Geography: China, Guizhou^This paper deals with the tabulate corals and chaetetids collected from the Longdongshui Member of the Houshan Formation in Dushan of Guizhou. The collections contain 19 genera and 30 species (including 12 new species and 3 varieties) of tabulate corals, 2 genera and 2 species of heliolitids and 2 genera and 4 species (including 2 new species) of chaetetids. The new species are: Roemerolites dushanensis, R. polymorphus, Parastriatopora jumuwanensis, P. jumuwanensis var. varia (var.nov.), P. jumuwanensis var. thamnopoidea (var.nov.), Thamnopora tersa, T. longdongshuiensis, Gracilopora spina, Alveolites convolutus, A. inconstans, Crassialveolites yunnanensis var. dushanensis (var.nov.), Caliopora mixta, Placocoenites elasmatus, Aulopora mixta, Syringoporella convexotabulata, Chaetetes raritabulatus and Cyclochaetetes distortus. The tabulate corals, heliolitids and chaetetids were found together with rugose corals (Utaratuia sinensis, Sociophyllum minor and Brevisseptophyllum kochanensis etc.) and Brachiopods (Acrospirifer houshanensis, Eospiriferina lachrymosa, Athyrinsina squameosaeformis, Acrospirifer fongi, Gypidula biplicata and Kwangsia perfecta etc.). * Accordingly, the tabulate coral-bearing deposits may be assignable to the early Middle Devonian stage, approximately corresponding to the Eifelian stage in Europe. Based upon the characteristic features of the tabulate corals and chaetetids, two coral assemblages may be recognized in the Longdongshui Member of the Houshan Formation, the upper assemblage is characterized by the presence of Parastriatopora jumuwanensis, Favosites clarus and Roemerolites dushanensis, while the lower assemblage is represented by Pachyfavosites nilella, Favosites multiplicatus and Pachycanalicula barrandei.^1";
- 2945 s[2942] = "DENG ZHANQIU (1984).- Lower and Middle Devonian Tabulate and Heliolitida from Alengchu of Northwestern Yunnan.- Bulletin Nanjing Institute Geology and Palaeontology, Academia Sinica 7: 287-310.- FC&P 15-2, p. 35, ID=0720^Topic(s): Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: Devonian L M; Geography: China, Yunnan^The Lower and Middle Devonian marine deposits well developed in Alengchu of Lijiang N.W. Yunnan contain tentaculites, conodonts, brachiopods and corals. The tentaculites collected from there have been identified in 1975 by Mu Dao-cheng and the rugose corals in 1978 by Yu Chang-min and Liao wei-hua. Here described which are Tabulata and Heliolitida belong to 14 genera and 35 species including 12 new species and 7 new subspecies with their stratigraphical distribution given as follows. In China, the Devonian sea may be generally outlined by two paleobiogeographical districts, the North district and the South one. The Lower Devonian marine strata with coral faunas including Tabulata and Heliolitida are developed from West Sichuan, Northwest Yunnan, Central Guangxi and West Qinling in the South, from East Junggar and

- Central Da Hinggan Mountains in the North. Favositids, Thamnoporids, Heliolitids are abundant in the above areas, chiefly containing Favosites, Dictyofavosites, Squameofavosites, Pahcyfavosites, Thamnopora, Striatopora, Cladopora, Parastriatopora, Heliolites and Paraheliolites, among which Favosites, Dictyofavosites and Squameofavosites are predominant. On the whole, the Lower Devonian coral faunas with Tabulata and Heliolitida from either North and South China bear a resemblance to those of Kazakstan and Kuznetsk Basin.¹¹";
- 2946 s[2943] = "FENG Qi, GONG Yi-Ming & RIDING R. (2010).- Mid-Late Devonian calcified marine algae and cyanobacteria, South China.- Journal of Paleontology 84, 4: 569-587.- FC&P 36, 125, ID=6576^Topic(s): taxonomy, temporal patterns; Systematics: calcified algae, Cyanobacteria; Stratigraphy: Devonian M U; Geography: China S^Givetian, Frasnian and Famennian limestones from southern China contain microfossils generally regarded as calcified algae and cyanobacteria. These are present in 61 out of 253 sampled horizons in four sections from three widely spaced localities in Guangxi and southern Guizhou. Three of the sections sampled are Givetian- Frasnian-Famennian, one section is Frasnian-Famennian. They include reef and non-reef carbonates of shallow marine platform facies. The following taxa are identified with differing degrees of confidence, and placed in algae, cyanobacteria or microproblematica. Algae: Halysis, 'solenoporaceans'; Vermiporella. Cyanobacteria: Bevocastria, Girvanella, Hedstroemia, Subtifloria. Microproblematica: ?Chabakovia, Garwoodia, ?Issinella, Izhella, Paraepiphyton, Rothpletzella, Shuguria, ?Stenophycus, Tharama, Wetheredella. As a whole, the abundance of algae, cyanobacteria and microproblematica increases by 34% from Givetian to Frasnian, and declines by 63% in the Famennian. This secular pattern of marked Famennian decrease does not support recognition of them as "disaster forms"; in the immediate aftermath of late Frasnian extinction. Nonetheless, their survival into the Famennian could indicate tolerance of environmental stress, independence of changes in food supply, morphologic plasticity, and ability to occupy a range of habitats and depths. Uncertainties concerning the affinities of the problematic taxa hinder assessment of their significance.¹¹";
- 2947 s[2944] = "LELESHUS V.L., OEKENTORP Kl. (2002).- Schischkat (Mittelasien) - eines der reichsten Fundgebiete unterdevonischer mariner wirbelloser der Welt.- Coral Research Bulletin 7: 95-108. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 11, ID=1615^Topic(s): geology; Systematics: Cnidaria Porifera; Stratigraphy: Devonian L; Geography: Asia Central, Shishkat^In the Lower Devonian in the vicinity of Shishkat (Tazhikistan) nearly 500 genera and about 1.000 species of fossil marine invertebrates have been discovered. A brief review of some taxonomic groups and oryctocoenoses is presented.¹¹";
- 2948 s[2945] = "SHEN JIANWEI, WEBB G.E. (2003).- Famennian (Upper Devonian) calcimicrobial (Renalcis) reef at Miaomen, Guilin, Guangxi, South China.- Palaeogeography, Palaeoclimatology, Palaeoecology 204, 3-4: 373-394.- FC&P 33-1, p. 98, ID=1198^Topic(s): reefs; reefs; Systematics: Cyanophyta; Stratigraphy: Devonian Fam; Geography: China, Guangxi^Famennian (Upper Devonian) reefs represent a calcimicrobial and stromatolitic reef framework with a few skeleton-dominated (stromatoporoid) examples after the skeletal metazoans in reef ecosystems were impacted on a global scale by the Frasnian-Famennian extinction event. Calcimicrobes, thrombolites, stromatolites, and biologically induced cement formed the major part of reef framework volume and contributed to rigidity of reefs. In this study, one example of Famennian non-skeletal carbonate buildups at Miaomen, Guilin, South China, has been documented in detail. Thick and massive limestones in the platform margin facies show a lateral transition to well-bedded fenestral and laminated limestone in the

back-reef facies southeastward and to well-bedded intraclastic grainstone, mudstone, and shale with lithoclasts and breccias in fore-reef slope facies northwestward. The Miaomen reef is almost exclusively constructed by calcimicrobes and cement. Major reef builders are Renalcis, Izhella, Paraepiphyton, Garwoodia, and a Keega-like microbe. Other reef builders are wetheredella, Rivularia, Rothpletzella, Ortonella, and Girvanella. Some less common algae and calcimicrobes also occur in the Miaomen reef, including Parachaetetes, Solenopora, Tharama-like objects, and unidentifiable microbes. Cavities are well developed in the reef limestone. The Miaomen Renalcis reefs developed along leeward platform margin settings adjoined by intraplatform depressions and rimmed Famennian carbonate platforms along with stromatolite reefs, ooid shoals, brachiopod-shell shoals, nautiloid shoals, and previously described Renalcis-Epiphyton and Renalcis-cement reefs. Miaomen reefs demonstrate the significant roles of calcimicrobes and microbial carbonates in the development of Famennian carbonate systems in South China. Famennian microbial reefs in Guilin represent an interval of profound biotic change in the style and extent of carbonate buildups and in the composition of buildup communities and indicate important environmental and ecological changes within the carbonate system. [original abstract]^1";

- 2949 s[2946] = "PICKETT J.W. (2007).- *Astraeospongium* (Porifera: Calcarea) from the Late Devonian of northwestern China, and the late ontogeny of the genus.- *Memoirs of the Association of Australasian Palaeontologists* 34: 331-342.- FC#038;P 35, p. 44, ID=2324^Topic(s): ; Porifera, *Astraeospongium*; Systematics: Porifera; Stratigraphy: Devonian U; Geography: China, Xinjiang^Two species of sponges are reported from Famennian strata at the locality Aomuhu, north of Hoxtolgay, Xinjiang, northwestern China. *Astraeospongium chenae* sp.nov. differs from other species in lacking a dermal armour of heteracts on the concave surface. Preservation and weathering details of this species suggest that the life orientation of *Astraeospongium* (convex up) is the reverse of that generally accepted. A growth analysis of *A. chenae* indicates that definition of species of the genus on the basis of spicule size is invalid. The presence of an abraded astylospongiid accompanying *A. chenae* indicates an association enduring from Late Silurian to Late Devonian times.^1";
- 2950 s[2947] = "YU CHANGMING (1988).- Late Devonian (Famennian) Receptaculitids from Guilin, Guangxi, South China.- *Acta Palaeontologica Sinica* 27, 2: 238-248.- FC#038;P 17-2, p. 24, ID=2176^Topic(s): ; Porifera Receptaculitida; Systematics: Porifera; Stratigraphy: Devonian Fam; Geography: China, Guilin^^1";
- 2951 s[2948] = "LIAO Wei-Hua, RUAN YIPING (2003).- Devonian Biostratigraphy of China.- *Biostratigraphy of China* [Zhang W., Chen P. & A.R. Palmer (eds)]: 237-279; Science Press, Beijing.- FC#038;P 32-2, p. 59, ID=0002^Topic(s): biostratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: China^^1";
- 2952 s[2949] = "DUBATOLOV V.N., KAPLUN L.I., SENKEVICH M.A. (1977).- Biogeografiya Kazakhstana v devonskiy period.- *Trudy Instituta Geologii i Geofiziki AN SSSR (Sibirskoe Otdeleniye)* 347 : 64-103.- FC#038;P 7-1, p. 21, ID=0175^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Devonian; Geography: Kazakhstan^Nach einer eingehenden Charakteristik der stratigraphischen Einheiten Kazakhstans werden die biogeographischen Zusammenhänge anhand der Korallen (Rugosa und Tabulata) und Brachiopoden des Dshungarskiy-Balkhash Meeres dargestellt und den Faunenprovinzen der übrigen Welt gegenübergestellt. Im tieferen Unterdevon finden sich noch verstärkt Relikte silurischer Gattungen und Arten (unter den Rugosa z.B. Schlotheimophyllum, Araeopoma, Pilophyllum, Ptychophyllum; unter den Tabulata Astrocenum, PachyporiL, Alcuolites), die aber gegen Ende des Unterdevons verschwunden sind.

Gleichzeitig treten aber neue Formen auf, die teils starken endemischen Charakter besitzen und im Kazakhian (Upper Emsium) den grossten Anteil der Fauna ausmachen. Favositidae spielen die bedeutendste Holle. Das Dshungarskiy-Balkhash-Meerbecken stellt somit im Unterdevon eine selbständige biogeographische Einheit dar. Die mit dem Ende des Kazakhian erfolgende Regression fuhrt zu einem Aussterben der meisten Korallen und Brachiopoden. Im Mitteldevon, insbesondere im Givetium, wird die Isolierung Beckens beendet. Neue, teils kosmopolitische Faunenvertreter erscheinen. Unter den Tabulata herrschen die Thamnoporinae vor, aber auch Alveolitidae u.a. Ein Austausch mit benachbarten Provinzen findet statt, so können Einwanderer aus Westeuropa (z.B. Thamnopora cervicornis), aus der Mediterranean -, der Uralo-Tianshan -, der Altai-Sayan-Provinz festgestellt werden. Verbindungen nach Nordamerika und Australien fehlen. Im Oberdevon schreitet die Transgression fort. Gleichzeitig aber tritt, vor allem im Famennium, dem Hohepunkt der Transgression, eine Faunenverarmung ein. Herrschen zunächst in Frasnium noch Alveolitidae vor, so finden sich im Famennium in erster Linie Syringoporen und Auloporen, die zudem bereits Anklänge an die karbonischen Formen aufweisen. [fragment of extensive summary]^1";

2953 s[2950] = "WANG YU, YU CHANGMING, XU HANKUI, LIAO Wei-Hua, TSAI CHUNGYANG (1978).- Devonian biostratigraphy of South China.- Nanjing Institute Geology Paleontology, Academia Sinica .- FC&P 8-1, p. 55, ID=0236^Topic(s): biostratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: China s^This paper deals with the litho-and biofacies, the division and correlation of the Devonian stratigraphy, as well as the Devonian fossil assemblages of South China. Species of stromatoporoids, tabulate and rugose corals are mentioned besides plants and other evertrebrate fossils. Two major provinces are to be distinguished: the western province covers the Tsinling, the Tibet - western Yunnan region and parts of the Kunlun Mts with marine Lower Devonian of mainly miogeosynclinal type with abundant benthonic and planktonic faunas conformably situated on the Silurian while the eastern province occupies the vast region south of the Tsinling Mts, and the east of the Kongtian Massif, where the Devonian is of platform type with deposits yielding rich faunas of different phyla.^1";

2954 s[2951] = "LIU XINHUA, LIU ZUHAN, YANG MENGDA, YANG RONGFENG, XIAO YONGLUN, WANG YUE (2004).- A preliminary study on the Devonian Buzhai reefs in southern Guizhou.- Chinese Journal of Geology 39, 1: 92-97.- FC&P 33-1, p. 91, ID=1207^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: China, Guizhou^The Devonian Buzhai reefs in southern Guizhou developed in the Jipao and Jiwozhai members of the Dushan Formation. The reefs distributed along the boundary between the platform and platform-basin and grew on a narrow elevated area, caused by a syn-sedimentary fault. They were mostly frame reefs, built mainly by Stromatopora-Almolites community, which was very important reef building community, characterized by the massive stromatoporoids and various tabulate corals. Some of them were baffle reefs, built mainly by blue-green algae community, which was dominated by columnar stromatolites. The reef complex could be divided into six facies, and four subfacies could be distinguished in the reef facies. The development of reefs was largely controlled by the sea transgression and regression and included two large cycles.^1";

2955 s[2952] = "ZHANG R.-J., LIAO Wei-Hua, FENG S.-N. (2001).- Frasnian fossils from the lowermost part of Hsiehchingsu Formation of Jianshi, west Hubei.- Journal of Stratigraphy 25, 1: 58-62.- FC&P 30-2, p. 22, ID=1574^Topic(s): ; fossils; Systematics: ; Stratigraphy: Devonian Fra; Geography: China, Hubei^1";

2956 s[2953] = "LIAO Wei-Hua (2001).- Query the validity of the "south-type" Devonian of the Hongliuyuan area, Gansu.-

- Journal of Stratigraphy 25, 2: 121-122.- FC&P 30-2, p. 11, ID=1594^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Devonian; Geography: China, Gansu^^1";
- 2957 s[2954] = "LIAO Wei-Hua (2001).- Biotic recovery from the Late Devonian F-F mass extinction event in China.- Science in China Series D: Earth Sciences 45, 4: 380-384.- FC&P 30-2, p. 11, ID=1595^Topic(s): extinctions, recoveries; extinctions recoveries; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: China^The Frasnian-Famennian (F-F) mass extinction is one of the five great extinctions of marine life during the Phanerozoic. The F-F event killed most of the Devonian reefs, the characteristic Devonian corals, stromatoporoids, bryozoans, nearly all tentaculites, a few superfamilies of brachiopods, such as Atrypacea and Pentameracea and some important elements of goniatites, such as Manticoceras. * The end-Frasnian was a phase of mass extinction. A large number of shelly benthos were killed by the F-F event. Early and middle Famennian was the survival interval. The marine faunas were very rare at that time. The late Famennian was the recovery interval. There appeared to have many new taxa in the Strunian stage. It lacked a radiation interval in Late Devonian Famennian because another event (the D-C mass extinction) happened at the Devonian-Carboniferous boundary. * Several causes for the F-F mass extinction have been proposed by some geologists, which have been grouped into two broad types, terrestrial and extraterrestrial. The former is related to sea level changes, climate changes and anoxic water event. The latter is linked with some forms of meteorite impact. * A large-scale eustatic change of sea level and black shales representing an anoxic environment has been invoked to explain one of the causes for the F-F mass extinction. [original abstract; also reported in FC&P 30, 2: 11 - similar, Chinese version of this paper: Liao Wei-Hua 2001, Biotic recovery from the Late Devonian F-F mass extinction event - this could not be confirmed by our bibliographic query in June 2013]^1";
- 2958 s[2955] = "LIAO Wei-Hua, ZHU H.-C. et al. (2001).- Devonian.- Stratigraphy of the Tarim Basin [Zhou Z.-Y. (ed.)]; Science Press, Beijing.- FC&P 30-2, p. 11, ID=1596^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: China, Xinjiang, Tarim Basin^^1";
- 2959 s[2956] = "WANG CHENGYUAN (2002).- Annotations to the Devonian Correlation Table. B520- 536, R500 - R532: China.- Senckenbergiana lethaea [Palaeobiodiversity and Palaeoenvironments] 81, 2: 431-433.- FC&P 31-1, p. 55, ID=1619^Topic(s): stratigraphy, correlation; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: China^^1";
- 2960 s[2957] = "HONG TIANQIU, HUANG MING, FLAJS G. (2000).- A study of Devonian reefs from Southern China.- Acta Geologica Sinica 74, 4: 727-739. [English edition; Journal of the Geological Society of China]10.1111/j.1755-6724.2000.tb00489.x.- FC&P 30-2, p. 16, ID=1740^Topic(s): reefs, ecology, geology; reefs; Systematics: ; Stratigraphy: Devonian; Geography: China ^Three Devonian reefs (bioherms) from Yunnan and Guangxi, southern China, are studied in detail. Six microfacies types are differentiated. Colonial rugose corals (Columnaria, Disphyllum, and Hexagonaria) at Qujing, tabulate corals (Alveolites) with massive stromatoporoids (Actinostroma, and Stromatoporella) and sponges at Pauxi, and massive stromatoporoids (Actinostroma, Trupetostroma and Stromatoporella) at Yangshuo belong to the most important reef builders. All the three reefs studied clearly reveal a successive evolution history. They developed on carbonate banks, shallow carbonate platforms and platform margins in Late Givetian and terminated in the Frasnian due to sea-level falls related to local uplifts of platforms. This coincides with a eustatic fall of relative sea level at the Frasnian / Famennian transition.^1";
- 2961 s[2958] = "LIU ZUHAN (1986).- Ecological characters of Devonian

- Leimingdong reef complex section in Lianyuan of Hunan.- Acta Palaeontologica Sinica 25, 6: 603-609.- FC&P 16-1, p. 73, ID=2009^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Devonian; Geography: China, Hunan^1";
- 2962 s [2959] = "LIU JIARUN, ZHANG YONGLU (1987).- Analysis of a Middle Devonian community from Panxi in eastern Yunnan, with notes on fossil counting in a quadrat.- Acta Palaeontologica Sinica 26, 1: 18-29.- FC&P 16-2, p. 19, ID=2042^Topic(s): biocoenoses; fossils; Systematics: ; Stratigraphy: Devonian M; Geography: China, Yunnan^This paper discusses the fossil counting in a quadrat, with the recognition that it is appropriate and effective to use the alternate fossil counting method for diverse organisms which are individually different in size. From the consumption of food resources in an ecosystem, a colonial form with smaller individuals (e.g. bryozoans) may be equivalent to a larger solitary form (e.g. solitary tetracorals). Application of this method would precisely ascertain the relative importance of each population at the same trophic level. By using the quadrat method and based on the data from autecology and sedimentology, the authors have analysed the structures of the PM (Parasociophyllum isactis - Microplasma fungi) community from the Middle Devonian Huaning Formation of Panxi, Eastern Yunnan and reconstructed the general features of the living community (fig. 6). The PM community represents a living community dominated by benthic suspension feeders. Including at least 28 populations, with the dominant species Microplasma fongi (Yoh) and Cystiphyllodes kwangsiense Yoh, and rare species Stringocephalus obesus, Murchisonia, etc. The PM community has a high diversity (D=3.795), a high dominance (C=0.648) and a low equitability (E=0.286), at two trophic levels (producer level and primary consumer level). The spatial distribution of the community is characterized by a mosaic pattern with patch areas of high biomass and high density enclosed in scattered areas of low biomass and low density, on four levels in height. Probably the PM living community was developed in the tropic zone and on the upper part of a shallow-shelf (below the normal wave base).^1";
- 2963 s [2960] = "YU CHANGMING, WU YI (1988).- Middle Devonian Facies Patterns and Reef Development in South China.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillan N. J. et al. (eds): Devonian of the World], II: 649-658.- FC&P 18-2, p. 46, ID=2504^Topic(s): reef complexes, facies; reef complexes; Systematics: ; Stratigraphy: Devonian M; Geography: China S^Middle Devonian rocks in Southern China exhibit a variety of lithofacies and biotas. Three facies areas can be recognized, including four facies zones or belts. The distribution of various facies zones was only controlled by a basement fracture system but also by syndepositional faults. The reefs range in age from late Emsian to Eifelian and from Givetian to the end of Frasnian time. They are mainly distributed along the northwest-trending Nandan-Yadu fault zone and along the northeast-trending Yongfu-Tao-jiang fault zone. Some of the Givetian reefs in Southern China are laterally differentiated into fore-reef, reef-core and back-reef subfacies. In vertical section they exhibit in ascending order repeated cycles of reef basement, reef, dolomitized reef and biodetrital limestones. Hematite ore deposition occurs preferentially in the transition zone between clastic rocks and argillaceous limestone in the central part of the littoral facies area. Siderite and its sister deposits typically occur in the transitional terrane between the reef platform and depressional facies so they, too, are related to the reef facies. The Devonian of South China was deposited in an epicontinental sea which overlapped paleo-landmasses. On the east the epicontinental sea was bounded by the Cathaysian landmass, on the north and northwest by the Jiangnan landmass and the Qianbei landmass respectively, and on the west by the Kongdian landmass. These paleo-landmasses were source areas for terrigenous material that was transported, respectively, from east to west, from north and northwest

- to south and from west to east during the Devonian marine transgression which advanced mainly from the southwest toward the northeast. The Middle Devonian of South China exhibits diverse lithofacies and biotas culminating in the development of reef complexes. Studying these rocks gives us a general understanding of the Devonian facies pattern and reef development in south China.^1";
- 2964 s[2961] = "DU YUANSHENG, ZHAO XIWEN, LI GUANCHENG (1990).- The Frasnian-Fammenian extinction event in the middle sector of the western Qinling Mountains.- Geological Review 36: 50-57. [in Chinese with English Summary].- FC&P 20-1.1, p. 77, ID=2875^Topic(s): extinctions; F/F extinction; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: China, Qinling Mts^^1";
- 2965 s[2962] = "LELESHUS V.L. (1990).- Organicheskiy mir Devona srednej Azii. [Devonian organisms in Central Asia; in Russian] .- Paleontologicheskiiy Zhurnal 1990, 2: 26-36.- FC&P 20-2, p. 47, ID=2904^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Devonian; Geography: Asia Central^^1";
- 2966 s[2963] = "ZUHAN L., MENGDA Y. (1997).- New thinking about research on Devonian reefs and oil exploration in Hunan, China.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 015-021.- FC&P 26-2, p. 21, ID=3698^Topic(s): reefs hydrocarbons; reefs, hydrocarbons; Systematics: ; Stratigraphy: Devonian; Geography: China, Hunan^Devonian reefs in Hunan were developed in the late Givetian and early Frasnian. Most reefs have been discovered in the area of carbonate platform facies and regarded as biostromes or patch reefs. Rare oil shows have been found in these kinds of reefs. Some so-called "reef mounds" have abundant oil shows, but they have been considered to have developed only on a few elevated blocks in the area of inter-platform depressional facies. Based on research on reef distribution and characters of sedimentography and paleoecology, this paper proposes that many so-called "biostromes" are not layered but instead are narrow [structures] along the edges of platforms [acting] as barrier reefs. Some "reef mounds" are only the upper parts of barrier reefs, which extended towards the depressional facies area and were broken by faults. If this is true, they will be found along the edges of platforms and are not restricted within narrow limits. Because these parts of the reefs are preserved in the black shales and have fine oil shows, great attention should be paid to them in oil exploration.^1";
- 2967 s[2964] = "LELESHUS V.L. (1991).- Paleogeography of Middle Asia in the Devonian Period.- Izvestiya AN Taj. SSR, otd. fiz.-mat, chim. i geol. nauk 1991, 3: 54-59.- FC&P 23-1.1, p. 40, ID=4110^Topic(s): biogeography; geography; Systematics: ; Stratigraphy: Devonian; Geography: Asia Central^^1";
- 2968 s[2965] = "WANG YU, YU CHANGMING, WU QI (1974).- Données concernant la biostratigraphie du Dévonien de la Chine méridionale.- Mem. Nanking Inst. Geol. Palaeontol. 1974, 6: 1-71. [en chinois].- FC&P 4-1, p. 40, ID=5147^Topic(s): biostratigraphy; paleontology; Systematics: ; Stratigraphy: Devonian; Geography: China s^[discovery of new Coelenterata]^1";
- 2969 s[2966] = "TSIEN H.-H. (1984).- Devonian reefs of China: palaeoecology and structure.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 8.1-8.19.- FC&P 13-1, p. 11, ID=6321^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: China^A vast area of China is characterized by karst topography. The most beautiful karst landscapes are the Stone Forest in Yunnan and the peculiar karst features of Kweilin in Kwangsi. Many of these features are developed in the Devonian carbonate rocks and are closely related with reef phenomena. * The distribution, depositional types and subdivision of the Devonian System of China are controlled by two major latitudinal structural belts, the Inshan-Tianshan mountains and Tsinling-Kunglung

- mountains respectively.. [first part of an introduction]^1";
- 2970 s[2967] = "YU CHANGMIN, SHEN JIANWEI (1999).- Devonian reefs and reef complexes in Guilin, Guangxi, South China. [in English].- Jiangsu Science and Technology Press, Nanjing: 168 pp., 57 text-figs, 27 pls.- FC&P 29-1, p. 13, ID=7009^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: China, Guilin^A professional volume contains rich data on Devonian reefs and reef complexes in Guilin, South China based on the result of as long term study under multidisciplinary principles of biology and geology, especially based on the result of paleobiologic study on many fossil groups, on the lithostratigraphic, biostratigraphic, sedimentology, microfacies analysis of carbonate rocks etc. It reveals that the region of present Guilin was covered by warm and shallow marine about 360 million years ago and was prosperous with the reef development. By the beginning of the geologic time interval approximately equivalent to the varcus conodont zone there started a record of carbonate deposition in Guilin. It was until the late Famennian and earliest Carboniferous that the reefs were intermittently developed along the margin of carbonate platform, and in places in the interior of platform. As a whole the marine Devonian form a megacycle mainly composed of the clastics at the base (pre-varcus zone), and of the carbonates at the above, where some hiatus of various scale caused by the bioevents and sedimentary events can be found. Some patch reefs, fringing reefs and algal mounds of smaller size occurred mainly in the earlier stage of the carbonate platform development in Givetian, whereas the barrier reefs along the margin of platform and rare patch reefs behind them were growing in the late developmental stage mainly in Frasnian, locally in Famennian. * Beside the first chapter in which the regional geology and the Devonian stratigraphy including the biostratigraphic framework and lithostratigraphic sequences are introduced, there are descriptions and records of the characteristics of various parts of the reef complexes and different facies types outcropped from place to place in Guilin. these contents occupying the length of three chapters are appended with many photos in plates and text-figures made from the outcrops or under the microscopy, the fifth chapter deals with the aspects of diagenesis and in the sixth chapter there is discussion of the sea-level changes affecting the Devonian sedimentation and reef development, the conclusive parts issued that the special mode of Devonian reef development in Guilin is distinct from the contemporaneous reef development in western part of North America, northwestern Australia and western Europe.^1";
- 2971 s[2968] = "LATHUILLIERE B. (2009).- Thurmann and Coby - students of Swiss Jura.- FC&P 35: 123-125.- FC&P 35, p. 123, ID=7262^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[biographic and bibliographic short note on Jules Thurmann (1804-1855) and Frederic-Louis Coby (1852-1930), students of Swiss Jura and its fossil corals]^1";
- 2972 s[2969] = "LIU Z.-H., LIU X.-H., YANG M.-D., YANG R.-F. (2003).- Palaeontology and palaeoecology characteristics of Devonian reefs in Buzhai of Guizhou. [in Chinese, with English abstract].- Journal of Xiangtan Mineralogical Institute 18, 3: 29-32.- FC&P 33-1, p. 92, ID=7237^Topic(s): reefs, paleontology, ecology; reefs; Systematics: ; Stratigraphy: Devonian; Geography: China, Guizhou^Devonian reefs in Buzhai of Guizhou developed in the Jipao Member and Jiwozhai Member of Dushan Formation. They are mostly frame reefs, built mainly by stromatoporoids and tabulate corals. Some are the baffle reefs, built mainly by dendroid tabulate corals or algae. Four communities and an association are recognized in the reef complex. The Ilmenia-Crassialveolites community is characterized by small brachiopods and dendroid tabulate corals and occupied in the lower-turbulent shallow sea. The Thamnopora-Stringocephalus community consists of the dendroid tabulate corals and big brachiopods and develops in the open shallow sea. The Stromatopora-Alveolites community

- is the very important reef-building community, characterized by the massive stromatoporoids and various corals. The blue-green algae community is the builder of the baffle reefs. The Cyclocyclicus-Clathrocoelona association is composed of the crinoids and thin-bed stromatoporoids and develops in bank facies. By the ecological analysis and comparison with the reefs in neighboring areas, the reef complex developed in a stable shallow marine environments, which was more suitable for growth of reef-building organisms. [original abstract]^1";
- 2973 s[2970] = "NING ZHONGSHAN, BAI SHUNLIANG, JIN SHANYU (1984).- Devonian / Carboniferous boundary beds at Guangxi, with remarks on the correlation of coral-conodont zonal species.- Geology of Guangxi 1984, 1: 36-44 [in Chinese, with English summary].- FC&P 15-2, p. 31, ID=0683^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: China, Guangxi^^1";
- 2974 s[2971] = "YU CHANGMING (1988).- Corals.- Devonian-Carboniferous Boundary in Nanbiancun, Guilin, China [Yu Changming (ed.); Beijing (Science Press)]: pp. 165-195. text-figs. 64-75, pls. 40-48.- FC&P 18-2, p. 35, ID=2175^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: China, Guilin^Corals are generally common in the Devonian / Carboniferous boundary beds of the Nanbiancun sections although not the most common fossils. 23 species assigned to 11 genera belong to the rugose corals. Among them 11 species and 2 genera are new. The rest of them either remained as open species or genus or restricted the identification at a species level, 2 forms described as indeterminable. There is only one species belonging to the tabulate corals. The described corals occurring in the beds are dated by conodonts. [...] The existence of axial structures already in Famennian corals is discussed as well as the paleoecological aspects of the Nanbiancun fauna. The corals in Nanbiancun probably favour a deeper water environment. [taken from the abstract]^1";
- 2975 s[2972] = "WANG ZHENGJI (1989).- Corals.- In: Ji Q.-A. et al. (eds): The Dapoushang section, an excellent section for the Devonian-Carboniferous boundary stratotype in China; Science Press, Beijing: 43-44, 123-126.- FC&P 20-2, p. 60, ID=2944^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: China, Dapoushang^^1";
- 2976 s[2973] = "XU S.Y., YE G. (1990).- The Devonian-Carboniferous boundary in South China based on coral fossils.- Geological Review 36, 2: 140-147. [in Chinese with English abstract].- FC&P 20-2, p. 60, ID=2946^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: China S^^1";
- 2977 s[2974] = "YU CHANGMING (1989).- Book presentation: Devonian-Carboniferous boundary in Nanbiancun, Guilin, China - Aspects and Records.- FC&P 18, 1: 58-59. [book presentation] - FC&P 18-1, p. 58, ID=6777^Topic(s): ; paleontology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: China, Guilin^This volume presents an intensive systematic descriptions and illustrations of 14 fossil groups including conodonts, foraminifers, algae, corals, blastoids, bryozoans, trilobites, ostracodes, brachiopods, ammonoids, gastropods, bivalves, holothurians and fish scales hitherto found in the D-C boundary beds in Nanbiancun section in order to understand the biological events and evolution of the life during the period of interval between Devonian and Carboniferous. [fragment of presentation]^1";
- 2978 s[2975] = "WANG ZHIPING (1988).- Distribution of Heterocorallia in China and Microstructure of Hexaphyllia.- Acta Palaeontologica Sinica 27, 4: 475-480.- FC&P 18-1, p. 44, ID=2281^Topic(s):

distribution, microstructures; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian, Carboniferous; Geography: China^China yields the most abundant fossils of Heterocorallia in the world. However, so far only eight genera have been established, namely, Tetraphyllia, Oligophylloides, Pentaphyllia, Crepidophyllia, Longlinophyllia, Radiciphyllia, Heterophyllia and Hexaphyllia. Among them, Oligophylloides, is only found in Poland, Radiciphyllia only in Japan, while the others are all discovered from China, and can be classified into 3 families, 6 genera and 58 species. These Chinese taxa include not only the genera first identified in Europe, for example, Heterophyllia and Hexaphyllia, but also the endemic forms such as Tetraphyllia, Pentaphyllia, Crepidophyllia and Longlinophyllia. In China, Tetraphyllia is found from the Lower Devonian of Wenshan, Yunnan, while the others are widespread in the strata of the Tatang Stage. The genus Hexaphyllia is much more abundant than others and together with Yuanophyllum may be regarded as zonal fossils for late Tatang Stage. It has been found that the microstructures of the skeleton of Hexaphyllia are all made up of fibrous elements, based on electron microscope observation of the specimens of Hexaphyllia floriformis Wang et Ye from Majiaoba, Sichuan. These microstructures resemble the septal structure of advanced forms of Carboniferous tetracorals. The walls are made up of fibrous crystals which are mainly composed of brachy-columns and needles, with rare crystal-granules, nearly in parallel arrangement and are perpendicular to the fibrolamellae. The fibrous elements in the septa are mainly brachy-columns and crystal-granules, with rare needles; they are arranged parallel to each other and are perpendicular to the mid-septal face. The tabulae are also mainly made up of brachy-columns and crystal-granules; they seem to be arranged in only one row and roughly perpendicular to the surface of tabulae.^1";

- 2979 s[2976] = "SONG XUELIANG (1982).- The Carboniferous and Devonian tetracorals from the Baoshan-Shidian region of western Yunnan.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 10: 18-37.- FC#038;P 15-2, p. 33, ID=0698^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian, Carboniferous; Geography: China, Yunnan^1";
- 2980 s[2977] = "POTY E., XU S. (1996).- Rugosa from the Devonian-Carboniferous transition in Hunan, China.- Memoires de l'Institut geologique de l'Universite de Louvain 36: 89-139.- FC#038;P 25-2, p. 48, ID=3136^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam#47; Carboniferous Tour; Geography: China, Hunan^Rugosa were collected in four sections in Hunan, to determine precisely the biozonation of Famennian to upper Tournaisian strata and to attempt correlations with western Europe. 29 species (including two new ones), belonging to 16 genera (including three new ones), are described and compared with Rugosa from equivalent levels in Europe. Their stratigraphical distributions are documented. In systematics, Eocaninophyllum nov. gen. has been created for Famennian species previously assigned to Caninia, Parastelechophyllum nov. gen. for Tournaisian species resembling Stelechophyllum, previously assigned to Thysanophyllum, and Heterostrotion for Famennian to Visean species assigned to Donophyllum or to Stylostrotion. It is shown that Pseudoralinia is a junior synonym of Uralinia and is not close to Cystophrentis. The fauna, which developed during the Strunian, is totally different to that occurring at the same time in western Europe. It includes genera which are not known outside southern and central Asia, or in other levels than the Strunian, except one taxon (Smithiphyllum), and do not allow correlations. The Tournaisian strata yielded corals belonging to the Uralinia tangpakouensis and Keyserlingophyllum Zones, including some genera which are known outside China, or closely related to them. The base of the U. tangpakouensis Zone is correlated with the base of the RC1?, Zone of Belgium. The base

- of the keyserlingophyllum Zone corresponds closely with the base of the RC3 Zone.¹¹;
- 2981 s [2978] = "LIN BAOYU, XU SHAOCHUN (1994).- Late Devonian to Tournaisian rugose corals from South China and palaeontological events.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 23-33.- FC&P 23-1.1, p. 13, ID=4060Topic(s): bioevents; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian U / Carboniferous L; Geography: China S^Study of the distribution of rugose corals from Frasnian to Tournaisian in South China permits recognition of seven rugose coral zones (including 3 assemblage zones, 2 interval zones, 1 acme zone and 1 range zone): I, Pseudozaphrentis-Hunanophrentis-Mictophyllum A.Z.; n, Smithiphyllum-Hebukephyllum A.Z.; III, First Interval Z.; IV, Ceriphyllum elegantum-Caninia dorlodoti A.Z.; V, Cystophrentis R.Z.; VI, Second Interval Z.; VII, Pseudouralinia Acme Z. The zones are represented by shallow-water coral faunas. In deep-water facies, three rugose coral zones are established: Neaxon-Kielcephyllum-Prosmilia A.Z. (equivalent to Cystophrentis Range Z.), Guilinophyllum A.Z. (equivalent to C-P Interval Z.) and Koninckolasma A.Z. (equivalent to the lower part of Pseudouralinia Acme Z.). Five main "palaeontological events" are distinguished: extinction of most Devonian-type rugose corals at the end of the Frasnian; development of a new rugose coral fauna in the early Famennian; increase and diversification of rugose corals during late Famennian (or Strunian); extinction of most Strunian rugose corals near the Devonian-Carboniferous boundary; diversification of the Tournaisian-type rugose coral fauna at the beginning of the late Tournaisian.¹¹;
- 2982 s [2979] = "CHUDINOVA I.I. (1975).- Tabulata.- Materialy Geol. Tsentral. Kazakhstana 18 [T.A. Gorokhova (ed.): Fauna pogranychykh otlozheniy Devona i Karbona tsentral'nogo Kazakhstana / Fauna of the Devonian - Carboniferous boundary interval of central Kazakhstan]: 33-36.- FC&P 5-2, p. 10, ID=5440Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian / Carboniferous; Geography: Kazakhstan^Describes and illustrates 2 new genera and 4 species, 3 of them new.¹¹;
- 2983 s [2980] = "HANCE L., MUCHEZ P., COEN M., FANG X.-S., GROESSENS E., HOU H., POTY E., STEEMANS P., STREEL M., TAN Z., TOURNEUR F., VAN STEENWINKEL M., XU S.-C., (1994).- Biostratigraphy and sequence stratigraphy at the Devonian-Carboniferous transition in Southern China (Hunan Province). Comparison with Southern Belgium.- Annales de la Societe geologique de Belgique 116, 2: 359-378.- FC&P 25-1, p. 4, ID=2986Topic(s): biostratigraphy; biostratigraphy; Systematics: ; Stratigraphy: Devonian / Carboniferous; Geography: China, Hunan^In southern China, the Devonian-Carboniferous transitional strata are well exposed in several sections representative of different sedimentary environments. The siliciclastic-carbonate deposits have been investigated in the Oujiachong, Malanbian and Sujiaping sections situated in central Hunan. The Devonian-Carboniferous boundary coincides with the boundary between the Menggongao and the overlying Malanbian Formation. Study of different fossil groups (conodonts, foraminifera, ostracods, spores, brachiopods, rugose and tabulate corals) gives coherent biostratigraphical results which form the framework for reconstruction of the sedimentological evolution. Strong similarities are observed with southern Belgium allowing biostratigraphical and sequence stratigraphical correlations between the two distant sedimentary basins.¹¹;
- 2984 s [2981] = "ZHAO R.-S., QIN G.-R. (1991).- Diachronous characteristic of Maotzefeng Formation and the Devonian-Carboniferous boundary in North Guangdong.- Compte Rendu 11th International Congress on Carboniferous

- Stratigraphy and Geology, vol. 2: 169-184; Beijing, China, 1987.-
 FC&P 21-1.1, p. 49, ID=6814^Topic(s):
 biostratigraphy; geology; Systematics: ; Stratigraphy:
 Devonian / Carboniferous; Geography: China, Guangdong^^1";
- 2985 s[2982] = "JIA HUIZHEN, XU SHOUYONG (1977).- Corals. [in Chinese].-
 Atlas of Fossils of Central-South China, pt 2: Late Palaeozoic. [atlas
 of fossils] - FC&P 9-1, p. 12, ID=5745^Topic(s): ;
 Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy:
 Paleozoic U; Geography: China Central-S^^1";
- 2986 s[2983] = "ZHU ZHIKANG (1985).- New material of Devonian and Permian
 Conulariids from China.- Acta Palaeontologica Sinica 24, 5: 528-537.-
 FC&P 15-1.2, p. 41, ID=0764^Topic(s): new taxa;
 Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy:
 Devonian - Permian; Geography: China^Descriptions are given
 of the following genera and species: Yinoconularia huaqiaoensis gen. et
 sp.nov., Pastuloconularia chinensis gen. et sp.nov., ? Paraconularia
 yichunensis sp.nov., Piquiglongensis sp.nov., P. zhongyingensis
 sp.nov., P. sp., Beijingoconularia panxianensis sp.nov., B. ?
 yuelushanensis sp.nov., Changshaconus carinata gen. et sp.nov.,
 Climacoconus ningxianensis sp.nov. The classification follows the
 proposal of Sinclair (1952).^1";
- 2987 s[2984] = "CAO XUANDAO, OUYANG XUAN, JIN TONAN (1983).- Rugosa.-
 Paleontological Atlas of Northwest China, Shaanxi, Gansu, and Ninxia
 Volume, Part 2, Upper Paleozoic: 48-166.- FC&P 13-2, p. 39,
 ID=0545^Topic(s): atlas of fossils; Rugosa; Systematics:
 Cnidaria; Rugosa; Stratigraphy: Paleozoic U; Geography:
 China NW^^1";
- 2988 s[2985] = "LI SHOUQI, ZHANG BUFEI, ZUE ZIBI, WU JINZHU (1977).-
 Stromatoporoids. [in Chinese].- Atlas of Fossils of Central-South
 China, pt 2: Late Palaeozoic. [atlas of fossils] - FC&P
 9-1, p. 12, ID=5746^Topic(s): ; stroms; Systematics:
 Porifera; Stromatoporoidea; Stratigraphy: Paleozoic U;
 Geography: China Central-S^^1";
- 2989 s[2986] = "LIN BAOYU (1983).- Some Upper Palaeozoic Tabulate Corals
 from Xizang (Tibet).- Contributions to Geology of the Qinghai-Xizang
 (Tibet) Plateau 02: 253-257.- FC&P 13-1, p. 29,
 ID=0425^Topic(s): ; Tabulata; Systematics: Cnidaria;
 Tabulata; Stratigraphy: Paleozoic U; Geography: China,
 Tibet^^1";
- 2990 s[2987] = "WANG XIANGDONG, UENO K., MIZUNO Y., SUGIYAMA T. (2001).-
 Late Paleozoic faunal, climatic, and geographic changes in the Baoshan
 block as a Gondwana-derived continental fragment in southwest China.-
 Palaeogeography, Palaeoclimatology, Palaeoecology 170, 3-4: 197-218.-
 FC&P 30-2, p. 13, ID=1599^Topic(s): biogeography;
 biogeography; Systematics: ; Stratigraphy: Paleozoic U;
 Geography: China, Baoshan Block^The Carboniferous and Permian of
 the Baoshan block consist of three major depositional sequences: a
 Lower Carboniferous carbonate sequence, a Lower Permian siliciclastic
 sequence, and a Middle Permian carbonate sequence. These three
 sequences were interrupted by two major regressive events: first, the
 Namurian Uplift ranging in age from Serpukovian to Gzhelian, and
 second, the Post-Sakmarian Regression occurring probably at Artinskian
 time in the Baoshan block, although the precise time interval of the
 latter event is still unclear. The Baoshan block is characterized by
 warm-water, highly diverse and abundant faunas during the Early
 Carboniferous, by cold-water and low diversity faunas during the Early
 Permian, and by possibly warm-water but low diversity faunas during the
 Middle Permian. The Sweetognathus bucarangus conodont fauna
 constrains the upper boundary of the diamictite-bearing siliciclastic
 deposits (Dingjiazhai Formation) to the Sakmarian to early Artinskian,
 as well as the eruption of the rifting basalts (Woniusi Formation) to,
 at least, the post-early Artinskian. Paleozoogeographically,
 affiliation of the faunas in the Baoshan block changed from Eurasian in

- the Early Carboniferous, to Peri-Gondwanan in the Early Permian, and to Marginal Cathaysian/Cimmerian in the Middle Permian. Cimmerian blocks have more or less comparable geohistory to one another in the Carboniferous and Permian. During the Middle Permian, the eastern Cimmerian blocks such as Sibumasu (s.s), Baoshan, and Tengchong are not far from the palaeoequator, but apparently more distant than the western Cimmerian blocks based on the presence or absence of some index taxa such as the fusulinaceans Eopolydiexodina and Neoschwagerina, and the corals Thomasiphyllum and Wentzellophyllum persicum.¹";
- 2991 s[2988] = "YU C.C., LIN YINGDANG (1978).- Generalization of the Chinese Fengninian and the characteristics of its coral fauna.- Acta Geologica Sinica . 3: 222-230.- FC&P 8-1, p. 53, ID=0230Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L (Fengninian); Geography: China¹";
- 2992 s[2989] = "WU WANGSHI, ZHAO JIAMING (1979).- Carboniferous coral assemblages of China.- 9th International Congress on Carboniferous Stratigraphy and Geology; [preprint], Nanjing Institute of Geology and Palaeontology, Academia Sinica, Nanjing, China. [paper] - FC&P 8-2, p. 43, ID=0342Topic(s): coral assemblages; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China¹The Carboniferous marine deposits are generally known to be extensively widespread and fairly well-developed in China. These deposits contain a great amount of corals. During the past two decades, knowledge regarding the Carboniferous corals of China has been increased considerably. In broad outline, three faunal regions may be [distinguished], based on the characteristics of Carboniferous coral fauna: the southern, northern and northwestern faunal regions. In this paper, accounts are given of the coral assemblages in each region, especially those in the southern region with their stratigraphical implications.¹";
- 2993 s[2990] = "YU C.C., LIN I.T., HUANG C.H., TSAI T.S. (1978).- Early Carboniferous stratigraphy and corals of eastern Xinjiang.- Professional Papers of Stratigraphy and Palaeontology 05: 1-70.- FC&P 9-2, p. 43, ID=0344Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Xinjiang¹";
- 2994 s[2991] = "WU WANGSHI, ZHOU KANGJIE (1982).- Upper Carboniferous corals from Kolping and Aksu, Xinjiang.- Bulletin Nanjing Institute Geology and Palaeontology, Academia Sinica 1982, 4: 213-239.- FC&P 13-1, p. 41, ID=0487Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: China, Xinjiang¹From uppermost Carboniferous deposits, the Kangkelin Formation, consisting of light grey argillaceous limestone, a rich coral fauna is described of which 29 species and subspecies are belonging to ten genera. Among them one Family (Kepingophyllidae), three genera (Cardiaphyllum, Paraduplophyllum, Anfractophyllum) and 20 species and subspecies are new. * Two coral assemblages can be differentiated: the Cardiaphyllum elegans assemblage below and the Kepingophyllum aksuense assemblage above. These are contemporaneous in age with coral faunas in the Maping Formation of northern Guangxi and western Guizhou, as well as with those faunas from the Upper Chuanshan Formation of southern Jiangsu. * This is proved by the occurrence of Lophocarinophyllum, Caninia, Timania, Koninckocarinia and Kepingophyllum in the Kangkelin Formation and the occurrence of characteristic fusulinids in addition. Regarding the Upper Paleozoic biogeographic provinces, it seem unlikely that the coral fauna of the Kangkelin Formation belongs either to the waagenophyllidae or to the Durhaminidae provinces. The Kepingophyllidae province thus is established covering the western Guizhou, eastern Jizang and southern Jiangsu areas as well as the Kalping area, Xinjiang. It approximately corresponds to the Sakmarian in the Urals or the wolfcampian of North America. * Cardiaphyllum gen.nov. very closely

resembles Palaeosmilina in the character of the tabulae and can easily be distinguished from the latter by its longer minor septa, the concentric dissepiments, and the absence of keyhole fossula. It also resembles Amandophyllum, but in the latter the central column is distinct and the character of the tabulae indistinct. The following [species] belonging to the new genus are mentioned: Neokoninckophyllum dunbari Ross & Ross 1962, N. cooperi Ross & Ross 1962, N. deciense Ross & Ross 1962, Koninckophyllum oklahomense Rowett & Sutherland 1964, and probably Dibunophyllum clari Felser 1937. * Paraduplophyllum gen.nov. is similar to Duplophyllum with regard to the longer minor septa. It can be distinguished from the latter by its developing carinae and the incomplete tabulae. It also closely resembles Asserculina, but in the latter the columella and fossula are developed. * Anfractophyllum gen.nov. is similar to Szechuanophyllum in the shape of the corallites and the character of the tabulae. The difference between these two genera is the epitheca of the present genus being generally suppressed, the septa being of three orders and the cystose zone rather developed. * At first glance, the present genus shows a similarity to Polythecalis, but differs from the latter in presenting tertiary septa.^1";

- 2995 s[2992] = "DUAN LILAN (1985).- Early Carboniferous corals from Baoshan and Shidian, Yunnan.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 17: 255-276.- FC&P 15-2, p. 29, ID=0659^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Yunnan^^1";
- 2996 s[2993] = "LIN YINGDANG, HUANG ZHUXI, WU SHIZHONG (1983).- The classification of the zoogeographical regions of Lower Carboniferous corals in China.- Changchun College of Geology Journal 1983, 3: 1-7.- FC&P 15-2, p. 31, ID=0677^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China^^1";
- 2997 s[2994] = "LIN YINGDANG, WU SHIZHONG, XU SHOUYONG (1984).- The Datangian corals of the Lower Carboniferous in central Jilin.- Changchun College of Geology Journal 1984, 2: 43-68.- FC&P 15-2, p. 31, ID=0678^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Jilin^^1";
- 2998 s[2995] = "WU WANGSHI, ZHAO JIANG (1984).- Carboniferous coral assemblages of China.- 9th International Congress on Carboniferous Stratigraphy and Geology; Comptes Rendus 5: 200-204. [paper] - FC&P 15-2, p. 33, ID=0708^Topic(s): coral assemblages; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China^^1";
- 2999 s[2996] = "WANG ZHENGJI (1984).- Corals.- The Carboniferous strata and its fauna from southwestern margin of Tarim basin in Xinjiang: 137-154 [Zhao Zhixin, Han Jianxiu & Wang Zengji (eds); Geological Publishing House, Beijing].- FC&P 14-1, p. 51, ID=1013^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China, Xinjiang^^1";
- 3000 s[2997] = "LIAO Wei-Hua, RODRIGUEZ S. (1999).- Lower Carboniferous corals from the southwestern margin of the Tarim Basin, NW China.- Geobios 32, 4: 539-559.- FC&P 28-2, p. 22, ID=1444^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Xinjiang, Tarim Basin^The corals described in this paper were collected from the Heshilafu Formation at Aitegou section, southwestern margin of the Tarim Basin, southern Xinjiang [= Sinkiang), NW China in 1992. They comprise 29 species included in 24 genera. Three species are new: Fomichevella shacheeensis, Auloclisia formosa and Caninostrotion xinjiangensis. The lower and middle parts of the Heshilafu Formation are attributed to the Eostafella mosquensis

zone (Foraminifera, Fusulinida) and the upper part of the Heshilafu Formation belongs to the Pseudoendothyra directa zone. The former correspond to the Visean and the latter equivalent roughly to Serpukhovian. ^1";

- 3001 s[2998] = "WANG BAOYU (1988).- Subdivision of the Middle-Late Carboniferous strata in the Urumqi area, Xinjiang.- Journal of Stratigraphy 12, 2: 20-27 [in Chinese, with English summary].- FC&P 18-1, p. 34, ID=2237^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M/U; Geography: China, Xinjiang^The marine Middle-Late Carboniferous strata are widely distributed in Liu-shugou, Qijagou and Jingjingzigou of Urumqi, Xinjiang. Strata under discussion may be divided into three formations, namely the Liushugou, Qijagou and Aoertu Formations. * The Liushugou Formation is subdivided into two subformations. The lower one is made up of grey-greenish, medium-bedded to massive interbeds, intermediate-acid tuff and volcanic rocks and a few siliceous rocks, totalling 1131m in thickness. The upper one is composed of green, grey-violetish volcanic breccia and agglomerate, intercalated with a few andesitic porphyrite, with a thickness of 894m. The modified Qijagou Formation, 189m thick, consists of carbonate and clastic rocks of normal littoral shallow water facies and contains abundant fusulinids, brachiopods, corals. In the present paper the volcanic and volcanoclastic rocks in the lower part of the Qijagou Formation have been incorporated into the Liushugou Formation. Thus, the contact between the Qijagou and Liushugou Formations is conformable. The Aoertu Formation is also subdivided into two subformations. The lower one consists chiefly of carbonate rocks intercalated with a low calcium-bearing clastic rocks 66m thick, containing brachiopods, corals, etc. The upper one is made up of the normal clastic rocks intercalated with a few carbonate rocks 175-228m thick, yielding gastropods, cephalopods and a few corals.^1";
- 3002 s[2999] = "WANG ZHENGJI (1987).- Lower Carboniferous stratigraphy and coral fossil sequences in the Amunike Mountains of the North Qaidam basin.- Chinese Academy of Geological Sciences, Institute of Geology Bulletin 16: 51-114 [in Chinese, with English summary].- FC&P 18-1, p. 39, ID=2266^Topic(s): biostratigraphy; geology, Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Qaidam Basin^^1";
- 3003 s[3000] = "DING YUNJIE, YU XUEGUANG (1987).- Some corals of Middle Carboniferous from the Qinling Range.- Bulletin of Tianjin Institute of Geology and Mineral Resources 18: 101-118.- FC&P 19-1.1, p. 41, ID=2629^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: China, Qinling Mts^^1";
- 3004 s[3001] = "YAN YOUYING (1987).- Carboniferous corals from the lower Yangtze area.- Bulletin of Nanjing Institute of Geology and Mineral Resources 8, 2: 99-108.- FC&P 20-2, p. 54, ID=2648^Topic(s): taxonomy, distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China, Yangtze lower^Carboniferous corals are abundant in the Lower Yangtze Area and mainly distributed in the carbonate facies of Jingling Formation, Hezhou Formation, Laohudong Formation, Huanglong Formation and Chuanshan Formation. The corals of the Gaolishan Formation occur in lenticular mudlimestone of littoral facies in Nanjing-Zhengjiang area and Caohu area. The majority of corals in this area is of Huanan type, and the minority is of European type. Besides, a quantity of them belongs to local type. * The tetracoralla from the Lower Carboniferous Jingling Formation is monotonic and undiversified, belonging to solitary Zweizoner. Pseudouralinia is a zone fossil of Jingling Formation. The corals of Gaolishan Formation differs from that of the Jingling Formation. Dreizoner begin to appear but in small quantity. In Hezhou period, the Early Carboniferous corals flourished, solitary, compound Dreizoner and

- Zweizoner appeared in great number. Yuanophyllum kansuens - Aulina carinata are assemblage zone fossils of Hezhou Formation. In late Early Carboniferous Laohudong period fossils are rare. Aulophyllidae and Palaeosmiliidae which flourished in Hezhou period largely vanished. Lithostrotion mccoynum is the zone fossil of Laohudong Formation. The corals in Late Carboniferous Huanglong period is less flourishing than that in Early Carboniferous. Main Early Carboniferous species extinguished continuously. New elements such as Kionophyllum, Fomitchevella, wentzellophyllum and so on appeared. In Chuanshan period developed solitary and compound Dreizoner corals with axial structure and clinotabulae. Some species resemble to Permian species. The coral group has a transitional nature of Carboniferous-Permian. (Original summary) The new taxa are: Dingshanophyllum minglingense n.gen. et n.sp., Chaohuphyllum anhuiense n.gen. et n.sp., Vesiculoamplexocarinia yinpingensis n.gen. et n.sp.¹;
- 3005 s[3002] = "YE GAN, YANG YUFEN (1988).- Carboniferous coral sequence of Longmenshan, Sichuan China.- Earth Science - Journal of China University of Geosciences 13, 5: 503-510. [in Chinese, with English abstract].- FC&P 19-1.1, p. 45, ID=2649Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China, Sichuan¹";
- 3006 s[3003] = "WANG ZHENGJI (1989).- Carboniferous coral fauna provinces of China.- Journal of Southeast Asia Earth Sciences 3, 1-4: 163-169.- FC&P 20-2, p. 60, ID=2943Topic(s): biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China¹";
- 3007 s[3004] = "LIN Y.-D., WU S.-Z., PENG X.-D. (1991).- Carboniferous strata in the eastern part of the North China platform with reference to their coral assemblages.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Compte Rendu 2: 80-85.- FC&P 21-1.1, p. 47, ID=3231Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: China¹";
- 3008 s[3005] = "HUANG ZHUXI, DUAN JIYIE (1992).- The Early Carboniferous corals in Dachaidan Area in the north margin of Chaidamu Basin, Qinghai.- In Lin Yingdang et al. (eds): Professional papers of Carboniferous corals from China: 152-166.- FC&P 21-2, p. 35, ID=3313Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Qinghai¹The new taxa are: Siphonophyllia elegans sp.nov., S. sinensis sp.nov., Melanophyttum intermedium sp.nov., Heterocaninia qinghaiensis sp.nov., Siphonodendron elegantulum sp.nov., S. dachaidanense sp.nov., S. giganteum sp.nov., Clisiophyllum elegantum sp.nov., and Arachnolasmella abnormis sp.nov.¹;
- 3009 s[3006] = "WANG XUNLIAN, KATO M., WANG HONGZHEN (1994).- The Early Visean rugose coral communities in China.- J. Fac. Sci. Hokkaido Univ. IV, 23, 3: 329-342.- FC&P 23-2.1, p. 39, ID=4234Topic(s): biostratigraphy; coral communities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: China¹within China six Early Visean rugose coral communities are recognized, they are: 1) the Siphonophyllia community, 2) the cool water Gangamophyllum community, 3) the Thysanophyllum community, 4) the Bothrophyllum-Zaphrentites community, 5) the island Humboldtia community and 6) the cold water Hapsiphyllum-Rhopalolasma community. In northwest China, the Siphonophyllia community is distributed along the northern margin of the Tarim-Qaidam Oldland. The Gangamophyllum community was widespread north of the region occupied by the Siphonophyllia community, including north Tianshan, central Tianshan and east Junggar. In South China there were three rugose coral communities. The Thysanophyllum community occurs on the margin of the Upper Yangtze Oldland. The Bothrophyllum-Zaphrentites community was confined to the southern and western part of the region occupied by the Thysanophyllum community.

These two communities merge into each other without a distinct boundary. The *Humboldtia* community is found only in the Baoshan area. The *Hapsiphyllum-Rhopalolasma* community is found in Xainza and Himalaya of Tibet. The distribution of the six Early Visean rugose coral communities was controlled by the palaeogeographical background. The *Gangamophyllum* community occurs along the southern margin of the Siberia Oldland, while the *Siphonophyllia* community is distributed along the northern margin of Tarim-Qaidam Oldland. The *Hapsiphyllum-Rhopalolasma* community is confined to the northern margin of the Gondwana Oldland. In the wide southern and western margin of Yangtze Oldland the distribution of the *Thysanophyllum* and the *Bothrophyllum-Zaphrentites* communities was controlled by the bathymetry. The *Humboldtia* community probably lived in island seas far from the Yangtze Oldland.¹¹;

- 3010 s[3007] = "BYKOVA M.S. (1977).- Osnovnye etapy razvitiya korallov Rannego Karbona vostochnogo Kazakhstana. [main development stages of Lower Carboniferous corals of western Kazakhstan; in Russian].- *Ezhegodnik vsesoy. paleont. obshch.* 19 [E.A. Modzalevskaya & L.I. Khozatskiy (eds)]: 14-22.- FC&P 7-2, p. 22, ID=5642Topic(s): phylogeny; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Kazakhstan W¹¹;
- 3011 s[3008] = "FAN YINGNIAN (1980).- Early Carboniferous strata and corals of northwestern Szechuan. [in Chinese, with English summary].- *Professional papers of Stratigraphy and Palaeontology* 9: 1-47.- FC&P 10-2, p. 61, ID=5883Topic(s): geology; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Sichuan^{The region of northwestern Szechuan is in the western of the line from Chengdu to Guangyuan which comprises the places of Longmenshan, Songpan and Nanping. It is characterized by Lower Carboniferous strata completely developed and by the distribution of corals and faunas of different varieties in those places. Based on more practical material, the writer studied the rules of coral distribution, suggested an opinion to divide the Lower Carboniferous strata, and to divide three coral zones from lower to upper according to these. Thus, the writer emended the original terms of the Zongchanggou series and subdivided these series into three different members as given below: *}
3. Zongchanggou member - zone of *Yuanophyllum* and important member *Melanophyllum* (Upper Visean); * 2. *Majiaoba* member - zone of *Pseudoouvalinia* and important member *Stelechophyllum* (Upper Tournasian); * 1. *Changtanzi* member - zone of *Cystophrentis*, and important member *Beichuanophyllum* (Lower Tournasian). * In the paper presented, the writer describes 17 genera (4 of which are new and 2 new subgenera), 50 species (42 of which are new and 1 new subspecies, 2 species indet.) and establishes one new family. [original summary]¹¹;
- 3012 s[3009] = "WU WANGSHI, ZHENG CAILIN (1982).- Early Carboniferous corals in the ammonoid facies from Barkol, Xinjiang. [in Chinese, with English abstract].- *Acta Palaeontologica Sinica* 21, 2: 141-152.- FC&P 11-2, p. 28, ID=6161Topic(s): ammonoid facies; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China, Xinjiang^{Our knowledge of the Carboniferous corals in the ammonoid facies in China is, on the whole, quite insufficient. However, new findings have been made in 1977 by the Regional Geological Surveying Team of Xinjiang Autonomous Region in Barkol, Xinjiang. The present paper describes the corals found from the Donggulubashitao formation of the Barkol area. They consist of 18 species belonging to 14 genera, i.e. *Crassiphyllum irregulare* (sp.nov.), *Rhopalolasma?* sp., *Lophophyllidium?* sp., *Neozaphrentis xinjiangensis* (sp.nov.), *N. xinjiangensis variabilis* (subsp.nov.), *Meniscophyllum irregulare* (sp.nov.), *M. xinjiangense* (sp.nov.), *Triplophyllum spinulosum* (Milne-Edwards et Haime), *Amplexus* sp., *Soschkineophyllum barkolense* (sp.nov.), *Fasciculophyllum sinense*}

- (sp.nov.), *F. longiseptatum* (sp.nov.), *F. sp.*, *Kinkaidia rhopaloides* (sp.nov.), *Cyathaxonia stereoseptata* (sp.nov.), *Hapsiphyllum crassum* (sp.nov.), and *Zaphrentites cf. pseudocrassus* Wu. [first fragment of extensive summary]^1";
- 3013 s[3010] = "YU JIANZHANG, LIN YINDANG, FAN YINGNIAN (1984).- New materials of Mesocorallia from the Lower Carboniferous of China.- 9th International Congress on Carboniferous Stratigraphy and Geology; Comptes Rendus 5: 193-199. [Changchun Geological College, Kirin, China]. [paper] - FC&P 15-2, p. 34, ID=0713^Topic(s): ; Mesocorallia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China^^1";
- 3014 s[3011] = "SUTHERLAND P.K. (1974).- Evaluation of Yu's Coelenterate Order Mesocorallia.- FC&P 3, 1: 10-11.- FC&P 3-1, p. 10, ID=6251^Topic(s): ; corals Mesocorallia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: China^Most participants at the coral meeting [held in Oklahoma in 1974] concluded that the coral species illustrated by Yu could represent a rugose coral that is abnormal only in that the length of the major septa in the counter quadrants are variable in the middle and late growth stages, with some septa away from the counter being longer than the counter lateral septa. However, all agreed that a final conclusion could not be drawn without an examination of serial sections of actual specimens of Yu's species so that the insertion of new septa could be traced from one section to the next. [final fragment of a paper; reference is to Yu C.-C. (1963): On the relationship of Cystophrentis with the Hexacorals and the establishment of the Order Mesocorallia Yu (ord. nov.) and family Cystophrentidae Yu (fam. nov.); Acta Palaeontologica Sinica 11, 3: 307-318; in Chinese, with extensive Russian summary]^1";
- 3015 s[3012] = "YU C.C., LIN Y.T., HUANG Z.X. (1981).- Lower Carboniferous Heterocorallia in China.- Scientific papers on Geology for international exchange prepared for. 26th International Geological Congress, No. 4, Stratigraphy and Palaeontology: 108-112, Publishing House of Geology, Beijing.- FC&P 11-1, p. 54, ID=1801^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: China^^1";
- 3016 s[3013] = "LIN YINGDANG, WU SHIZHONG (1985).- Lower Carboniferous Heterocorallia of Longlin area, Guangxi.- Acta Geologica Sinica 1985, 4: 271-278.- FC&P 17-1, p. 31, ID=2143^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: China, Guangxi^^1";
- 3017 s[3014] = "HUANG ZHUXI, MA GUEIQIN (1986).- Heterocorals from the Zhaojiashan Formation, Lower Carboniferous, western Guizhou Province.- Journal of Changchun College of Geology 43, 1: 12-24 [in Chinese, with English abstract].- FC&P 18-1, p. 37, ID=2248^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: China, Guizhou^^1";
- 3018 s[3015] = "LIN YINGDANG, PENG XIANGDONG (1990).- Some Heterocorals from Late Carboniferous Taiyuan Formation in North China.- Acta Palaeontologica Sinica 29, 3: 371-375.- FC&P 20-1.1, p. 65, ID=2844^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous U; Geography: China^The heterocorals described in this paper were collected from the Taiyuan Formation of the Upper Carboniferous in Shandong, Henan and Shanxi Provinces during the field work carried out in 1985-1986. They are assigned to two genera and three species, including 1 new genus and 2 new species. The associated rugose corals are identified as *Amandophyllum carnicum* Heritsch, *Amplexocarinia asturia* Rodriguez, *A. muralis* Soshkina, *Bothroclisia clisiophylloides* Fomitchev, *B. poriferoides* Fomitchev, *Bothrophyllum aequalum* Fomitchev,

Caninia mapingensis Lee & Yu, Cyathocarinia multituberculata Soshkina, Gshelia rouileri Stuckenberga; Lophotubularia; karpinskyi (Fomitchev); the fusulinids include Triticitis sp., Quasifusulina sp., Pseudofusulina cf. fecunda Shawer; Scherbovich, Rugosfusulina cf. dastarensis Bensch and Sphaeroschwagerina cf. subrotunda (Ciry). The heterocorals occur in a higher horizon in the North China Platform than in any other countries over the world. [original summary] The new taxa are: Heterophyllia henanensis sp.nov. and Dichophyllia simplex gen. et sp.nov. ^1";

- 3019 s[3016] = "LIU ZUHAN, SU LINYAO (1992).- New materials of Heterocorallia from Hunan with discussion on their structures.- Acta Palaeontologica Sinica 31, 4: 472-482.- FC&P 22-1, p. 36, ID=3392^Topic(s): structures; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: China, Hunan^Recently a wealth of perfect specimens of Heterocorallia was collected from the dark grey limestone of the Upper Datang Stage of the Lower Carboniferous in Central Hunan, China. These specimens belong to four known genera: Hexaphyllia, Pentaphyllia, Haptaphyllia, Heterophyllia, and two new genera. A series of sections have been made. Based on detailed observation of these sections, some revisionary views about the structures of Heterocorallia can be proposed. Central tube: Yu C.-C. et al. (1978) first discovered and named Crepidophyllia as a sub-genus of Hexaphyllia with their inner ends of six septa conjoined to form an aulos-like central tube. Among the specimens from Central Hunan, the central tubes were also found in some heterocorals with six or five septa, but they are very unstable, and they could appear or disappear in a distance of several millimeters. In the parts where they disappeared, the inner structures were the same as those in Hexaphyllia or Pentaphyllia. The unstable central tubes were formed by the splitting of the connected part of the septa. Tabula: It is a controversial issue whether the tabulae of Heterocorallia are convex upward or on the contrary, because it is very difficult to determine the growth direction of the specimen. In the collected specimens, an individual Hexaphyllia with a bud has been discovered, so that it is very easy to confirm the growth direction. In the longitudinal section of this specimen, tabulae ascend from the center to the wall. In many longitudinal sections deviating from the center, the tabulae between two septa are domical, but those between the septum and wall ascend to the wall. For this reason, it is inferred that the tabula of Heterocorallia is similar in form to an inclined saddle ascending to the wall. Septum: Nearly all septa are complete, and mostly even platelike. But in many of the specimens from Hunan the septa are wavy in longitudinal direction or in both longitudinal and transverse directions. Since the septa are usually thickened, mostly at outer ends, many septa are sphenoid. The septa and their stereoplasma stretch into the wall, forming clear limits with the peripheral stereozone. These limits have been mistaken as the supports of the septa. In a new species there are seven septa; one of them is incomplete with a free outer end. This fact is contrary to the inference that the septa were developed from the wall to the center. wall: The epitheca is clearly observed in the specimens from Hunan, including all six genera. It is obvious that the wall consists of tabula wall, peripheral stereozone and epitheca. The peripheral stereozone is lamellar in both transverse and longitudinal sections.^1";
- 3020 s[3017] = "LIN YINGDANG, YUAN XIAOQI (1994).- New discovery of the Lower Carboniferous heterocorals in Laevo-Alxa Banner (Inner Mongolia).- Chinese Science Bulletin 39, 11: 933-935.- FC&P 23-2.1, p. 41, ID=4237^Topic(s): taxonomy; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: China, Nei Mongol^The new species described in this paper are: Hexaphyllia lata sp.nov., Fossaphyllia simplex sp.nov., and Dichophyllia alashanensis sp.nov.^1";
- 3021 s[3018] = "YU XUEGUANG (1976).- Some Middle Carboniferous tetracorals

- from southern Jiangsu.- Acta Palaeontologica Sinica 15, 2: 224-230.-
 FC&P 6-1, p. 27, ID=0071^Topic(s): ; Rugosa;
 Systematics: Cnidaria; Rugosa; Stratigraphy:
 Carboniferous M; Geography: China, Jiangsu^Describes and
 Illustrates one new genus and 11 species, 8 of which are new.^1";
- 3022 s[3019] = "YU XUEGUANG (1977).- On four new genera of the Upper
 Carboniferous tetracorals from the southern part of Jiangsu Province.-
 Acta Geologica Sinica 1977, 1: 84-88.- FC&P 6-2, p. 17,
 ID=0137^Topic(s): new taxa; Rugosa; Systematics:
 Cnidaria; Rugosa; Stratigraphy: Carboniferous U;
 Geography: China, Jiangsu^Describes and illustrates 4 new genera
 and 4 new species.^1";
- 3023 s[3020] = "YU XUEGUANG (1982).- The discovery of Siphonophyllia from
 the Middle Carboniferous Benxi Formation.- Geological Review 28, 5:
 492-493.- FC&P 13-1, p. 28, ID=0409^Topic(s): new
 records; Rugosa, Siphonophyllia; Systematics: Cnidaria; Rugosa;
 Stratigraphy: Carboniferous M; Geography: China^A
 description and illustration of two new species.^1";
- 3024 s[3021] = "YU XUEGUANG (1982).- On some tetracorals of the Huanglong
 Formation from Beshan, Northern Zhijiang.- Scientific Articles for the
 commemoration of the 30th Anniversary of the Changchun Geological
 College 2: 7-12.- FC&P 13-1, p. 28, ID=0410^Topic(s):
 ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:
 Carboniferous Mos; Geography: China, Zhejiang^A description
 and illustration of one new genus and ten species, seven of which are
 new.^1";
- 3025 s[3022] = "REN RUNSHENG, WANG GUIXIANG, YUAN KERUI, WANG RUIXIANG (1983
).- Discovery of the Early Carboniferous strata in Huaning area,
 Anhui.- Journal of Stratigraphy 7, 3: 227-230.- FC&P 13-1,
 p. 35, ID=0448^Topic(s): stratigraphy; stratigraphy;
 Systematics: Cnidaria; Rugosa; Stratigraphy:
 Carboniferous L; Geography: China, Anhui^A description is
 given of Lithostrotion portlocki huainingense Ren (n.subsp.),
 Arachnastraea carinata Ren (n.sp.), and Aulina paracarcner Ren
 (n.sp.).^1";
- 3026 s[3023] = "GUO SHENGZHE (1983).- Middle and Upper Carboniferous rugose
 corals from southern Dahinganling (Great Khingan Mts).- Acta
 Palaeontologica Sinica 22, 2: 220-229.- FC&P 16-2, p. 17,
 ID=0549^Topic(s): ; Rugosa; Systematics: Cnidaria;
 Rugosa; Stratigraphy: Carboniferous M/U; Geography:
 China, Gt Khingan Mts^The rugose corals dealt with in this paper
 were collected from Middle and Upper Carboniferous on the southern
 slope of Dahinganling (Greater Khingan Mountains). They contain 44
 species and 31 genera (including 17 new species and 1 new genus) as
 listed below: Metriophyllum, Rotiphyllum, Empodesma, Duplophyllum,
 Barrandeophyllum, Amplexocarinia, Calophyllum, Tachylasma, Cyathaxonia,
 Cyathocarinia, Lophophyllidium, Stereostylus, Amplexizaphrentis,
 Lithostrotionella, Hillia, Antheria, Koninckocarinia, Carinthiaphyllum,
 Dibunophyllum, Amandophyllum, Bothroclisia, Neokoninckophyllum,
 Paracarruthersella, Lomaphyllum (gen. nov.), Pavastephyllum
 (Thomasiphyllum), Caninia, Timania, Caninophyllum, Cystolonsdaleia,
 Ivanovia, Akagophyllum. Noticeably, among these corals 15 species are
 identical with or closely related to those from the Middle and Upper
 Carboniferous or Lower Permian in South China, Moscow and Donets Basin
 of USSR, Palencia of Spain and North America. Moreover, in the Upper
 Carboniferous three rugose coral assemblages may be recognized.^1";
- 3027 s[3024] = "CAI TUCI (1986).- Late Carboniferous Tetracorals of Baicheng
 in Southern Tian-shan, Xinjiang.- Acta Palaeontologica Sinica 25, 1:
 55-62.- FC&P 15-2, p. 27, ID=0647^Topic(s): ;
 Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:
 Carboniferous U; Geography: China, Xinjiang^A well-developed
 section consisting of Late Carboniferous deposits in Bai-cheng region
 of Southern Tianshan, Xinjiang, is characterized by distribution of

- fusulinids, tetracorals and brachiopods in extensive varieties in the region. The materials of the Late Carboniferous strata and the tetracorals studied in this paper were collected by the stratigraphical research Team in 1974. These strata yield abundant tetracorals, with 9 genera and 13 species (including 12 new species) and 2 indeterminate forms: *Kepingophyllum baichengense*, *Eokepingophyllum concavetabulatum*, *Ivanovia* sp., *Lophocarinophyllum lanceuse*, *Fomichevella elegantus*, *F. xinjiangensis*, *F. triseptatus*, *Pseudozaphrentoides elegantus*, *P. multitabulatus*, *P. brevisseptatus*, *Skotekophyllum regulare*, *S. brevisseptum*, *Caninophyllum convextabulatum*, and *Sochkineophyllum* sp. These fossils provide new evidences for the presence of the Upper Carboniferous in the southern Tianshan region of Xinjiang.[original summary]^1";
- 3028 s[3025] = "OUYANG XUAN (1985).- Tournaisian stratigraphy and sequence of rugose corals in the eastern Qinling.- Xi'an Institute of Geology and Mineral Resources Bulletin 9: 84-89 [in Chinese, with English summary].- FC&P 15-2, p. 32, ID=0685^Topic(s): biozonation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: China, Qinling Mts^^1";
- 3029 s[3026] = "YU XUEGUANG (1984).- Some new genera and species of Weining Formation tetracorals from Longhuo, Guangxi.- Regional Geology of China 10: 103-116.- FC&P 15-2, p. 34, ID=0714^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: China, Guangxi^^1";
- 3030 s[3027] = "YU XUEGUANG (1985).- New genera and species of Carboniferous tetracorals from Zhenan, Shaanxi.- Xi'an Institute of Geology and Mineral Resources Bulletin 11: 85-94.- FC&P 15-2, p. 34, ID=0715^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China, Shaanxi^^1";
- 3031 s[3028] = "WU WANGSHI (1985).- A strange form of the genus *Axolithophyllum*.- Acta Palaeontologica Sinica 24, 2: 181-185.- FC&P 14-2, p. 37, ID=0919^Topic(s): ; Rugosa, *Axolithophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Guizhou^The material described in this paper was collected by the author in 1981 from the Uppermost Carboniferous Mapping Formation at Zhaojiashan, Weining County, Guizhou Province. So far as known, all the species referred to the genus *Axolithophyllum* are externally solitary in form except the present species *A. squamatum* sp.nov. It is of great interest that this species has a peculiar form with a small fasciculate corallum as compared with other forms of this genus. Following the change of geological times, this species developed and thus became the ancestor of the genera *Stilbophyllum* and *Diversiphyllum* in the Lowermost Permian Changmo Formation, both of which possess the peculiar colony appearance and naotic structure of the present species.^1";
- 3032 s[3029] = "CAI TUCI (1984).- The Early-Middle Carboniferous transition zone and its age assignment in the Tianshan Mountains region, Xinjiang, discussed in the light of tetracorals.- Regional Geology of China . 59-70.- FC&P 14-1, p. 49, ID=0993^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L/M; Geography: China, Xinjiang^^1";
- 3033 s[3030] = "LUO JINDING (1984).- Early Carboniferous rugose coral assemblages and paleobiogeography of China.- Palaeontographica Americana 54: 427-432 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 49, ID=0997^Topic(s): biostratigraphy, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China^^1";

- 3034 s[3031] = "YAN YOUYING (1981).- Some new genus and species of Middle Carboniferous tetracorals from southern Jiangsu and southern Anhui.- Nanjing Institute of Geology and Mineral Resources Bulletin 2, 2: 67-73. [in Chinese, with English abstract].- FC&P 14-1, p. 52, ID=1021^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: China, Jiangsu, Anhui^^1";
- 3035 s[3032] = "YAN YOUYING (1982).- The Fengninian (Lower Carboniferous) Rugosa from Linwu, Hunan.- Changchun Geological Institute Bulletin 3: 29-42.- FC&P 14-1, p. 52, ID=1022^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L (Fengninian); Geography: China, Hunan^^1";
- 3036 s[3033] = "ZHAO JIANGMING, ZHOU GUANGDI (2000).- Upper Carboniferous Rugose corals from Eastern Kunlunshan, China.- Acta Palaeontologica Sinica 39, 2: 177-188.- FC&P 29-1, p. ???, ID=1453^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Kunlun Mts^^1";
- 3037 s[3034] = "WANG Z. (1981).- Rugose corals from the early Lower Carboniferous Chuan-Shangou Formation in Amunike Mountains, Qinhai Province.- Acta Geologica Sinica 03: 170-178.- FC&P 11-1, p. 54, ID=1796^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Qinghai^^1";
- 3038 s[3035] = "SORAUF J.E., FEDOROWSKI J. (2006).- William A. Oliver, Jr. (1926 - 2005), a brief memorial.- FC&P 34: 10-12.- FC&P 34, p. 10, ID=7249^Topic(s): biographical; Systematics: Stratigraphy: Geography: ^[short obituary note, accompanied by Oliver's photograph; see also Sorauf & Fedorowski (2010)]^1";
- 3039 s[3036] = "ONOPRIENKO Yu.I. (1977).- Rannekamennougolnye rugozy severo-zapadnoy chasti Tikhookeanskogo poyasa [Early Carboniferous Rugosa from the northwestern part of the Pacific fold-belt].- Krasilov E. (ed.): Evolyuciya ogranicheskogo mira tikhookeanskogo poyasa: 50-62.- FC&P 11-2, p. 30, ID=1842^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Russia, Far East^During the Tournaisian, when there was no exchange between the Asian and American coral communities, the Uraliniidae appeared by explosive evolution. The exchange was established in the Middle Visean.^1";
- 3040 s[3037] = "WANG ZHENGJI, YU XUEGUANG (1986).- Early late Carboniferous rugose corals from Jinghe of Xinjiang.- Acta Palaeontologica Sinica 25, 6: 657-662.- FC&P 16-1, p. 63, ID=1969^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Xinjiang^The corals described might belong to one rugose coral assemblage, the Rotiphyllum exilis - Acrocyathus xinjiangensis Assemblage, which contains such species as Rotiptiylum monophylloides (Fomitchev), R. monophylloides major subsp.nov., R. exilis Groot, Meniscophyllum jingheense sp.nov., Lytvolasma bradyphylloides sp.nov., Eoamplexocarinia typica gen. et sp.nov., E. crassoseptata gen. et sp.nov., Parasychnoelasma typica gen. et sp.nov., Pseudozaphrentoides verticillatus (Barbour), Tiaania jingheensis sp.nov., and Acrocyathus xinjiangensis sp.nov. [part of original summary]^1";
- 3041 s[3038] = "ZHENG CHUNZI (1986).- Rugose corals from Upper Carboniferous Maping Formation in West Guizhou and North Guangxi.- Acta Palaeontologica Sinica 25, 5: 531-543.- FC&P 16-1, p. 63, ID=1970^Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Guizhou, Guangxi^Based on their stratigraphic distribution, 19 genera and 26 species (including 1 new genus, 22 new species, and 2 new subspecies) are described in this paper. The corals are assigned to two assemblages in this area in ascending order: the

Pseudocarniaphyllum-Chuanshanophyllum assemblage below and the Parawentzellophyllum-Kepingophyllum assemblage above. Diagnosis of the new genus Pseudohillia (type-species *P. hilloides*): Compound coral, fasciculate-massive in shape, often somewhat cystose along marginarium. Septa of two orders: major ones thicker, extending nearly to the columella; minor ones shorter or absent. Columella plank-like, dissepimentarium narrower. Tabularium wider; tabulae complete, inclined toward the central area of corallite. Late Carboniferous from Guizhou, South-China. The other new forms are: *Metriophyllum longlinense*, *Calophyllum paratypicum*, *Timania asiatica*, *Antheria irregularis*, *Protoivanovia sheshanensis*, *P. laticystata*, *Kionophyllum ellipticum*, *Thomasiphyllum venustum*, *Qinglongshanophyllum simplex*, *Q. yishanense*, *Yokoyamaella robusta*, *Pseudocarniaphyllum orientale*, *Chuanshanophyllum dewuense*, *Akagophyllum regulare*, *Nephelophyllum simplex magnum*, *Kepingophyllum densum*, *K. weiningense*, *K. shuichengense*, *Peiraphyllum yishanense*, *Vesotabularia guangxiensis*, *Lonsdaleiastraea compacta*. [part of original summary]^1";

- 3042 s[3039] = "GUO SHENGZHE (1985).- On the Early Carboniferous Corals from Xieertala District of Nei Mongol (Inner Mongolia).- Bulletin Shengyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 12: 68-73.- FC&P 16-2, p. 18, ID=2039^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Nei Mongol^The Xieertala Formation was established on the western slope of Da Hingan-ling (Great Khingan) by Hailar in 1976. Based mainly upon the determination of brachiopods, the age of the formation has been recognized as Late Carboniferous, but the coral fauna of the Xieertala Formation indicated that the age should be Early Carboniferous. This coral fauna consists merely of very few small solitary corals and its generic assemblage, such as *Zaphrentites*, *Zaphrentoides*, *Trochophyllum*, *Cyathaxonia* and *Amplexus* etc., clearly shows a Early Carboniferous feature, although its dominant species are endemic. Whereas in west Europe the characteristic forms of the Tournaisian corals are dominated by "*Zaphrentis*", the Xieertala coral fauna is comparable with the "*Zaphrentis*" konincki subzone (Z2) of England except for disappearance of caniniid corals. Our coral assemblage is also similar to some types of American Mississippian corals, therefore the Xieertala Formation seems to be able to compare with the Keoikuk Limestone or the New Providence Shale of the Osagean Series of Mississippian in the United States.^1";
- 3043 s[3040] = "GUO SHENGZHE (1987).- Carboniferous corals from eastern and southern Liaoning, China.- Bulletin Shengyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 16: 99-120.- FC&P 16-2, p. 18, ID=2040^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China, Liaoning^The Liaoning province is situated in the northeastern corner of the Sino-Korean Platform. Lacking of lower part, the Carboniferous there has only the Middle and Upper Series, overlying disconformably on the Majiagou Fm. of Middle Ordovician and present in some small depressed fault basins. The Carboniferous corals in Liaoning have been seldom studied and described before. Recently, the writer systematically collected and studied the corals respectively from the Benxi Fm. of the Taizihe valley and from the Taiyuan Fm. of the Fuzhouwan-Luda area. They are as follows: Corals from the Benxi Fm. of Taizihe valley: *Bradyphyllum?* sp., *Tachylasma* sp., *Lopholasma carbonaria* Grabau, *Gshelia nuanheziensis* sp.nov., *G.?* sp., *Arachnastraea manchurica* Yabe & Hayasaka, *Cystophorastraea yanxiensis* sp.nov., *Ivanovia manchurica* (Yabe & Hayasaka), *Boswellia obesa* sp.nov., *Multithecopora penchiensis* Yoh, *Cystilophophyllum* sp. indet.; Corals from the Taiyuan Fm. of Fuzhouwan-Luda area: *Cyathocarinia tuberculata* Soshkina, *Lopholasma carbonaria* Grabau, *Lophocarinophyllum acanthiseptum* Grabau, *Amplexocarinia* cf. *corrugata* (Mather), *Corwenia* sp., *Neokoninckophyllum* sp., *Multithecopora irregularis* sp.nov., i.e. 15 genera with 17 species

- (including 4 new species) in total [part of original summary].^1";
- 3044 s[3041] = "WANG ZHIPING (1987).- Upper Carboniferous Rugose Corals from Central Hunan.- Acta Palaeontologica Sinica 26, 4: 471-485.- FC&P 17-1, p. 23, ID=2132^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Hunan^The Upper Carboniferous rugose corals studied in the present paper were collected from Shaoyang, Lianyuan and Longhui counties of central Hunan. The collections cover 17 genera and 28 species, including 3 new genera and 13 new species belonging to 13 genera. They are in association with Triticitis and Pseudoschwagerina and are characterized by the thickened septa in cardinal quadrant, striking cardinal fossula, simple axial structure and arched tabulae. According to their stratigraphic ranges, two assemblages may be suggested as follows: 1. Lower Bothrophyllum-Koninckophyllum assemblage, including Bothrophyllum crassoseptatum sp.nov., B. tenuiseptatum sp.nov., Koninckophyllum caninophylloides X. Yu, K. longhuiense sp.nov., Arctophyllum copiosum sp.nov., Caninia lingwuensis Jiang, C. diphyloides X. Yu, C. brockleyensis minor X. Yu, Caninophyllum gurovi Fomichev, Timania damiaoensis X. Yu, Pseudotimania hunanensis Jiang, P. subcylindricum sp.nov., Gshelia tianxinpingensis sp.nov., G. shaoyangensis sp.nov., Chuanshanophyllum sp., etc. 2. Upper Parawentzelophyllum-Longhuiphyllum assemblage, with such main elements as Parawentzelophyllum irregularis sp.nov., P. hunanense sp.nov., Arctophyllum copiosum sp.nov., Cania obliquis tenuis (Fomichev), C. hunanensis Jiang, Caninophyllum domheri Fomichev, Koninckophyllum diphyloides X. Yu, Neokoninckophyllum sp., Timania hunanensis Jiang, Orygmophyllum sp., Paraorygmophyllum sinense gen. et sp.nov., Gshelia hunanensis Jiang, G. shaoyangensis sp.nov., G. tianxinpingensis sp.nov., Longhuiphyllum typicum gen. et sp.nov., L. simplex gen. et sp.nov., Tantouphyllum complex gen. et sp.nov. These assemblages may be roughly related to those from southern Jiangsu (Yu 1980) and western Guizhou (Wu 1974). [part of original summary]^1";
- 3045 s[3042] = "CAI TUCI (1988).- Tetracorals from Hebukehe Formation of Northern Xinjiang.- Acta Palaeontologica Sinica 27, 1: 39-47.- FC&P 17-2, p. 28, ID=2182^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L?; Geography: China, Xinjiang^The tetracorals described in the present paper were chiefly collected from the Hebukehe Formation in Northern Xinjiang, consisting of 9 genera and 15 species (including 12 new species), which are dominated by such endemic forms as Kassinella, Parakassinella, Caninia, Amplexus, Amplexocarinia, Zaphrentites, Cyathocarinia, Nalivkinella, Hebukephyllum, etc. The Hebukehe Formation with Kassinella and Parakassinella might correspond to the Verchnekassinskaya Formation of Kazakhstan in USSR, and to the Chuanshangou Formation of Qinghai in China which is generally believed to be of the Early Carboniferous age. In USSR Caninia cornucopiae also is regarded as of the same age. According to the characters of the tetracorals, the author considers the Hebukehe Formation as possibly belonging to Early Carboniferous in age. The new species described are: Hebukephyllum equitabulatum, H. curvuse and H. elegantum. [part of summary]^1";
- 3046 s[3043] = "WANG ZHENGJI (1985).- Rugose corals from the early Lower Carboniferous Chengqianggou Formation in Oulongbuluke Mountains, Qinghai Province.- Chinese Academy of Geological Sciences, Professional Papers of Stratigraphy and Paleontology 14: 49-66 [in Chinese, with English abstract].- FC&P 18-1, p. 39, ID=2265^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: China, Qinghai^^1";
- 3047 s[3044] = "ZHENG CHUNZI (1986).- Rugosa corals from the weining Formation of Middle Carboniferous in West Guizhou and North Guanxi.- Journal of Changchun College of Geology 1986, 3: 29-40 [in Chinese, with English abstract].- FC&P 18-1, p. 40, ID=2270^Topic(s): ; Rugosa; Systematics: Cnidaria;

- Rugosa; Stratigraphy: Carboniferous M; Geography: China, Guizhou, Guangxi^^1";
- 3048 s[3045] = "ZHUO ZHIBI, [Zuo Zibi] (1986).- Discovery of Kueichouphyllum from Yanguan Stage of Lower Carboniferous.- Acta Palaeontologica Sinica 25, 3: 296-300.- FC&P 18-1, p. 40, ID=2271^Topic(s): new records; Rugosa, Kueichouphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China^^1";
- 3049 s[3046] = "CAI TUCI (1988).- The characteristics of Tetracoralla assemblage in Carboniferous and its distribution in Xinjiang.- Xinjiang Geol. 6, 1: 10-20 [in Chinese, with English summary].- FC&P 18-1, p. 40, ID=2272^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China, Xinjiang^The characteristics of Tetracoralla assemblage in Carboniferous and its distribution are discussed in the Xinjiang paper, and the conclusion is as follows: (1) the characteristic fossils Pseudouralinia, Cystophrentis of the early Carboniferous in South China do not occur in Xinjiang, Hexaphyllia is distributed extensively in Tianshan Mountains and its southern adjacent district; (2) Siphonophyllia developed from late Tournaisian stage and thrived gradually in late Viséan stage; (3) Empodesma discovered in late Carboniferous series in Kunlun - Kalakunlun Mountains in Xinjiang has furnished fresh evidence for the definition of the northern boundary of the Gondwana mainland.^1";
- 3050 s[3047] = "LIN YINGDANG, WU SHIZHONG (1988).- Early Carboniferous rugose corals from Longhuo area of Longlin, Guangxi.- Acta Palaeontologica Sinica 27, 5: 565-582.- FC&P 18-1, p. 40, ID=2273^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Guangxi^The Lower Carboniferous in the Longhuo area of the Multinational Autonomous County of Longlin is divided into two formations. The lower is the Sanjiazhai Formation (equivalent to Aikuanian), consisting of siliceous clastic rocks, unfossiliferous and 34 m in thickness. The upper is the Longhuo Formation (equivalent to Tatangian), mainly composed of carbonate deposits, yielding abundant marine fossils and attaining a thickness of 188 m. This paper describes 22 genera and 25 species, among which 1 genus, 1 subgenus, 21 species and 1 subspecies are new. All coral specimens were collected from the Longhuo Formation of the Tang stage in the Longhuo area. In this area, the coral fauna is outstandingly characteristic of the South China zoogeographical province. There have been found some genera such as Yuanophyllum, Kueichouphyllum and Neoclesiophyllum, which appear all over the Guizhou, and Guangxi regions, with occurrence of certain genera such as Siphonophyllia, Cyathaxonia, Palaeosmia, Dibunophyllum, Carcinophyllum, Lithostrotion and Corwenia, which generally have a wide distribution in the West European - Tethyan coral [province], and a few coral elements either from the Ural - Arctic area such as Aulokoninckophyllum, Gangamophyllum, or from North America such as Vesikulophyllum. During the Early Carboniferous time the sea of the Longhuo area was connected with the European sea and possibly with the North American sea.^1";
- 3051 s[3048] = "YU XUEGUANG (1989).- Rugose corals from Late Carboniferous Huanglong limestone at Cishan near Nanjing, Jiangsu.- Acta Palaeontologica Sinica 28, 3: pp ???.- FC&P 18-2, p. 16, ID=2461^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Jiangsu^^1";
- 3052 s[3049] = "CAI TUCI (1989).- Late Early Carboniferous corals in ammonoid facies from Altay of Northern Xinjiang.- Acta Palaeontologica Sinica 28, 1: 89-108.- FC&P 18-2, p. 31, ID=2472^Topic(s): pelagic facies; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Xinjiang^The present article deals with the

Early Carboniferous corals from the Nalingala Formation of the Altai area, northern Xinjiang. Here are described 9 genera, 11 new species and 2 indeterminate species, namely, *Zaphrentoides crassiseptatus* sp.nov., *Amplexus regularis* sp.nov., *Parallelynia xinjiangensis* sp.nov., *Plerophyllum bilamellatum* sp.nov., *P. sp.*, *Pleramplexus nalingalaensis* sp.nov., *P. multitabulatus* sp.nov., *P. raritabulatus* sp.nov., *Pentaphyllum elegantum* sp.nov., *P. sp.*, *Cryptophyllum xinjiangense* sp.nov., *Cyathaxonia altaiensis* sp.nov., and *Endamplexus xinjiangensis* sp.nov. They are especially rich in the middle and upper parts of the Nalingala Formation. This coral fauna is characterized by the corals which are all in simple forms, small, cornuted-conical and ceratoid with very thickened septa but no dissepiments. The occurrence of the ammonoids *Goniatites*, *Epicanites*, *Prolecanites* and *Stenopronolites* in the Nalingala Formation also lends support to such a conclusion. Therefore, the palaeoecological conditions of this coral fauna belong to offshore water rather than to warm water of low energy, and are prevailing in the transitional area from foreslope to organic (ecologic) reef. [part of extensive summary]^1";

- 3053 s[3050] = "WANG ZHIGEN, ZHAO JIAMING (1989).- Carboniferous corals in Huize, Yunnan.- *Acta Palaeontologica Sinica* 28, 1: 79-97.- FC&P 18-2, p. 34, ID=2481^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China, Yunnan^The Carboniferous corals described were collected from two sections in the Huize County, Yunnan. At these sections are exposed the Upper Carboniferous Maping Formation with *Axolithophyllum* sp., the Upper Carboniferous Weining Formation with *Amygdalophylloides kionophylloides* sp.nov., *A. aepitabulatus* sp.nov. and *A. stenotabulatus* sp.nov., the Lower Carboniferous Shangssu Member with *Corwenia magna* Wu et Zhao, *Arachnolasma leptaxia* sp.nov., *A. multitabulata* sp.nov., *Axophylloides huixensis* gen. et sp.nov., *A. varium* (Fan), *Durhamina yunnanensis* sp.nov., *Syringopora honanensis* Lin, *Kueichowpora distans* sp.nov. and *Chaetetes*, accounting for 11,2 % of the total genera. * The corals from Huize, Yunnan, obviously belong to two groups. In the first group, since both Rugosa and Tabulata occur, and the rugose corals have tabulae or tabellae ascending towards the median plate, this group can be roughly correlated with the *Yuanophyllum* zone of the Zhimenqiao Formation of Hunan, the Zhongchangou Member of Sichuan, and the Shangssu Member of Guizhou. In the second group, there are only two genera and four species of Rugosa, but it can be easily made out that this group had entered into the Late Carboniferous facies. According to the structural morphology of these corals, they are regarded as then living in a warm neritic environment, but of some mud and low turbulence. [fragment of extensive summary]^1";
- 3054 s[3051] = "WANG ZHENGJI, ZHAO ZHIXIN (1987).- Early Tournaisian tetracorals from the Hobok River Formation, western Junggar, Xinjiang.- *Geological Review* 33, 3: 479-483. [in Chinese, with English abstract].- FC&P 19-1.1, p. 44, ID=2636^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: China, Xinjiang^^1";
- 3055 s[3052] = "YU XUEGUANG, WANG ZHENGJI (1987).- New genera and species of Carboniferous tetracorals from Kapu of Dushan County, Guizhou Province.- *Chinese Academy of Geological Sciences, Professional Papers of Stratigraphy and Palaeontology* 16: 73-92. [in Chinese, with English abstract].- FC&P 19-1.1, p. 45, ID=2650^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China, Guizhou^^1";
- 3056 s[3053] = "ZHAO JIAMING, LIANG XIANGYUAN (1989).- Some rugose corals from Late Carboniferous Taiyun Formation of Henan.- *Acta Palaeontologica Sinica* 28, 4: 488-494. VOL PP ???.- FC&P 19-1.1, p. 50, ID=2661^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Henan^The fossil rugose corals described in this paper were collected from the limestones in some boreholes of the

Upper Carboniferous Taiyun Formation in Gongxian, Hebi and Yongcheng districts, Henan. * There are totally 4 genera and 6 species (including five new species), namely: *Lopholasma cratoseptatum* sp.nov., *Lophocarinophyllum karpinskyi* sp.nov., *L. misticarinum* sp.nov., *L. tenuiseptatum* sp.nov., *Tachylasma carinum* sp.nov. and *Yakovleviella raridisseptata* sp.nov. Among the four genera, *Lopholasma* and *Tachylasma* are first found in the coral-bearing strata of China; *Lophocarinophyllum karpinskyi* Fomichev is known to occur in the Upper Carboniferous of the Donetz Basin, while *Yakovleviella* occurs in the Upper Carboniferous of the Donetz Basin as well as in the Maping and Taiyun Formation of Guizhou and Shaanxi, China. [part of extensive summary]^1";

- 3057 s[3054] = "WANG ZHENGJI, YU XUEGUANG (1995).- The Late Carboniferous Rugose Corals from Shihuigou on the North Margin of the Qaidam Basin.- *Acta Geoscientia Sinica* 3, 1995: 310-327.- FC&P 25-1, p. 35, ID=3017^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Qaidam Basin^The late Carboniferous rugose corals described in this paper were collected from the Shihuigou area on the north margin of the Qaidam basin. They contain 26 genera, and 49 species and subspecies (including 17 new species and 4 subspecies, and may be divided into five coral assemblage zones. They belong to the Keluke Formation of early late Carboniferous and the Zhabusagaxu Formation of late Late Carboniferous. In this area, the Late Carboniferous coral fauna is different from that in South China, but it is related to the East-Europe an coral fauna and especially similar to the Donets basin coral fauna.^1";
- 3058 s[3055] = "YAMAGIWA N., WANG A., MAEDA S. (1991).- A new species of *Petalaxis* (Rugosa) from the Huanglong Formation, Zhejiang, southeast China.- *Palaeontological Society of Japan, Transactions and Proceedings*, NS 161: 751-755.- FC&P 21-1.1, p. 49, ID=3246^Topic(s): new taxa; Rugosa, *Petalaxis*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous?; Geography: China SE^1";
- 3059 s[3056] = "PENG XIANGDONG, LIN YINGDANG, LI YENG (1992).- The Late Carboniferous strata and coral fauna in southern part of North Platform of China.- In Lin Yingdang et al. (eds): *Professional papers of Carboniferous corals from China*: 113-151.- FC&P 21-2, p. 36, ID=3317^Topic(s): geology; Rugosa, geology; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China N^The new taxa are: *Amplexus anyanense* sp.nov., *Bradyphyllum allotropiophylloides* sp.nov., *Hapsiphyllum fuchengense* sp.nov., *Pseudallotropiophyllum huabeiense* gen. et sp.nov., *Barrandeophyllum fuchengense* sp.nov., *Cyathocarinaria major* sp.nov., *Lophocarinophyllum elegantum* sp.nov., *Lophotabularia cordyla* sp.nov., *Caninia mapingensis* sp.nov., *C. trifossula* sp.nov., *Bothrophyllum jiyuanense* sp.nov., *Gshelia yuanophylloides* sp.nov., *Amandophyllum yangquanense* sp.nov., *Ivanovia jiaozuoensis* sp.nov., and *Paraheritschioides monodissepimentarus* sp.nov.^1";
- 3060 s[3057] = "WU SHIZHONG, LIN YINGDANG (1992).- Early Late Carboniferous Stratigraphy (Benxi formation) and rugosa in Taizihe River valley, eastern part of Liaoning Province, China.- In Lin Yingdang et al. (eds): *Professional papers of Carboniferous corals from China*: 64-112.- FC&P 21-2, p. 36, ID=3318^Topic(s): biostratigraphy; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Liaoning^Among others the new taxa *Taiziheophyllum* gen. nov with the type species *T. taiziheense* gen. et sp.nov. (Lophophyllidae) and *Benxiphyllum* gen. nov. with the type species *Cystophora manchurica* Yabe & Hayasaka 1916 (Paralithostrotionidae) are described. The following new species / subspecies are established *Barrandeophyllum choniukuense* subsp. nov, *Lopholasma simplex* sp.nov., *Taiziheophyllum taiziheense* sp.nov., *T. kongjiabuziense* sp.nov., *Yakovleviella*

fusiformis sp.nov., Y. danangouensis sp.nov., Neokoninckophyllum taiziheense sp.nov., Opiphyllum minor sp.nov., Arachnastraea manchurica vesiculata subsp.nov., A. floriformis sp.nov., A. minor sp.nov., Protoivanovia dilutathecata sp.nov., P. mayicunensis sp.nov., P. shanchengziensis sp.nov., P. shanchengziensis pluriseptata sp. et subsp.nov., Benxiphyllum manchuriforme gen. et sp.nov., B. temcolumnarum sp.nov., B. brachyseptatum sp.nov., B. ellipticum sp.nov., Bothroclisia gangamophylloides sp.nov., Cystrophprastraea intermedia sp.nov., C. niumaolingensis sp.nov., C. danangouensis sp.nov., Ivanovia intermedia sp.nov., I. mirabilis sp.nov., and Cystolonsdaleia hongliangouensis sp.nov.^1";

3061 s[3058] = "YU XUEGUANG (1991).- New genus and species of Carboniferous tetracorals from Jiangsu and Anhui.- Acta Palaeontologica Sinica 30, 4: 420-437.- FC&P 21-2, p. 37, ID=3319^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: China, Jiangsu, Anhui^The specimens described in the present paper were collected from Hezhou, Huanglong and Chuanshan Formations in Jiangsu and Anhui. They belong to 17 genera (including 1 new genus) and 24 new species or subspecies, together with a new species from the lowermost part of the Chishia Formation in Jiangsu. Based on characteristics of tetracorals, the Huanglong Formation (Moscovian) and the Chuanshan Formation (Sphaeroschwagerina Zone) at Dushan of Ouangde, Anhui may be divided into four assemblage zones.^1";

3062 s[3059] = "WANG XIANGDONG (1992).- Early Carboniferous Rugose Corals of Baoshan District, Western Yunnan / China.- PhD Thesis [University? unpublished?]: 172 pp.- FC&P 22-1, p. 33, ID=3388^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Yunnan^[unpublished?] Based on materials from four sections of the Lower Carboniferous in Baoshan District, Yunnan, it is suggested that the Tournaisian-Visean boundary in the study area was drawn at the base of the Gnathodus taxanus Zone in the Shihudong Formation. The large solitary rugosans, i.e., Keyserlingophyllum, Siphonophyllum, in the formation, occur above the conodont Zone. In light of rugosan types and sedimentological features, three Visean rugosan biofacies are recognized as follows: I - the deeper water and soft substratum biofacies characterized by small cornute solitary rugosans, II - the shallow water and hard substrate biofacies characterized by solitary rugosans with dissepiments, and III - the shallow water and mobile substrate biofacies characterized by large solitary rugosans with lonsdaleoid dissepiments. Meanwhile, the Lower Carboniferous rugose corals in the area are grouped into 7 assemblages, they are: I. Zaphrentites parallelus-Saleelasma hadrotheca Assemblage, II. I to III interval Zone, III. Lophophyllum-Siphonophyllum sp.-Parazaphriphyllum cf. P. cylindricum Assemblage, IV. Cyathoclisia arachnolasmoidea-Siphonophyllia cylindrica-Kueichouphyllum sinense Assemblage, V. Palaeosmia murchisoni-Caninophyllum tomiense Assemblage, VI. Dibunophyllum-Diphyphyllum carinatum Assemblage, VII. Commutia exoletus-Sychnoelasma affossularis Assemblage. Among them, the first assemblage is attributed to Tournaisian and the latter six belong to Visean. Cladistical analysis is applied for discussing the relationships among all genera of Antiphyllinae and two genera (Neozaphrentis and Longiclava) of Hapsiphyllinae. Polarities of 7 character states are determined by ontogenetic criteria. The results show that the subfamily Antiphyllinae should be revised and might contain the following 10 genera: Actinophrentis Ivanovskiy, Longiclava Easton, Neozaphrentis Grove, Fasciculophyllum Thomson, Rotiphyllum Hudson, Falsiamplexus Fedorowski, Lytvoelasma Soshkina, Monophyllum Fomichev, Bradyphyllum Grabau, Claviphyllum Hudson. A detailed taxonomical study on 72 species (13 new) of 38 genera is undertaken. Furthermore, intrapopulation variations of 4 new rugose species, (e.g. Commutia exoletus sp.nov., Pentaphyllum amoebum sp.nov., Ufimia

- baoshanica sp.nov., Neozaphrentis sphenoidale sp.nov.) are dealt with. It is suggested that the scarcity of small corallites in the four fossil populations is due to biases in sampling and in taphonomy, variations in some characters are caused by differently-oriented sections, and some discontinuous variation (e. g., diameters of Pentaphyllum amoebum sp.nov.) are due to paleoecological factors.^1";
- 3063 s[3060] = "XU SHAOCHUN, POTY E. (1997).- Rugose corals near the Tournaisian-Visean boundary in South China.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 349-363.- FC&P 26-2, p. 34, ID=3726^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour / Vise; Geography: China^Studies of new coral faunas near the Tournaisian-Visean boundary, from the Malanbian and Zhouwangpu sections of Hunan, Huaqiao Farm and Longdianshan sections of Guangxi, define their stratigraphic distribution and permit the recognition of one coral zone between the Keyserlingophyllum and Thysanophyllum (Dorlodotia) Zones, i.e. the Keyserlingophyllum-Dorlodotia interval Zone. It is also shown that the Tn-V boundary should be drawn within the interval zone. The lithostratigraphic sequences near the Tournaisian-Visean boundary are distinguished by an abrupt replacement of carbonate sediments with cherty nodules.^1";
- 3064 s[3061] = "WANG ZHENGJI (1993).- Some Rugose corals from the Xiangshan Formation of the early Lower Carboniferous in Shidian County, Western Yunnan.- Bulletin Chinese Academy geological Sciences 27-28: 155-173.- FC&P 23-1.1, p. 65, ID=4142^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Yunnan^The rugose corals dealt with in the present paper were collected from the Xiangshan Formation of the early Lower Carboniferous in Shidian County, western Yunnan. The early Lower Carboniferous strata, are called the Xiangshan Formation, it may be subdivided into two members: Upper and Lower. In this paper 12 genera, 15 species and 3 indetermined species (including 2 new genera and 12 new species) are described. They may be divided into two rugose coral assemblages as follows: Lower assemblage: Rotiphyllum yudongense - Commutia crassoseptata - Antikinkaidia typica assemblage, including Rotiphyllum yudongense (sp.nov.), R. dilatatum (sp.nov.), R. crassoseptatum (sp.nov.), Commutia crassoseptata (sp.nov.), Antikinkaidia typica (sp.nov.), A. sp., Parametriophyllum symmetricum (gen. et sp.nov.), Pentaphyllum crassoseptatum (sp.nov.), Shidianophyllum staurum (gen. et sp.nov.), Tachylasma sp. The fossil corals of this assemblage are simple, small in size and conical in shape, without dissepiments. They are not in intergrowth with compound rugose corals and genus Cystophrentis has not been found. The coral fauna possibly lived in the deep and calm sea water. It differs from that of South China, but closely resembles that of Europe. The coral fauna belongs to the Gattendorfia Zone and the lower part of the Cystophrentis Zone. Upper assemblage: Thuriantha sinensis - Tachylasma shidianense assemblage, containing Tachylasma shidianense (sp.nov.), Thuriantha sinensis (sp.nov.), Fasciculophyllum omaliusi (Edwards & Haime), Caninia cornucopiae Michelin, Sychnoelasma konincki (Edwards & Haime). The upper assemblage belongs to the upper part of the Cystophrentis Zone. The description of the new genera is given as follows: Genus Shidianophyllum Z.J. Wang (gen. nov.) Type species: Shidianophyllum staurum Z.J. Wang (gen. et sp.nov.) [fragment of extensive summary]^1";
- 3065 s[3062] = "LIN BAOYU, RODRIGUEZ S. (1993).- Estudio de los corales rugosos del Carbonifero inferior de Mahai, Provincia de Qinhai, Noreste de China.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 88, 1/4: 17-55.- FC&P 23-2.1, p. 46, ID=4271^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Qinhai^^1";

- 3066 s[3063] = "ZHU H.Y., TAO J.B., XU L.X., GU D.Y. (1992).- Rugose corals from Early Carboniferous of Fanjiaping, Yunxi, Hubei.- Acta Palaeontologica Sinica 31, 1: 63-85.- FC&P 23-2.1, p. 48, ID=4384Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Hubei^This paper makes a study of the lower Carboniferous rugose corals from Yunxi, Hubei, in the south of the East Qinling Mountains, with a systematical description of 24 genera, 39 species (including 21 new species and 2 new genera) separately belonging to 11 families. The lower Carboniferous corals of Fanjiaping can be divided into 4 assemblages: Fanjiaping Formation; upper part: Palaeosmilium-Lithostrotion assemblage; lower part: Yuanophyllum assemblage; Yuanjiagou Formation; upper part: Shennongia majus assemblage; lower part: Zaphrentoides assemblage. After studying the coral fauna, the authors have modified division and correlation of the Carboniferous in this region, with the suggestion that the Fanjiaping Formation should be established.^1";
- 3067 s[3064] = "ZHAO JIAMING, LIANG XIANG-YUAN (1994).- A phaceloid colonial rugose coral from Late Carboniferous Taiyuan Formation of Henan.- Acta Palaeontologica Sinica 33, 5: 593-603.- FC&P 24-1, p. 64, ID=4481Topic(s): new taxa; Rugosa, Ccrocyathus; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Henan^The genus Ccrocyathus [sic!] discovered in the Taiyuan Formation (Late Carboniferous) of Jiyuan, Henan, China, is a large phaceloid colonial corallum measuring 80cm in height and 40 x 25cm in diameter, in coexistence with the fusulinids Pseudofusulina, Quasifusulina and Rugosofusulina. In this genus, one phaceloid colonial species, C. proliferus (Hall) (in Sando 1983), is distributed in the Lower Carboniferous (Visean) of USA. The present specimen was cut in 22 transverse sections and 14 longitudinal sections. It is found that the corallites grew densely in the lower part (approximately in the early and middle stages), with their skeletons thickened on sides. Based on the development of septa and axis, 2 stages of the corallites may be recognized in descending order as follows: Stage I : Corallites measuring 1.0-4.0mm in diameter; major septa shortened; minor septa undeveloped; stereocolumella small, usually forming platform (text-fig. 4). Stage II: corallites measuring 4.1-9.0mm in diameter; major septa prolonged but not extending to the center; minor septa developed; stereocolumella enlarged with carina to form an irregular shape (text-fig. 5). Increase of Ccrocyathus jiyuanensis sp.nov. occurring frequently, usually with buds put forth from external walls or propagated from lonsdaleoid dissepimentarium. It must be pointed out that the axis of the present species is usually composed of a counter septum extending to the center to form a simple axial plate, but sometimes it is in coexistence with the upturned edges of tabulae to form a pseudosyncolumella. The phaceloid colonial coral lived in a beachy, slightly turbulent and shallow-water ecological environment with a slightly higher energy. ^1";
- 3068 s[3065] = "RODRIGUEZ S., LIN BAOYU (1994).- On Lophocarinophyllum of the Xiedao Limestone (Taiyun Formation, Upper Carboniferous, North China).- Neues Jahrbuch f. Geologie u. Palaeontologie, Abhandlungen 191, 1: 125-145.- FC&P 24-2, p. 84, ID=4573Topic(s): ; Rugosa, Lophocarinophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China N^Several corals belonging to the species Lophocarinophyllum acanthiseptum and Lophocarinophyllum hippocrepiforme from the Taiyun Formation (Upper Carboniferous, North China) are described. The genus Lophocarinophyllum is common in the Upper Carboniferous and Permian of the Tethys Realm. More than 35 species and subspecies of this genus from North China, Donetz Basin, Carnic Alps and Cantabrian Mountains were described, but most of them were defined on the basis of features which show high variability in different sections of a single specimen. The validity of these features is discussed and some of the species are regarded as

- synonymous.^1";
- 3069 s[3066] = "HAN N., LI L., JING Y. (1976).- Note on the Lower Carboniferous corals *Humboldtia* from Shidian of Yunnan.- Acta Palaeontologica Sinica 15, 2: 241-243.- FC&P 6-1, p. 25, ID=5521^Topic(s): ; Rugosa, *Humboldtia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Yunnan^[new species is described]^1";
- 3070 s[3067] = "YU XUEGUANG (1980).- Upper Carboniferous Chuanshanian Tetracorals of Southern Jiangsu. [in Chinese, with English summary].- Professional papers of Stratigraphy and Palaeontology 9: 48-88.- FC&P 10-1, p. 21, ID=5886^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Jiangsu^^1";
- 3071 s[3068] = "WANG ZHENGJI (1980).- Early Carboniferous Rugose corals from the Dulan and the Naling Guole river areas of Qinghai, Northwest China. [in Chinese, with English summary].- Acta Palaeontologica Sinica 19, 6: 493-499.- FC&P 10-1, p. 50, ID=5989^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Qinghai^^1";
- 3072 s[3069] = "WANG Z., YU X. (1982).- Tetracorals from the Upper Carboniferous Licha Group in Jiaoyong of Jiangda County, Eastern Xizang (Tibet). [in Chinese, with English abstract].- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 10: 38-45.- FC&P 12-2, p. 35, ID=6220^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: China, Tibet^^1";
- 3073 s[3070] = "XU S. (1981).- On new taxa of rugose corals from the Lower Carboniferous of Guangdong Province. [in Chinese, with English abstract].- Bulletin of the Yichang Institute of Geology and Mineral Resources, Chinese Academy of Sciences nr ???: 42-49.- FC&P 12-2, p. 35, ID=6221^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Guangdong^^1";
- 3074 s[3071] = "WANG XIANGDONG, SUGIYAMA T., ZHANG FENG (2004).- Intraspecific variation in a new solitary rugose coral, *Communia exoleta*, from the Lower Carboniferous of the Baoshan Block, Southwest China.- Journal of Paleontology 78, 1: 77-83.- FC&P 33-1, p. 64, ID=7167^Topic(s): new taxa, variability; Rugosa *Communia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China SW^Based on 137 specimens examined, the new species *Communia exoleta* is characterized by a small, slightly scolecoïd shape with 21 septa at a mean maximum corallite diameter of 6mm (range 3 to 10.5mm); a persistent inner wall, which encloses an aulos with a mean maximum diameter of 1.2mm, formed during an early ontogenetic stage when the axial ends of the cardinal, alar and counter-lateral septa fused; short counter septa are lacking in the earliest stage of development. * Corallites are highly variable. Characters exhibiting a wide range of variation are: size and shape of corallites, number of septa, diameter of aulos and the timing of its appearance, number of septa connected to the inner wall, and the septal arrangement in each growth quadrant. Combinations of these variable characters result in corallites that are each uniquely different. Variations of those characters are partly due to stressed environments, such as unstable, muddy substrates resulting in corallite rejuvenescence and redirection. [original abstract]^1";
- 3075 s[3072] = "KULLMANN J., LIAO Wei-Hua (1985).- Hornformige Einzelkorallen (*Rugosa*) aus dem Unterkarbon von Süd-China.- Palaeontographica A189, 4-5: 125-157.- FC&P 14-2, p. 33, ID=0949^Topic(s): ; Rugosa, *Cyathaxonia* fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China S^Lower Carboniferous solitary corals (*Rugosa*) are described from 9 localities in South China; they come from the Lower Tournaisian of wangyou (prov. Guizhou), the Upper Tournaisian

Liujiatang formation (Hunan province and the Autonom. region Guangxi) and from the Upper Visean Tzemenchiao formation (Hunan province). They belong to 15 species of the families Stereolasmatidae, Hapsiphyllidae, Zaphrentoididae, Lophophyllidae and Heterophylliidae. A new subgenus and a new genus are established: *Drewerelasma* (*Fuchuanelasma*) n.subgen., with the type species *D. (F.) fuchuanense* n.subgen., n.sp. from the Liujiatang formation in South China, and *Weyerelasma* n.gen., with the type species *W. seiberti* n.gen., n.sp. from the Lower Namurian Alba formation of the Cantabrian Mountains in North Spain. Seven species are new: *Drewerelasma* (*Fuchuanelasma*) *fuchuanense* n.subgen., n.sp., *Weyerelasma seiberti* n.gen., n.sp., *Zaphrentites omaloides* n.sp., *Z. hunanensis* n.sp., *Z. wuae* n.sp., *Z. weyeri* n.sp., *Stereostylus qiziensis* n.sp. Four more species are already known, four taxa are described in open nomenclature. The stratigraphic range of the described corals and their relationship to coeval coral faunas in other regions are discussed.¹¹;

- 3076 s[3073] = "LIN BAOYU, WANG BAOYU (1985).- Middle Carboniferous tabulate corals from Jinghe District of Xinjiang.- Geological Review 31, 6: 512-517 [in Chinese, with English summary].- FC&P 15-2, p. 31, ID=0676^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous M; Geography: China, Xinjiang^^1";
- 3077 s[3074] = "LELESHUS V.L. (1992).- *Sarbinia* gen.n. (Tabulata) from Middle Carboniferous of the Hissar Range.- Paleontologicheskii Zhurnal 1992, 2: 117-121.- FC&P 23-1.1, p. 40, ID=4111^Topic(s): ; Tabulata, *Sarbinia*; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous M; Geography: Tajikistan, Hissar Mts^^1";
- 3078 s[3075] = "LELESHUS V.L. (1991).- Ein letzter Vertreter der Thecostegidae (Tabulata) aus dem Mittelkarbon von Darwas (Tadzhikische SSR).- Paläontologische Zeitschrift 65, 1-2: 71-75.- FC&P 20-2, p. 63, ID=2957^Topic(s): ; Tabulata, Thecostegidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Mos; Geography: Tajikistan^Marcopolia n.gen. is described from Middle Carboniferous Moscovian beds of Darwas (Tadzhikian SSR). It is the last representative of the family Thecostegidae. Type species is *Marcopolia ultima* n.gen., n.sp.^1";
- 3079 s[3076] = "IVANOVSKIY A.B. (1976).- Tip Coelenterata.- Akademiya Nauk SSSR, Sibirskoe otdolenie, Inst. Geol. i geofiz. Trudy 285: 58-60./ Dubatolov, V. N., ed.,_Pribalkhaah'e-perekhodnaya zona biogeograficheskikh podyasov pozdnego Karbona .- FC&P 6-2, p. 16, ID=0128^Topic(s): ; Cnidaria; Systematics: Cnidaria; Stratigraphy: Carboniferous U; Geography: Kazakhstan, Balkhash Region^Describes and illustrates 6 species, none new.^1";
- 3080 s[3077] = "YANG J., WU W., ZHANG L., LIAO Z. (1979).- Advances in the Carboniferous biostratigraphy of China. Paper for the 9th International Congress of Carboniferous Stratigraphy and Geology, Nanjing Institute of Geology and Paleontology.- 9th International Congress on Carboniferous Stratigraphy and Geology; Nanjing Institute of Geology and Paleontology, Academia Sinica, Nanjing, China. [paper] - FC&P 8-2, p. 44, ID=0343^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous; Geography: China^The Carboniferous system in China was three-fold, corresponding to those in the Moscow basin of the USSR. This scheme of division is accepted by the pioneer geologist of China, but Sun (1943) suggested that the Lower Carboniferous of the old classification had become a separate system, restricted the Carboniferous system to include the Middle and the Upper Carboniferous (Weiningian and Mapingian) of the old classification. The writers, to some extent, agree with Sun's views, nevertheless, they hold that the Carboniferous in China is no more than a system in rank with two series included. * Broadly speaking, the logical and natural

- chronological classification should be based upon the cycle of sedimentation, the diastrophism and the faunal assemblages. The stratigraphical distribution of the Carboniferous fossils - illustrated in a table - shows concerning the corals three evolutionary trends: in the Aikunian, Tatangian (Lower Carboniferous) and weiningian-Mapingian (Middle and Upper Carboniferous). There is obvious dissimilarity between the Early and Late Carboniferous. [part of extensive summary]^1";
- 3081 s[3078] = "WANG Z. (1983).- On the Carboniferous stratigraphy from the western section of eastern Kunlunshan. Contributions to the geology of the Qinghai-Xijang (Tibet) Plateau.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 02: 207-225.- FC&P 13-1, p. 41, ID=0484^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous; Geography: China, Tibet^^1";
- 3082 s[3079] = "YANG SHIPU, FAN YINGNIAN (1982).- Carboniferous strata and fauna in Shenzha District, northern Xizang (Tibet).- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 10: 46-69.- FC&P 15-2, p. 34, ID=0712^Topic(s): paleontology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: China, Tibet^^1";
- 3083 s[3080] = "CHEN JLRONG (1987).-'Shuhe Formation" and its mixed zoolites.- Journal of Stratigraphy 11, 1: 58-59 [in Chinese].- FC&P 16-2, p. 31, ID=2075^Topic(s): reefs fossils; reefs fossils; Systematics: ; Stratigraphy: Carboniferous; Geography: China^[mentioned are Carboniferous forams and rugose corals]^1";
- 3084 s[3081] = "FAN YINGNIAN (1988).- The Carboniferous system in Xizang (Tibet).- Chongqing Publ. House, Chongqing [China]: 128 pp., 6 figs., 2 tbls.- FC&P 18-2, p. 32, ID=2474^Topic(s): geology; Systematics: ; Stratigraphy: Carboniferous; Geography: China, Tibet^^1";
- 3085 s[3082] = "WANG ZHIPING, YANG FENGQING (1988).- Carboniferous paleobiogeography and palaeoclimate of China.- Earth Science - Journal of China University of Geosciences 13, 3: 495-582. [in Chinese, with English abstract].- FC&P 19-1.1, p. 44, ID=2639^Topic(s): biogeography; biogeography, climate; Systematics: ; Stratigraphy: Carboniferous; Geography: China^^1";
- 3086 s[3083] = "WU XIANGHE (1987).- The Carboniferous biostratigraphy of Guizhou Province, China.- Acta Geologica Sinica 1987, 4: 283-295.- FC&P 19-1.1, p. 44, ID=2640^Topic(s): biostratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous; Geography: China, Guizhou^^1";
- 3087 s[3084] = "XU SHOUYONG, YANG DELI (1987).- Characteristics of the Early Carboniferous biostratigraphy in central-south China.- Special Paper of National Carboniferous Symposium of China: 21-46; Geological Publishing House. [in Chinese, with English summary].- FC&P 19-1.1, p. 44, ID=2644^Topic(s): biostratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous L; Geography: China Central-S^^1";
- 3088 s[3085] = "WANG H.-Z., ZHENG L.-R., WANG X.-L. (1989).- The tectono-palaeogeography and biogeography of China and adjacent regions in the Carboniferous Period.- Geoscience 3, 2: 137-154 [in Chinese with English abstract].- FC&P 20-2, p. 60, ID=2942^Topic(s): geography, biogeography; Systematics: ; Stratigraphy: Carboniferous; Geography: China^^1";
- 3089 s[3086] = "LIU Z.-H., YANG M.-D., SU L.-Y. (1991).- Communities and environments of Tzemenchiao (Zimenqiao) Formation (Lower Carboniferous) in Lianshao region of central Hunan.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Comptes Rendus 3: 236-244.- FC&P 21-1.1, p. 47, ID=3232^Topic(s): biocoenoses; biocoenoses biotopes; Systematics: ; Stratigraphy: Carboniferous L; Geography: China, Hunan^^1";

- 3090 s[3087] = "YANG F.-Q. (1991).- Carboniferous paleobiogeographic provinces of China.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Comptes Rendus 3: 351-362.- FC&P 21-1.1, p. 49, ID=3247^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Carboniferous; Geography: China^^1";
- 3091 s[3088] = "YANG S.-P., WANG S.-F., LI A.-G. (1991).- Study on Early Carboniferous fossil communities of Hunan and Guizhou provinces.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Comptes Rendus 3: 296-314.- FC&P 21-1.1, p. 49, ID=3248^Topic(s): ecology; biocoenoses; Systematics: ; Stratigraphy: Carboniferous L; Geography: China, Hunan, Guizhou^^1";
- 3092 s[3089] = "LIN Y., HUANG Z., LIU P. (1997).- On the geographic province of the lower Carboniferous coral of China.- J. Changchun Univ., Earth Sci. 27, 4: 361-368.- FC&P 27-1, p. 71, ID=3814^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Carboniferous L; Geography: China^Based on some factors, e.g. the distribution and evolution of sea, the obstruction of land, the paleolatitude variation and the characteristics of the coral fauna, the geographic province of the Lower Carboniferous coral of China is proposed in the paper. The Yanguanian coral geographic subprovince is subdivided into Northern coral region (N China coral region) and Tethys coral region (S China coral region). The N China coral region can be further classified into Xingan coral subregion and Zhungeer coral subregion, where the former is represented by the coral Ankelasma, Homalophyllites and the latter by the kassinella, Hebukephyllum. The S China coral region can be subdivided into Huanan coral subregion characterized by the coral Cystophrentis, Pseudouralinia and the western coral subregion containing Beichuanophyllum, Siphonophyllia and Humboldtia. The Datangian geographic subprovince is subdivided into Tethys coral region (Kueichouphyllum-Yuanophyllum region). The Kueichouphyllum-Yuanophyllum region can be classified into N Tianshan-central Jilin coral region characterised by the coral Yuanophyllum, Gangamophyllum, Siphonophyllia and southern coral subregion yielding Kueichouphyllum, Yuanophyllum. The southern Tibet coral region is classified into Gangdesi-Nianqingtangula coral subregion containing the Rhopalolasma, Mirusophyllum and the Himalaya coral subregion with the coral Longiclave, Cumminsia. We think that the first appearance of the caninoid coral of China suggests the beginning of the Yanguanian stage.^1";
- 3093 s[3090] = "LELESHUS V.L. (1992).- Organic world of Carboniferous in Middle Asia.- Izvestiya AN Respubliki Tajikistan, otd. nauk o zemle, 1992, 3/4, 3: 19-24.- FC&P 23-1.1, p. 40, ID=4112^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Carboniferous; Geography: Asia Central^^1";
- 3094 s[3091] = "FANG S.X., HOU F.H. (1992).- Bryozoan-coral patch reefs of the Carboniferous carbonate platform, Langping area, Tianling County, Guangxi, China.- Eleventh International Congress of Carboniferous Stratigraphy and Geology, Comptes Rendus 4:19-25.- FC&P 23-2.1, p. 44, ID=4248^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Carboniferous; Geography: China, Guangxi^^1";
- 3095 s[3092] = "FONTAINE H., VACHARD D. (1979).- Note on the Carboniferous of the Republic of Korea.- CCOP Newsletter 06, 4. [reprinted in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 61-68].- FC&P 23-2.1, p. 45, ID=4261^Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: Korea Republic of^^1";
- 3096 s[3093] = "FAN JIANSONG, RIGBY J.K. (1994).- Upper Carboniferous phylloid algal mounds in southern Guizhou, China.- Brigham Young

- University, Geology Studies 40: 17-24.- FC&P 23-2.1, p. 57, ID=4412^Topic(s): reefs, algal mounds; reefs; Systematics: Stratigraphy: Carboniferous U; Geography: China, Guizhou^^1";
- 3097 s[3094] = "GUO H.-J., HUANG Z.-X. (1991).- Carboniferous stratigraphy and palaeogeography of the Tianshan-Xing'an region of China.- Comptes Rendus 11th International Congress on Carboniferous Stratigraphy and Geology, vol. 2: 36-48; Beijing, China, 1987.- FC&P 21-1.1, p. 46, ID=6808^Topic(s): stratigraphy geography; geology; Systematics: Stratigraphy: Carboniferous; Geography: China, Tien-Shan^^1";
- 3098 s[3095] = "RUI L., ZHANG L.-X. (1991).- Chronostratigraphic subdivision of the Upper Carboniferous of South China.- Courier Forschungsinstitut Senckenberg 130: 339-344.- FC&P 21-1.1, p. 47, ID=6810^Topic(s): stratigraphy; stratigraphy; Systematics: Stratigraphy: Carboniferous U; Geography: China S^^1";
- 3099 s[3096] = "WANG XIANGDONG, JIN Y.-G. (2003).- The Carboniferous Biostratigraphy of China.- Biostratigraphy of China [Zhang W., Chen P. & A.R. Palmer (eds)]: 281-330; Science Press, Beijing.- FC&P 33-1, p. 18, ID=7168^Topic(s): biostratigraphy; geology; Systematics: Stratigraphy: Carboniferous; Geography: China^^1";
- 3100 s[3097] = "FAN YINGNIAN (1985).- A division of zoogeographical provinces by Permo-Carboniferous corals in Xizang (Tibet), China.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 16: 87-106.- FC&P 15-2, p. 30, ID=0661^Topic(s): biogeography; Anthozoa biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: China, Tibet^^1";
- 3101 s[3098] = "WANG XIANGDONG, SUGIYAMA T., FANG RUNSEN (2001).- Carboniferous and Permian coral faunas of West Yunnan, Southwest China: implications for the Gondwana / Cathaysia divide.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 265-278.- FC&P 32-2, p. 63, ID=1399^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: China, Yunnan, Gondwana / Cathaysia^West Yunnan, Southwest China, is composed of several allochthonous continental blocks. The Changning-Menglian Belt contains a continuous rugose coral succession ranging from Early Carboniferous to Middle Permian. The succession is dominated by such Eurasian and Cathaysian taxa as Siphonodendron, Fomichevella, Lublinophyllum, Sestrophyllum?, Caninella, and Nephelophyllum, thus, the Changning-Menglian Belt belongs to the Cathaysian province. However, the successions of coral faunas in the Baoshan and Tengchong blocks are similar of the Cimmerian blocks. The similarities, contrary to those observed in the Changning-Menglian Belt are: 1) an affinity with the Eurasian forms during the Early Carboniferous, 2) absence of Late Carboniferous faunas, 3) very low diversity of faunas during the Early Permian, and 4) presence of massive forms during the Middle Permian. Thus, it is clear, based on corals faunas, that the boundary between Gondwana and Cathaysia existed along the Lancangjiang suture and the Kejie-Nandinghe fault, the boundary between the Baoshan block and the Changning-Menglian Belt in West Yunnan. ^1";
- 3102 s[3099] = "ZHOU GUANGDI (1987).- New contribution to the knowledge of the Carboniferous and Permian strata of the Shanxi Member in eastern Kunlun Shan.- Journal of Stratigraphy 11, 1: 71-74 [in Chinese].- FC&P 16-2, p. 32, ID=2079^Topic(s): geology; geology, Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: China, Kunlun Mts^[listed are many species of rugose and tabulate corals]^1";
- 3103 s[3100] = "ZHAO JIANGMING, WU WANGSHI (1986).- Upper Paleozoic corals

- from Xainza, Xizang.- Bulletin of Nanjing Institute of Geology and Palaeontology, Academia Sinica 10: 169-194.- FC&P 18-1, p. 39, ID=2269^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: China, Tibet^^1";
- 3104 s[3101] = "DING YUNJIE (1986).- New fossil corals of the Shazitang Formation from the Puan County, Guizhou Province, with remarks about boundary of Carboniferous-Permian.- Bulletin of Tianjin Institute of Geology and Mineral Resources 10: 123-158.- FC&P 19-1.1, p. 41, ID=2627^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous / Permian; Geography: China, Guizhou^^1";
- 3105 s[3102] = "HE XINYI (1990).- Carboniferous and Permian rugose corals and tabulates [of the Ngari area].- In: Yang Zunyi, Nie Zetong et al. (eds): Paleontology of Ngari, Tibet (Xizang): 76-79.; China Univ. Geosci. Press. [in Chinese, with English summary].- FC&P 20-2, p. 61, ID=2952^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: China, Tibet^ [new taxa are: Pseudofavosites aberrant, n.sp., Upper Permian; Sinopora cateniformis n.sp., Lower Permian; Neomultithecopora compacta n.sp.]^1";
- 3106 s[3103] = "DING YUNJIE, XU SHOU-YONG (1993).- Late Carboniferous-Early Permian coral faunas from Yishan, Guangxi.- Acta Palaeontologica Sinica 32, 6: 693-715.- FC&P 23-2.1, p. 35, ID=4229^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U / Permian L; Geography: China, Guangxi^The Carboniferous-Permian boundary strata in Yishan County of Guangxi are composed of uniform carbonate facies rocks and contain greatly abundant fossil corals. From 1983 to 1984, the writers made a systematical study of the fossil corals between Upper Carboniferous Triticites zone and Lower Permian Misellina claudiae zone in Yishan, Guangxi. A total of 51 genera with 97 species (Table 1) are recorded in this area, among which 13 new species are described. The 5 coral assemblage-zones were established based on the Carboniferous-Permian boundary coral fauna in the Manaoshan-wuguiling section. The present paper deals with these coral zones in order to make correlations with other regions both at home and abroad. The five coral assemblage-zones described are: 1. Paracarruthersella-Carinthiaphyllum carnicum (Pa-Ca) assemblage-zone, 2. Pseudocarniaphyllum-Pseudozaphrentoides mapingensis-Antheria polygonalis (Ps-Pm-A) assemblage-zone, 3. Chusenophyllum-Polythecalis nephelophylloides-Nephelophyllum yunnanense (Ch-Pn-N) assemblage zone, 4. Szechuanophyllum-Polythecalloidea pulchra (Sz-Pp) assemblage zone, 5. Yatsengia yishanensis-Wentzellophyllum kueichowense (Y-wk) assemblage-zone. The new species described are: Gshelia yishanensis sp.nov., Petalaxis difformis sp.nov., P. guiensis sp.nov., P. wuguilingensis sp.nov., Polythecalis nephelophylloides sp.nov., P. variformis sp.nov., P. typica sp.nov., P. crassiseptata sp.nov., Parapolythecalis raredentata sp.nov., Wentzellophyllum epicharis sp.nov., W. wuguilingense sp.nov., Yatsengia yishanensis sp.nov., Sinopora manaoshanensis sp.nov.^1";
- 3107 s[3104] = "SHCHUKINA V.Ya. (1973).- Carboniferous and Permian assemblages of Corals from Middle Asia.- Sovetskaya Geologiya 3: 53-68.- FC&P 2-2, p. 20, ID=4814^Topic(s): biostratigraphy; coral zonation; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Asia Central^^1";
- 3108 s[3105] = "LUO J.D., WU F.B., GUO Z.Y. (1990).- Late Carboniferous - early Early Permian beds and fusulinid zones at Jingyang, Longyan, Fusan. [in Chinese, with English summary].- Acta Palaeontologica Sinica 29, 6: 645-667.- FC&P 23-2.1, p. 46, ID=6856^Topic(s): geology, Anthozoa; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous / Permian;

- Geography: China, Fusan^^1";
- 3109 s[3106] = "WANG XIANGDONG, SHEN S.-Z., SUGIYAMA T., WEST R.R. (2003).- Late Palaeozoic corals of Tibet (Xizang) and West Yunnan, Southwest China: successions and palaeobiogeography.- Palaeogeography, Palaeoclimatology, Palaeoecology 191, 3-4: 385-397.- FC&P 33-1, p. 19, ID=7169^Topic(s): biostratigraphy, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Permian; Geography: China, Tibet, Yunnan^A dynamic pattern of coral faunal provincialism in the Carboniferous to Permian sequence is preserved in Tibet-West Yunnan. During the Early Carboniferous, an undifferentiated Eurasian province was present, containing the Kueichouphyllum, Keyserlingophyllum-Siphonophyllia, and Cyathaxonia faunas, that reflect major environmental differences relative to previous interpretations. During the Late Carboniferous-Early Permian, the Indoralian province and the Cathaysian province can be distinguished. The former is recognised by an absence of Late Carboniferous-Asselian corals and by the presence of the Sakmarian-Artinskian Cyathaxonia fauna. The latter contains the Late Carboniferous and Early Permian compound corals Nephelophyllum and Kepingophyllum. As many blocks drifted northward beginning in the late Early Permian, the Indoralian province had evolved into two discrete provinces: the Himalayan and Cimmerian provinces. The Himalayan province as a relic of the Indoralian province was in the northern margin of Gondwanaland. The Cimmerian province between the Himalayan and the Cathaysian provinces consists of the present tectonic blocks: Lhasa, Qiangtang, Tengchong, and Baoshan in Tibet and West Yunnan. It is characterised by Roadian non-dissepimental solitary corals and Wordian-Capitanian compound waagenophyllidae, as well as some endemic Cimmerian taxa such as Thomasiphyllum and Wentzellophyllum persicum. The Cathaysian province is dominated by Szechuanophyllum and Ipciphyllum. During the Late Permian, the Himalayan province and the Cathaysian province can be recognised. The former contains only small solitary corals, referred to as the Lytvolasma fauna, and the latter is identified by Liangshanophyllum, a fasciculate waagenophyllid. [original abstract]^1";
- 3110 s[3107] = "XIA GUOYING, DING YUNJIE (1987).- Carboniferous-Permian fusulinids and corals from Henan.- Bulletin of Tianjin Institute of Geology and Mineral Resources 18: 119-142.- FC&P 19-1.1, p. 44, ID=2641^Topic(s): ; corals forams; Systematics: Cnidaria Foraminifera; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: China, Henan^^1";
- 3111 s[3108] = "WU WANGSHI, ZHANG YANSHENG (1979).- Late Paleozoic Rugose corals from Batang and Yidun, western Szechuan.- Acta Palaeontologica Sinica 18, 1: 25-38.- FC&P 8-2, p. 42, ID=0341^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: China, Sichuan^The present paper deals with the rugose corals found from the latest Lower Carboniferous Xuchika formation and the late Lower Permian Bingfeng formation in Batang and Yidun, western Szechuan. The Xuchika formation contains Hiroshimaphyllum, Ozakiphyllum, Amygadalophyllidium and Ramiphyllum with Hiroshimaphyllum as the leading form. It deserves to be mentioned that Hiroshimaphyllum was previously recorded only from the early Namurian in southwestern Japan, but unseen in this country. The Bingfeng formation yields a coral fauna of western Tethys called Iranophyllum-Ipciphyllum fauna, which, so far as known, includes wentzelella, wentzelellites, Wentzelloides (Wentzelloides), w. (Multimurinus), waagenophyllum, Yokoyamaella (Yakoyamaella), Praewentzelella, Thomasiphyllum and Laophyllum. Both the faunas are, however, quite different in assemblage from those in the contemporaneous deposits in southwest and southeast China. It seems that the distributional pattern of the two faunas must have something to do with the geotectonic condition. The range of the Hiroshimaphyllum fauna is more or less controlled by the eugeosynclinal factor, whereas

- the distribution of the Iranophyllum-Ipciphyllum seems to be restricted by the fold belts. * 9 genera and 11 species are described; two genera - Ramiphyllum and Batangophyllum - as well as six species are recognized as new ones. [part of extensive summary]^1";
- 3112 s[3109] = "WANG ZHENGJI (1983).- Upper Carboniferous and Lower Permian compound and rugose corals in the western Kunlun Mountains, Xinjiang.- Geological Review 29, 6: 499-505 .- FC&P 13-2, p. 40, ID=0557^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U / Permian L; Geography: China, Xinjiang^^1";
- 3113 s[3110] = "WU WANGSHI (1985).- Rugosa near the Carboniferous-Permian boundary in southwest China.- Tenth International Congress of Carboniferous Stratigraphy and Geology, Compte Rendu 2: 331-334.- FC&P 15-2, p. 33, ID=0706^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous / Permian; Geography: China SW^^1";
- 3114 s[3111] = "WU WANGSHI (1984).- On the Carboniferous-Permian boundary in South China in the light of the Rugosa.- Academia Sinica, Developments in Geoscience, Contribution to 27th International Geological Congress: 97-103.- FC&P 14-1, p. 51, ID=1018^Topic(s): stratigraphy; stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous / Permian; Geography: China S^^1";
- 3115 s[3112] = "WU WANGSHI, KONG LEI (1983).- Rugose corals from the Carboniferous-Permian boundary beds in Yunnan, Guangxi, and Guizhou Provinces.- Palaeontologia Cathayana 1, 1: 367-409.- FC&P 14-1, p. 52, ID=1020^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous / Permian; Geography: China, Yunnan, Guangxi, Guizhou^^1";
- 3116 s[3113] = "WANG XIANGDONG, WANG XIAOJUAN, ZHANG F., ZHANG H. (2006).- Diversity patterns of Carboniferous and Permian rugose corals in South China.- Geological Journal 41, 3-4: 329-343.- FC&P 34, p. 40, ID=1244^Topic(s): diversity patterns; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: China S^The diversity and changing patterns of rugose corals in the Carboniferous and Permian of South China are analysed by statistical analyses of 45 families, 284 genera, and 1979 species from 14 consecutive time intervals. The ancestors of Carboniferous rugose corals originated early and underwent preliminary radiation in the late Famennian, but were eliminated by the Hangenberg global regressive event, which marks the Devonian-Carboniferous boundary. Radiation of typical Carboniferous rugose corals began in the late Tournaisian, when they were represented by an abundance of columellate taxa such as Kueichouphyllum and a significant diversification of Keyserlingophyllum. A decrease in the diversity of rugose genera occurred in the Serpukhovian, followed by a change in the composition of the rugose coral assemblages at the Mid-Carboniferous Serpukhovian-Bashkirian boundary, where large dissepimented taxa with complex axial structures disappeared. In the Bashkirian the Serpukhovian taxa were replaced by compound rugosan taxa of the Geyerophyllidae, Kepingophyllidae and waagenophyllidae. This compositional change was associated with a global regressive event, recognized in South China by the absence of upper Serpukhovian strata in many places and by several erosional surfaces in carbonate sequences in the Lower Yangtze region. This regressive event was probably caused by an episode of glaciation in Gondwana. Subsequent transgression occurred in South China during the early Bashkirian, where a wide, uniform shallow-water platform developed in South China, on which were deposited tidal-flat dolostone and pure limestone containing compound rugose corals. Another change in the rugose coral assemblages, at the Sakmarian-Artinskian boundary, resulted in the absence from the Artinskian of representatives of typical Pennsylvanian and Early Permian families such as the Bothrophyllidae, Lithostrotionidae,

Cyathopsidae, and Petalaxidae. Families uniquely typical of the Permian, characterized by Waagenophyllidae and Kepingophyllidae, dominate post-Sakmarian strata. This faunal change may be related to a major, worldwide regression, recognized at the end of the Sakmarian. Extinction of rugose corals at the end of the Permian occurred in two phases in South China. The first phase occurred at the end of the Capitanian and eliminated 47% of the families and 45% of the genera. Extrusion of the Omeishan Basalt, which is widely distributed in the western part of South China, and/or a global regression at the end of the Guadalupian could be the principal causes of this first phase of mass extinction. The second phase, which occurred at the end of the Changhsingian and is the largest extinction event in Earth's history, eliminated all remaining rugose corals.¹;

- 3117 s[3114] = "WU WANGSHI, ZHAO JIANGMING (eds) (1989).- Carboniferous and early Permian Rugosa from Western Guizhou and Eastern Yunnan, SW China.- Palaeontologia sinica 177, ser. B, 24: v + 1-230, 98 figs, 63 pls.; Beijing. [in Chinese, with comprehensive English summary].- FC&P 18-2, p. 34, ID=2482Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian L; Geography: China, Yunnan, GuizhouThe fully developed marine Carboniferous and early Early Permian rocks in western Guizhou and Eastern Yunnan, SW China are represented by several hundred meters to more than 1000 m of limestones and argillaceous limestones, containing abundant faunas of rugose corals in association with brachiopods, fusulinids, and others. The Carboniferous and early Early Permian rugose corals here described and illustrated were collected at Weining, Shuicheng, Panxian and Puan Counties of Guizhou Province and Zhanyi County of Yunnan Province. These have been assigned to 215 species (including 106 new species and 13 new subspecies) in 96 genera (including 8 new genera and 1 new subgenus) and 24 families, providing the knowledge of their faunal succession, evolutionary stages and biological community of the Carboniferous and early Early Permian in the concerned area. [part of extensive summary] * The following new taxa are described: Parazaphrophyllum cylindricum gen. et sp.nov. (fam. Bothrophyllidae), Dizonophyllum eximium gen. et sp.nov., Empachyphyllum conicum gen. et sp.nov. (both fam. Aulophyllidae). Lithostrotion (Mictolithostrotion) sinensis subgen. et sp.nov. (subfam. Lithostrotioninae), Diphyphylloides regularis gen. et sp.nov. (subfam. Diphyphyllinae), Paralytvophyllum shuichengense gen. et sp.nov., Prolytvophyllum minus gen. et sp. nov (both fam. Petalaxidae), Paragangamophyllum weiningense gen. et sp.nov. (fam. Axophyllidae), Characophyllum carinatum gen. et sp.nov. (fam. Geyerophyllidae).¹;
- 3118 s[3115] = "LUO JINDING, HE XINYI, WANG ZHIPING, WENG FA (1989).- Carboniferous and Permian rugose coral assemblages and biogeography of China.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 267-298 (chapter 12); Science Press, Beijing.- FC&P 19-1.1, p. 43, ID=2565Topic(s): biostratigraphy, biogeography; Rugosa assemblages; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: China¹;
- 3119 s[3116] = "LUO JINDING, QI YONGAN (1990).- Rugose coral fauna of Huanglung Formation at Quanxia, Ninghua, Fujian.- Acta Palaeontologica Sinica 29, 6: 694-715.- FC&P 20-1.1, p. 55, ID=2824Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous ? Permian; Geography: China, FujianThe Huanglung Formation exposed in Quanxia, Ninghua Country, SW Fujian is composed of continuously deposited marine carbonate rocks which contain abundant fossil corals with 27 genera and 59 species and subspecies, and can be grouped into two assemblages and two subassemblages in ascending order as follows: - 1. Yinophyllum crassum Assemblage. [...] Besides, Yinophyllum crassum gen. et sp.nov. [it] is characterized by naotic septa and the thickened, curved

columella, sometimes with a few axial tabellae, also some non-dissepimented solitary corals are also found in the assemblage, such as *Lophophyllidium* sp., *Bradyphyllum* sp., etc. The assemblage is associated with the fusulinid *Profusulinella*. - 2.

Protoivanovia-Arachnastraea Assemblage. (1) *Protoivanovia quanxiaensis-Koninckocarina minor* Subassemblage. [...] It is dominated by the caninid corals and dreizoner corals developing lonsdaleoid dissepiments. Both of the index fossils are prosperous and characteristic, for example, *Protoivanovia quanxiaensis* sp.nov. is a kind of aphyroid compound corals with a simple columella. Besides, the dreizoner corals developing lonsdaleoid dissepiments include *Actinocyathus similis* (Dobr.), *A. sinensis* (Wu et Zhao), *Acrocyathus baijingensis* (H. D. Wang), *Dorlodotia subcaespitosa* (Meek), *Kionophyllum dibunum* Chi, *K. ovatum* Wu et Zhao, *K. sp.*, *Koninckocarina cf. yishanensis* Wu, *K. minor* sp.nov., *K. sp.*, *Petalasis wyomingensis* Sando, etc. The caninid corals are characterized by the appearance of *Pseudozaphrentoides nosovi* (Fom.), *P. chuanshanensis* X. Yu, *Caninella* sp., *Caninia brockleyensis minor* X. Yu, *C. lipoensis* (Chi), *C. lipoensis chuanshanensis* X. Yu, *C. simpliseptata* Chi, *C. wangi* sp.nov., *C. sp.*, *Fomichevella holtedahli* (Herit.), *F. sinensis* X. Yu, *F. stuckenbergi* (Fom.), *Haplolasma lingwuensis* (Lee et Yu), *H. juddiformis regularis* (Gorskiy), *H. extensa* (Gorskiy), *Pseudotimania cf. mosquensis* (Dobr.), etc. The fusulinids in the subassemblage are *Fusulinella*, *Fusiella*. This fauna is obviously equivalent to the lower part of the *Fusulina-Fusulinella* Zone in age. (2) *Arachnastraea exquisita-Fomichevella aff. hoeli* Subassemblage. [...] It is characterized by the fasciculate and asteroid compound coralla, including such important components as *Arachnastraea manchurica* Yabe et Hayasaka, *A. exquisita* sp.nov., *Fomichevella campophylloides* Yan et Chen, *F. aff. hoeli* (Holt.), *F. holtedahli* (Herit.), *F. sinensis* X. Yu, *F. stuckenbergi* (Fom.), *F. sp.*, *Opiphyllum fomichevi* Kozyreva and *Crataniophyllum ninghuaense* sp.nov., among which the last one is a quasi-colonial coral, while the genus *Arachnastraea* is a kind of asteroid compound (or thamnasteroid in part) coral developing plate-columella and distributed widely in the Soviet Union, Spain and China as an index fossil for the late Moscovian. Taking into account the shared fusulinids *Fusulina*, *Beedeina*, etc., the subassemblage can be compared to the upper part of the *Fusulina-Fusulinella* Zone.

[abridged abstract]^1";

3120 s[3117] = "LUO JINDING, XU HANQIU (1990).- Rugose coral fauna of late Carboniferous and early Early Permian in Fujian.- *Acta Palaeontologica Sinica* 29, 6: 668-693.- FC#038;P 20-1.1, p. 56, ID=2826^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U #47; Permian L; Geography: China, Fujian^The Chuanshan Formation widespread in western Fujian is composed of continuously deposited carbonate rocks and contains very abundant fossils. [#8230;] The rugose corals comprise 83 species and subspecies in 38 genera, including 2 new genera, *Paraantheria* and *Pseudobothrophyllum*, 10 new species and 1 new subject [?]. Based on the obvious evolutionary phases, they can be grouped into three assemblages and two subassemblages in ascending order as follows: 1. *Nephelephyllum* Assemblage. [#8230;] The common elements are *Nephelephyllum*, *Caninia*, *Haplolasma*, *Arctophyllum*, *Timania*, *Orygmophyllum*, *Pseudozaphrentoides*, *Caninophyllum*, *Fomichevella*, *Lytvophyllum*, etc. Among them, the solitary corals with dissepiments, complete and domed or flat tabulae without axial structures are prominent, which are commonly called the #34;Carboniferous type#34;. But the occurrence of the massive rugose coral genus *Nephelephyllum* reveals an evolutionary trend from typical Carboniferous to Permian form. This assemblage is associated with the fusulinids *Montiparus* and *Triticites*. 2. *Anfractophyllum-Kepingophyllum* Assemblage. The first appearance of *Kepingophyllum* marks the beginning of this zone. It is sensibly different from the underlying

Nephelephyllum Assemblage in the emergence of a great number of new types, such as the advanced Kepingophyllidae, which possess massive compound, tertiary septa, brambly [?] or septal thecae, more or less cystose dissepiments, clinotabulae, inclining tabulae towards the centre, and complex axial structure. The significant elements include Kepingophyllum simplex Wu et Chow, K. ninghuaense sp.nov., Monsteraphyllum yunnanense Wu et Kong, Anfractophyllum fujianense sp.nov., Ivanovia? elegans sp.nov., Paraantheria multiseptata gen. et sp.nov., Pseudobothrophyllum fujianense gen. et sp.nov., Pseudocarniaphyllum sp., Chuanshanophyllum sp., among which Anfractophyllum appeared in the upper part of this assemblage. Therefore, this assemblage can be subdivided into two parts, i.e. the Kepingophyllum subassemblage below and the Anfractophyllum subassemblage above. The fusulinids in the assemblage are Pseudoschwagerina, Sphaeroschwagerina, etc. 3. wentzelophyllum volzi Assemblage. The first appearance of the zonal species is regarded as the beginning of this zone, which is coincident with the lower limit of the Gaodian Stage. The principal elements are wentzelophyllum volzi (Yabe et Hayasaka), Yatsengia asiatica Huang, Pseudohuangia tsengi (Zhao et Chen), etc. mainly the massive and fasciculate compound corals, in addition to some small non-dissepimented solitary corals and the tabulate Protomichelinia. [abridged abstract]^1";

3121 s[3118] = "WANG HONGDI (1978).- Tetracoralla. [in Chinese].- Atlas of Fossils of Southwest China, Guizhou Volume; pt 2: Carboniferous - Quaternary. [atlas of fossils] - FC&P 9-1, p. 12, ID=5750^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: China, Guizhou^^1";

3122 s[3119] = "FAN YINGNIAN (1978).- Rugosa. [in Chinese].- Atlas of Fossils of Southwest China, Sichuan Volume; pt 2: Carboniferous - Mesozoic. [atlas of fossils] - FC&P 9-1, p. 13, ID=5757^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: China, Sichuan^^1";

3123 s[3120] = "FAN Y.-N., YU X.-G., HE Y.-X., PAN Y.-T., LI X., WANG F.-Y., TANG D.-J., CHEN S.-J., ZHAO P.-R., LIU J.-J. (2003).- The Late Palaeozoic Rugose corals of Xizang (Tibet) and adjacent regions and their Palaeobiogeography.- Earth, Series of Geoscience: 679 pp., 73 figs, 36 tabs, 73 pls; Hunan Science & Technology Press.- FC&P 33-1, p. 50, ID=7207^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Permian; Geography: China, Tibet^This monograph includes the following 8 parts (besides the introduction): (1) stratigraphical regionalization and description of section (2) the sequences and assemblage zones of the Rugose corals (3) characteristics and distinction of Rugose Corals in the Palaeotethyan Neritic facies, Slope facies and Gondwanan facies (4) composition of carbon and oxygen isotopes of corals skeleton in Palaeotethyan neritic, Slope, and Gondwanan facies (5) biogeographical Regions of the rugose corals. * According to the characters of assemblage and distribution of the much rugose corals in Late Palaeozoic, the authors have divided into the China biogeographical Region of the Boreal Realm, the Palaethethysan Realm and the Gondwanan Realm in China. (a) The China Region of the Boreal biogeographical Realm; The rugose corals dominated North America in type, most of them are solitary corals of no dissepiments. (b) The China Region of the Palaeotethysan biogeographical Realm; It occupied the richly solitary and compound corals, with dissepiments, and some reef building corals appear usually in this Realm. (c) The China Region of the Gondwanan biogeographical Realm; The rugose corals are small solitary, their dissepiments absent. But during the Late Middle Permian (Maokouan age), the Indian Plate gradually shifted northwards into the Palaeotethysan Realm where sediments were received, when the rugose coral fauna, adapted to the warm water environment, is predominated by

the Suborder wentelellina. (6) The affinities of some rugose corals. The authors have made a systematic research on the affinity of some rugose coral genera and have solved the problems of their origin, the evolution and the interrelationship of some rugose corals genera, revising their taxonomic position. (7) Restatement on the classification of wentelellina (8) Description of corals. The monograph describes totally 38 family (3 new family), 149 genera (12 new genera and 3 new subgenera), 338 species [64 new species and 2 subspecies (1 new)] and 6 non-determinable species. Among of them, 12 [new?] genera, including 2 new genera are the small solitary without dissepiments being adapted to the cold-water environment by the sea of the north margin of the Gondwanaland, and 5 genera, including 1 new genus, belong to the slope facies of the Palaeotethys. The 73 plates of fossils and 53 text-figures show the affinity and the characters of growth in various stages of some genera and species. [part of original introduction]^1";

- 3124 s[3121] = "LI YAOXI (1989).- Carboniferous and Permian tabulate coral faunas and biogeography of China.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 319-335 (chapter 13); Science Press, Beijing.- FC&P 19-1.1, p. 42, ID=2646^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous, Permian; Geography: China^^1";
- 3125 s[3122] = "LELESHUS V.L. (1991).- Regional differentiation of Carboniferous and Permian tabulates of Tajikistan.- Doklady AN Taj. SSR. 34, 2: 112-114.- FC&P 23-1.1, p. 40, ID=4107^Topic(s): geography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous, Permian; Geography: Tajikistan^^1";
- 3126 s[3123] = "YANG SHENGWU (1978).- Tabulata. [in Chinese].- Atlas of Fossils of Southwest China, Guizhou Volume; pt 2: Carboniferous - Quaternary. [atlas of fossils] - FC&P 9-1, p. 12, ID=5751^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous, Permian; Geography: China, Guizhou^^1";
- 3127 s[3124] = "JIN CHUNTAI (1978).- Tabulata. [in Chinese].- Atlas of Fossils of Southwest China, Sichuan Volume; pt 2: Carboniferous - Mesozoic. [atlas of fossils] - FC&P 9-1, p. 13, ID=5756^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous, Permian; Geography: China, Sichuan^^1";
- 3128 s[3125] = "XU SHOUYONG (1984).- Coelenterata.- Biostratigraphy of the Yangtze Gorge area, 3, Late Paleozoic Era [Feng Shaonan, Xu Shouyong, Lin Jiixin & Yang Deli (eds); Geological Publishing House, Beijing]: 177-203.- FC&P 15-2, p. 34, ID=0711^Topic(s): stratigraphy; Coelenterata; Systematics: Cnidaria; Stratigraphy: Carboniferous, Permian; Geography: China^^1";
- 3129 s[3126] = "XIA GUOYING, DING YUNJIE, ZHAO SONGYIN (1987).- Subdivision of Carboniferous-Permian fusulinid-bearing strata of Henan and their faunas.- Professional Papers of Stratigraphy and Palaeontology 17: 98-128. [in Chinese, with English abstract].- FC&P 19-1.1, p. 44, ID=2642^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous, Permian; Geography: China, Henan^^1";
- 3130 s[3127] = "YAN G.-S., WANG D.-Y., JIANG Y.-A., XI Y.-H. (1987).- Subdivision and correlation of Carboniferous and Permian strata of North China type in Henan Province.- Professional Papers of Stratigraphy and Palaeontology 17: 72-97. [in Chinese with English abstract].- FC&P 20-2, p. 60, ID=2948^Topic(s): stratigraphy; stratigraphy, correlation; Systematics: ; Stratigraphy: Carboniferous, Permian; Geography: China, Henan^^1";
- 3131 s[3128] = "XIA GUOYING, DING YUNJIE, DING HUI, ZHANG WENZHI, ZHANG YAN,

- ZHAO ZHEN, YANG FENGQING, (1996).- On the Carboniferous-Permian Boundary Stratotype in China.- Geological Publishing House, Beijing: 200 pp., 24 pls.- FC&P 25-2, p. 17, ID=3079^Topic(s): stratigraphy; stratigraphy, stratotypes; Systematics: Stratigraphy: Carboniferous / Permian; Geography: China^[The book dedicated to the 30th International Geological Congress]^1";
- 3132 s[3129] = "ZENG XUELU, ZHU WEIYUAN, HE XINYI, TENG FANGKONG et al. (1996).- Permo-Carboniferous Biostratigraphy and Sedimentary Environment of West Qinling.- Geological Publishing House, Beijing: 334 pp., 56 pls.- FC&P 25-2, p. 17, ID=3080^Topic(s): geology, stratigraphy; stratigraphy, facies; Systematics: Stratigraphy: Carboniferous, Permian; Geography: China, Qinling Mts^1";
- 3133 s[3130] = "DING P.-Z., JIN T.-A., SUN X.-F. (1991).- Carboniferous-Permian boundary of Xikou area of Zhen'an, South Shaanxi, East Qinling Range.- Comptes Rendu 11th International Congress on Carboniferous Stratigraphy and Geology, vol. 2: 199-206; Beijing, China, 1987.- FC&P 21-1.1, p. 45, ID=6807^Topic(s): stratigraphy paleontology; geology; Systematics: Stratigraphy: Carboniferous / Permian; Geography: China, Shaanxi^1";
- 3134 s[3131] = "LUO J.-D., HONG Z.-Y., LIN X.-S., YI W.-J., LI Y.-L., WU F.-B. (1991).- On the Carboniferous-Permian boundary in Fujian.- Comptes Rendu 11th International Congress on Carboniferous Stratigraphy and Geology, vol. 2: 216-228; Beijing, China, 1987.- FC&P 21-1.1, p. 47, ID=6809^Topic(s): biostratigraphy; geology; Systematics: Stratigraphy: Carboniferous / Permian; Geography: China, Fujian^1";
- 3135 s[3132] = "RUI L., ZHANG L.-X., WANG Z.-H., WANG J.-H. (1991).- Notes on the Carboniferous-Permian boundary in South China.- Comptes Rendu 11th International Congress on Carboniferous Stratigraphy and Geology, vol. 2: 239-250; Beijing, China, 1987.- FC&P 21-1.1, p. 48, ID=6811^Topic(s): stratigraphy; stratigraphy; Systematics: Stratigraphy: Carboniferous / Permian; Geography: China S^1";
- 3136 s[3133] = "WANG XIANGDONG, SUGIYAMA T., UENO K., MIZUNO Y. (1999).- Peri-Gondwana sequences of Carboniferous and Permian age in the Baoshan Block, West Yunnan, Southwest China.- Proceedings of the International Symposium on Shallow Tethys (ST), 5 [B. Ratanasthien & S.L. Rieb (eds)]: 88-100.- FC&P 32-2, p. 54, ID=7159^Topic(s): geohistory; geology; Systematics: Stratigraphy: Carboniferous Permian; Geography: China, Yunnan^The Baoshan block in west Yunnan, southwest China is one of the key areas for understanding Gondwana dispersion and Asian accretion. […] The Late Paleozoic stratigraphic and paleontological characters of the Baoshan block contrast with similar characters in south China and Indochina but are close to those of the Sibumasu block of Southeast Asia. These data indicate that the block is part of the Gondwana-derived Cimmerian fragment. [excerpts from extensive abstract]^1";
- 3137 s[3134] = "CHEN M., XIONG P. (1978).- Permian corals.- Paleontological stratigraphy of the region east of the Yangtzi River canyon: 294-301; Bureau of Geology of Hupei Province, Stratigraphic Research Section.- FC&P 9-2, p. 40, ID=0308^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: China, Yangtze^1";
- 3138 s[3135] = "LIN BAOYU (1983).- Lower Permian Stratigraphy and Coral Faunas from both flanks of Yarlung Zangbo River in Central-Southern Xizang (Tibet).- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 8: 69-181.- FC&P 12-2, p. 37, ID=0424^Topic(s): biostratigraphy; Anthozoa stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography:

- China, Tibet^In this paper the author describes the Lower Permian strata and rugose and tabulate corals from both flanks of the Yarlung Zangbo River in central southern Xizang. They comprise 112 species and subspecies referable respectively to 45 genera, among which ten genera and 93 species and subspecies are identified as new ones. [first part of extensive summary]^1";
- 3139 s[3136] = "DING YUNJIE (1984).- Corals.- Tianjin Institute of Geology and Mineral Resources Bulletin 10: 244 [Ding Yungle, Xia Guoying, Duan Chenghua, Li Wenguo, Liu Xiaoliang & Liang Zhongfa (eds): Study on the Early Permian stratigraphy and fauna in Zhesi District, Nei Mongol Zizhiqu (Inner Mongolia).- FC&P 15-2, p. 29, ID=0657^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: China, Nei Mongol^^1";
- 3140 s[3137] = "DING YUNJIE, YU XUEGUANG (1983).- Some new fossil corals of early Lower Permian from southern Qinling Range.- Tianjin Institute of Geology and Mineral Resources Bulletin 8: 123-142 [in Chinese, with English abstract].- FC&P 15-2, p. 29, ID=0658^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: China, Qinling Mts^^1";
- 3141 s[3138] = "XU SHOUYONG (1984).- The characters of the Permian coral faunas from Hunan and Hubei provinces.- Acta Palaeontologica Sinica 23, 5: 605-616.- FC&P 14-1, p. 48, ID=0992^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: China, Hunan, Hubei^The paper deals with the history of research, division and characters of coral zones, and the Permian coral zones of Hunan and Hubei provinces in order to make correlations between regions. The Permian corals in these areas are abundant and widely distributed. Three coral Acme-zones and 4 Assemblages zones have been established^1";
- 3142 s[3139] = "WANG XIANGDONG, SUGIYAMA T. (2000).- Diversity and extinction patterns of Permian coral faunas of China.- Lethaia 33, 4: 285-294.- FC&P 30-2, p. 12, ID=1396^Topic(s): diversity, extinctions; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: China^Coral diversity and extinction patterns in the Permian of China are revealed through statistical analyses of 56 coral families, 263 genera and 2100 species from five consecutive time intervals. The highest coral diversity in the Chuanshanian, with 753 species, 167 genera and 39 families. In contrast, the lowest diversity is in the Changsibgian. With only 68 species, 20 genera and 10 families. Two decreases in diversity can be recognized during the Permian. The first occurred at the end of the Maokouan (end-Guadalupian) and is marked by the loss of 75,6% of coral families, 77,8% of coral genera and 82,2% of coral species. The second major diversity drop took place at the end of the Changsingian, when all rugose and tabulate corals became extinct. The extinction at the end of the Guadalupian in Pangea may be related to the middle Permian global regression of the Omeishan basalt. A triple-zoned palaeobiogeographical pattern is well preserved by coral diversity.^1";
- 3143 s[3140] = "WANG XIANGDONG, SUGIYAMA T. (2002).- Permian coral faunas of the eastern Cimmerian Continent and their biogeographical implications.- Journal of Asian Earth Sciences 20: 589-597.- FC&P 32-2, p. 63, ID=1398^Topic(s): biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Cimmeria E^Because of a depositional hiatus, Late Carboniferous corals are unknown from the eastern Cimmerian Continent. Early Permian (Asselian to Artinskian) corals are characterized by non-dissepimented solitary forms, and the absence of Kepingophyllidae and waagenophyllidae, forms common in the Cathaysian biotic province. Roadian faunas in most areas of the eastern Cimmerian Continent are dominated by small solitary corals. These faunas are quite different from those of the Cathaysian area, where abundant large

solitary and compound corals occur. By the wordian, into the Capitanian, large solitary and massive Waagenophyllidae, with a Cathasian aspect, were well developed and widespread in the Cimmerian Continent. However, some endemic taxa, like Thomasiphyllum, also occur. Late Permian corals consist only of Cathysian elements. Therefore, paleobiogeographically, the coral faunas in the eastern Cimmerian Continent reveal the following changes: 1) a Peri-Gondwana affinity during the Early Permian to early Middle Permian, (2) an endemic Cimmerian-Cathysian affinity during the Late Middle Permian, and (3) a true Cathysian fauna during the Late Permian. These changes may be related to the rifting of the Cimmerian Continent from Gondwana in the Late Early Permian and its subsequent northward drift.¹;

- 3144 s[3141] = "SHI YAN (1982).- Some Lower Permian corals from South China.- Acta Palaeontologica Sinica 21, 2: 249-265.- FC&P 12-1, p. 33, ID=1903Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: ChinaThis paper deals with the Lower Permian corals from Southern China. 12 genera (four of which are new) are described, as well as a new sub-genus and 15 species (13 of which are also new). Regarding the Early Permian corals distributed in the Lower Yangtze Valley, the author also supposes that the Lower Permian should be divided into three zones and four subzones (in ascending order) as follows: Ipciphyllum zone (Zaphrentis permicus subzone; Ipciphyllum subtimoricum subzone); Polythecalis zone (Lophocarinophyllum-Chusenophyllum subzone; Polythecalis-Hayasakai subzone); wentzellophyllum zone. The new genera are: Tachylasma (Praetachylasma) kwangchense n.subgen. et n.sp., Lophotabularia (type species: Lophocarinophyllum lophophyllidium Liao & Zhu, 1977), Naoticophyllum typicum n.gen. et n.sp., Prowebtzellites elegans n.gen. et n.sp., Parapolythecalis huangshiensis n.gen. et n.sp.1";
- 3145 s[3142] = "WANG HONGDI (1986).- Description of some new genera and species of corals.- Early Permian stratigraphy and fauna of southern Guizhou [Xiao Weiman, Wang Hongdi, Zhang Linxin et Dong wenlan (eds); Peoples Publishing House of Guizhou]: 199-273 [in Chinese with English summary].- FC&P 18-1, p. 39, ID=2264Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: China, Guizhou1";
- 3146 s[3143] = "DING YUNJIE (1987).- Some new species of Early Permian corals from Ulanqab Meng, Inner Mongolia.- Professional Papers of Stratigraphy and Palaeontology 17: 277-296. [in Chinese, with English abstract].- FC&P 19-1.1, p. 41, ID=2628Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: China, Nei Mongol1";
- 3147 s[3144] = "DING YUNJIE (1995).- On some Asselian corals in Nandan, Guangxi.- Professional papers of Stratigraphy and Palaeontology 26: 77-91.- FC&P 25-2, p. 17, ID=3076Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian Ass; Geography: China, Guangxi1";
- 3148 s[3145] = "ZHAO JIAMING (1981).- Permian corals from Beichuan and Jiangyou of Sichuan and from Hanzhong of Shaanxi. [in Chinese, with English abstract].- Memoirs of Nanjing Institute of Geology and Palaeontology, Academia Sinica 15: 233-274.- FC&P 11-2, p. 28, ID=6163Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: China, Sichuan, ShaanxiThe new genus Lasmophyllum (L. beichuanense n.gen., n.sp.) is described from the Lower Permian of Sichuan. Corallum fasciculate. Corallites cylindrical; these often in touch with another. Septa of two orders, major and minor in alternation. Major septa number neverthan 20. Minor septa rudimentary or absent. Counter septum often connected with cardinal septum forming an irregular median plate in the central area. Some of the major septa connected with median plate. Tabulae usually incomplete, convex upward, and inclined toward the periphery. 1-2 rows of dissepiments.e This new genus resembles

- Yatsengia (Huang 1932), but differs from the latter in the counter septum connected with cardinal septum and forming an irregular median plate. The tabellae and radial plate are not developed.^1";
- 3149 s[3146] = "XIA GUOYING, DING YUNJIE (1983).- Early Permian fusulinids and corals in Deyanqimiao District, Sonid Youqi of Nei Mongol Zizhiqu.- Tianjin Institute of Geology and Mineral Resources Bulletin 8: 143-160.- FC&P 15-2, p. 33, ID=0709^Topic(s): ; corals forams; Systematics: Cnidaria Foraminifera; Anthozoa; Stratigraphy: Permian L; Geography: China, Nei Mongol^^1";
- 3150 s[3147] = "FAN JIANSONG, RIGBY J.K., ZHANG WEI (1991).-'Hydrozoa" from the Middle and Upper Permian reefs of South China.- Journal of Paleontology 65, 1: 45-68.- FC&P 20-1.1, p. 65, ID=2842^Topic(s): taxonomy; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Permian M U; Geography: China S^Abundant "hydrozoans" are important frame-building and accessory organisms in Middle and Upper Permian reefs of southern China, particularly in western Hubei, eastern Sichuan, eastern Yunnan, and northwestern Guangxi. The new genera Radiotrabelculopora, Lichuanopora, and Pseudopalaeoaplysina are described, as are the new species Disjectopora beipeiensis, D. irregulara, Radiotrabelculopora xiangoboensis, R. maokoui, R. elegans, R. astrorhiza, Balatonia robusta, Lichuanopora bancaoensis, L. (?) regulara, Pseudopalaeoaplysina sinensis, and P. major. The assemblage represents one of the most diverse upper Paleozoic "hydrozoans" assemblages known. ^1";
- 3151 s[3148] = "WANG SHENG-HAI, QIANG ZI-TONG, FAN JIA-SONG (1994).- A preliminary study of plate-shaped hydrozoans from Upper Permian reefs in Huaying Mountains, Sichuan, China.- Acta Palaeontologica Sinica 33, 1: 106-117.- FC&P 23-2.1, p. 53, ID=4397^Topic(s): reefs; Hydrozoa, reefs; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Permian Chang; Geography: China, Sichuan^Since 1983, numerous Upper Permian reefs have been discovered in the Huaying Mountains, Central Sichuan, which are similar in textures, structures and developing process, with such main reef-building organisms as calcareous sponges, hydrozoans and bryozoans, and encrusting organisms such as Archaeolithoporella and Tubiphytes. Associated in great amounts with the reef building organisms are reef dwelling organisms, such as brachiopods, foraminifers, gastropods, crinoids, ostrocods and various calcareous algae. In sedimentological and palaeontological characteristics of these reefs, the Upper Permian reefs developed in central Sichuan represent the typical organic reefs in South China. All of these reefs occurred in the Upper Permian Changhsing Formation which is overlain by the Lower Triassic Feixianguan Formation. The tops of the reefs are covered with tidal flat deposits attaining about 1-7 m in thickness and made up of micritic dolomites accompanied by some evaporitic remnants in which specialized ostracods and stromatolites can be found. It is not very clear whether the tidal flat deposits belong to Triassic or to Permian. The decline of the Permian reefs corresponds to the mass extinction of various Permian organisms across the Permo-Triassic boundary, and therefore the reefs in this area can be regarded as the latest Palaeozoic reefs in the world. Here described are abundant "plate-shaped hydrozoans" found in these reefs over the past several years, with two new genera and three new species which are placed in the family Palaeoaplysilidae Chuvashov 1973 and included tentatively in the class Hydrozoa. [original summary] The following new taxa are described: Pseudopalaeoaplysina huayingensis sp.nov., Phragmorpha asiatica gen. et sp.nov., Cnidopora tuberculosa gen. et sp.nov.^1";
- 3152 s[3149] = "DENG ZHANQIU (1982).- Note on some sponges and hydroids. [in Chinese, with English summary].- Acta Palaeontologica Sinica 21, 6: 709-714.- FC&P 12-1, p. 42, ID=6182^Topic(s): taxonomy; Porifera, Hydrozoa; Systematics: Porifera

Cnidaria; Hydrozoa; Stratigraphy: Permian; Geography: China^Of late years, a number of fossil sponges have been obtained from different localities in the provinces of Sichuan, Guizhou and Jiangsu. Among them the Permian calcareous sponges preponderate in number over others. Some of them described in this paper include six genera and seven species. They are as follows: Sollasia aff. ostiolata Steinmann (Batang, Sichuan), Waagenella muliensis sp.nov., Cystauletes ribuzuoensis sp.nov., Coelociadia cf. spinosa (Muli, Sichuan), Cryptocolia sp. (Mianning, Sichuan), Heliospongia sp. (wuxian, Jiangsu) and Heliospongia? houchangensis sp.nov. (Ziyun, Guizhou). * These forms belong to the classes Calcispongea and Demospongea respectively. They are collected from the Maokou Formation (P12) Southwest China except Sollasia aff. ostiolata Steinmann from the Bingfeng Formation (P12), and they may be compared with those from Carboniferous-Permian strata of the Tethysian area of Eurasia. * Here a fragment of hydroid collected from the Late Triassic Jieza Formation in Ylishu of Qunghai is also described. This form belongs to the order Sphaeactinoida and is designated under the name Ellipsactinia qinghaiensis sp.nov. [original summary]^1";

- 3153 s[3150] = "ZHAO JIAMING (1976).- Late Permian rugose corals from Anshun, Luzhi, and Qinglong, Guizhou Province.- Acta Palaeontologica Sinica 15, 2: 213-223 .- FC&P 6-1, p. 27, ID=0072Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: China, GuizhouDescribes and illustrates one new genus and 16 species, 10 of which are new.^1";
- 3154 s[3151] = "JIN T. (1978).- Zhenganophyllum gen. nov. from the Upper Permian of Zhenan, Shaanxi province.- Professional Papers of Stratigraphy and Palaeontology 04: 83-86.- FC&P 9-2, p. 40, ID=0314Topic(s): new taxa; Rugosa, Zhenganophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: China, Shaanxi^^1";
- 3155 s[3152] = "CHEN HUACHENG, YAN YOUYIN, QI DUNLUN (1983).- Chusenophyllum (Rugose coral) from the Chihsia Formation of Lower Permian, Southern Anhui.- Acta Palaeontologica Sinica 22, 5: 510-516.- FC&P 13-1, p. 31, ID=0438Topic(s): ; Rugosa, Chusenophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, AnhuiThe Lower Permian Chihsia Formation is well-developed in southern Anhui. In the upper part of the formation a considerable number of Chusenophyllum occurred which may be regarded as a guide fossil since it is confined to a certain horizon. Chusenophyllum is characterized morphologically by the entire vanishing of thecae, while Polythecalis is characterized by a partly vanishing of thecae and wentzellophyllum by well-developed thecae. It seems that Polythecalis has evolved from Wentzellophyllum, and Chusenophyllum from Polythecalis through a gradual vanishing of the thecae. According to the lithological characters and the coral assemblage, the Chihsia Formation in southern Anhui may be divided into two zones and two subzones: 2. Polythecalis zone a. Chusenophyllum subzone b. Polythecalis yangzeensis subzone 1. wentzellophyllum volzi zone. In addition eight new species of Chusenophyllum are described and illustrated: Ch. chaoxianense, multiseptatum, anhuiense, pingdingshanense, chaohuense, guichiense, intermedium and annulatum. [original summary]^1";
- 3156 s[3153] = "WANG Z., CHEN S., WU R. (1983).- Two new tetracorals, Xizangophyllum and Xainzaphyllum, from the Lower Permian of Xizang.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 02: 258-264.- FC&P 13-1, p. 41, ID=0485Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Tibet^^1";
- 3157 s[3154] = "DING YUNJIE (1983).- On some new species of Early Permian Tetracoralla froa Xilin Gol Meng, Inner Mongolia.- Tianjin Institute of Geology and Mineral Resources Bulletin 8: 105-122 [in Chinese, with

- English abstract].- FC&P 15-2, p. 29, ID=0656^Topic(s):new taxa; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian L; Geography:China, Nei Mongol^^1";
- 3158 s [3155] = "WANG HONGDI (1985).- Some new genera and species of Early Permian Tetracorals from South Guizhou.- Acta Palaeontologica Sinica 24, 5: 553-557.- FC&P 15-1.2, p. 32, ID=0815^Topic(s):new taxa; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian L; Geography:China, Guizhou^Described are the new genera Symmetrites (type species *S. elegans* gen. et sp.nov.), belonging to the Melanophyllidae, and Houchangophyllum (type species *H. magnum* gen. et sp.nov.), a representative of the Lonsdaliidae.^1";
- 3159 s [3156] = "ZHAO JIANGMING, YAUNG DAORONG (1985).- Discovery of the Multimurinus coral fauna from Xiuzhumuqinqi of Nei Mongol.- Acta Palaeontologica Sinica 24, 4: 440-448.- FC&P 15-1.2, p. 32, ID=0817^Topic(s):new records; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian L; Geography:China, Nei Mongol^Descriptions of the following Lower Permian species are given: Chusenophyllum intermedium sp.nov., Szechunophyllum abnormis sp.nov., Multimurinus subregularis sp.nov., *M. neimongolensis* sp.nov., Amplexocarinia crassithecata sp.nov.^1";
- 3160 s [3157] = "ZHANG FENG, WANG XIAOJUAN, WANG XIANGDONG (2004).- Intraspecific variation in Kepingophyllum aksuense Wu et Zhou from the Lower Permian of Keping, Xinjiang, Northwest China.- Acta Palaeontologica Sinica 43, 4: 579-585.- FC&P 33-2, p. 24, ID=1136^Topic(s):variation, numerical analysis; Rugosa, Kepingophyllidae; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian L; Geography:China, Xinjiang^After a detailed observation in a large number of thin sections of Kepingophyllum aksuense from Lower Permian of Keping area, Xinjiang, we found that there are strong variations in corallites of colony. The characters exhibiting high variability include: shape of corallites, width ratio of tabularium to dissepimentarium, septal length, shape of tabulae, the number of septa, and the ratio of septal number to diameter. The shape of corallites is greatly different in transverse section. The [corallites] are commonly hexagon and some pentagon, and even triangle. The statistical analysis shows the ratio of tabularium to dissepimentarium has a random distribution. This abnormal distribution may be caused by unstable development of lonsdaleoid dissepimentariums. Major and minor septa are measured in the length and indicate a good linear relation between them. In longitudinal sections, shapes of tabulae can be differentiated into three kinds: the concave complete tabulae, incomplete tabulae, and clinotabulae. About 200 corallites are measured in number of septa to show a distribution pattern that the number 14-16 takes the majority. Eighty corallites are measured for the ratio of septal number to diameter. The distribution pattern shows that data points are surprisingly scattered away from the curve and the R value is only 0.3923. In addition, in longitudinal section there exists a periodic increase that probably shows a kind of seasonal variation, represented by alternative arrangement of large and small vesicular dissepiments. The comparison between the present and type specimens indicates a less difference in variability.^1";
- 3161 s [3158] = "WANG XIANGDONG, SUGIYAMA T., KIDO E., WANG XIAOJUAN (2006).- Permian rugose coral faunas of Inner Mongolia-Northeast China and Japan: Paleobiogeographical implications.- Journal of Asian Earth Sciences 26: 369-379.- FC&P 34, p. 39, ID=1243^Topic(s):biogeography; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian; Geography:China, Japan^The faunal characteristics, successions and geographical distribution of the Permian rugose corals in Inner Mongolia-Northeast China and Japan are reviewed using current coral taxonomy and the recently revised Permian global time scale. The co-occurrences of Cathaysian compound corals, abundant non-dissepimented solitary corals, and endemic corals indicate

that Inner Mongolia and Northeast China present an independent biogeographical entity, quite separate from South China and the Japanese terranes. However, the common occurrence in South China of Permian taxa such as *Wentzellophyllum*, *Lonsdaleiastraea*, *Yatsengia*, *Ipciphyllum*, and *Waagenophyllum* indicates, in a broad sense, a Tethyan affinity for the Akiyoshi and Mino terranes in Japan. Rocks from the Asselian to the Artinskian in the South Kitakami Terrane of Japan contain eleven large dissepimented solitary and compound genera, including *Huangia*, *Iranophyllum*, *Laophyllum*, *Polythecalis*, *Sestrophyllum*, *Wentzelella*, *Wentzellophyllum* and *Yatsengia*. These genera are all typical of, and common in, South China, but are absent from coeval strata in Northeast China. Middle Permian rocks in the South Kitakami Terrane also contain rugose corals that are abundant in South China, in some cases the same species, such as *Parawentzelella regularis*, *Waagenophyllum indicum*, *Waagenophyllum virgalense* and *Yatsengia kiangsuensis*. Thus, the coral faunas from the South Kitakami Terrane indicate a close paleobiogeographical affinity with those from South China, which is consistent with the paleobiogeography based on ammonoids and bivalves.¹¹;

- 3162 s[3159] = "WANG XIANGDONG, SUGIYAMA T. (2001).- Middle Permian rugose corals from Laibin, Guangxi, South China.- *Journal of Paleontology* 75, 4: 758-782.- FC&P 30-2, p. 24, ID=1397^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: China, Guangxi^The Middle Permian Chihhsia and Maokou formations in Labin, central Guangxi, South China contain 19 rugose coral species; of these taxa, *Lophocarinophyllum sandoi*, *Asserculinia solida*, and *Innixiphyllum wuae* are new. *Innixiphyllum* represents a new genus characterized by contrasting minor septa. Ten species are reviewed and described in detail, and the diagnoses of three of these species, *Allotropiophyllum heteroseptatum* (Grabau 1928), *Lophocarinophyllum taihuense* (Yan & Chen 1982), and *Ipciphyllum regulare* (Wu 1963), are emended. The morphological variation and ontogenetic changes of the solitary, nondissepimented species are particularly emphasized. Six additional taxa are described and illustrated but are left in open nomenclature. The corals from Labin are typically Tethyan. Four biostratigraphic assemblages are recognized: an assemblage of massive corals in the Upper Chihhsia Formation represented by *Polythecalis longliensis*; an assemblage of small solitary and nondissepimented corals in the lower Maokou Formation, dominated by species of *Allotropiophyllum*, *Innixiphyllum* and *Lophocarinophyllum*; an assemblage of mixed massive colonial and small solitary corals in the middle Maokou Formation, characterized by *Ipciphyllum regulare*; and an assemblage of solitary nondissepimented corals in the uppermost Maokou Formation, characterized by *Ufimia elongata*. These assemblages correspond well to those from other areas of South China. In Labin, only two rugose taxa, *Amphicarinia* sp. and *Paracarinia minor*, occur in the basal part of the Wuchiaping Formation of Lopingian age.¹¹;
- 3163 s[3160] = "DING YUNJIE (1980).- The new fossil corals of Lower Permian - *Wentzelella* and *Zhurrihephyllum* from Inner Mongolia.- *Bulletin Chinese Academy Geological Sciences* ., 2: 82-84.- FC&P 11-1, p. 46, ID=1758^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Nei Mongol^The new genus *Zhurihephyllum* (*Z. vesiculosum* n.gen. et n.sp.) is described.¹¹;
- 3164 s[3161] = "YIM W.W.-S., NAU P.S., ROSEN B.R. (1981).- Permian corals in the Tolo Harbour Formation, Ma She Chau, Hong Kong.- *Journal of Paleontology* 55, 6: 1298-1300.- FC&P 11-1, p. 35, ID=1800^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: China, Hong Kong^Identification of ?*Duplophyllum* *mikron* suggests a Middle Permian age for the Tolo Harbour Formation, previously thought to be Permo-Carboniferous.¹¹;

- 3165 s[3162] = "YU C.C., LIN Y.T., HUANG Z.X. (1981).- Early Permian corals from central Jilin.- Acta Palaeontologica Sinica 20, 4: 273-286.- FC&P 11-1, p. 54, ID=1802^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Jilin^^1";
- 3166 s[3163] = "GUO SHENGZHE (1980).- A general account of Early Permian rugose coral fauna from the geosynclinal region of northeastern China.- Bulletin Chinese Academy geological Sciences ser 5, 1, 1: 103-114.- FC&P 11-2, p. 25, ID=1816^Topic(s): oceanic realm; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China NE^^1";
- 3167 s[3164] = "WU WANGSHI (1987).- A Study on some Asselian Corals.- Acta Palaeontologica Sinica 26, 2: 149-157.- FC&P 16-2, p. 22, ID=2050^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian Ass; Geography: China, Guangxi^The Asselian corals described in this paper were collected in 1984 by Zhou Zuren and others during their investigation of the Carboniferous-Permian boundary in Nandan County, the Zhuang Autonomous Region of Guanxi. Those identified here as Notophyllum liuzhaiense gen. et sp.nov., Liuzhaiphyllum intermedium gen. et sp.nov. Thomasiphyllum? sp. and Bayhaium nandanense sp.nov. were found in association with the Asselian ammonoids and fusulinids. All of these fossils occur in the carbonate blocks of the debris flow, which derived probably from the foreslope of the Carbonate platform, 6 m in thickness at the quarry, 1.2km southwest of the Liuzhai Town. In 1982, the author defined two paleogeographical regions of corals in the Sakmarian all over the world, the Durhaminidae region which is distributed in North America, Soviet Union and Spitsbergen and the Kepingophyllidae region which is limited within the Tethys only. Since no typical elements of the Kepingophyllidae have been found in the present coral fauna so far, it is difficult to define the exact age of the described corals. Of interest is the discovery of the specimens of the genus Bayhaium which was proposed in 1959 by Langenheim et McCutcheon. Since then, about five species of the genus have been described by different authors, including the American species found in the wolfcampanian of California (Langenheim et McCutcheon 1959; Wilson 1982), and two other species which also have been identified by Ding et Yu in 1983 from the lower part of the Permian in southern Shaanxi, China. These seem to indicate that the age of the present coral fauna could be recognized as the earliest Permian. However, the presence of the associated Asselian ammonoids is something noticeable which can be taken as an evidence to put them in the Asselian age [part of original summary].^1";
- 3168 s[3165] = "XU H.-Q. (1990).- On the stratigraphical and geographical distribution of the kepingophyllids during the Maping Age in China.- Chinese Science Bulletin 35, 2: 116-122.- FC&P 20-2, p. 60, ID=2945^Topic(s): distribution; Rugosa, Kepingophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L Map; Geography: China^^1";
- 3169 s[3166] = "ZHAO JIAMING, ZHOU GUANGDI (1995).- Records of the Kepingophyllum coral fauna from Mt. Qimantage of Qinghai.- Acta Palaeontologica Sinica 34, 5: 275-601.- FC&P 25-1, p. 32, ID=3010^Topic(s): Kepingophyllum fauna; Rugosa, Kepingophyllum fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: China, Qinghai^^1";
- 3170 s[3167] = "DING YUNJIE (1995).- On some new species of Maping Limestone Tetracorals from Guangxi.- Jour. Geol. & Min. Res., North China 10, 1: 5-20.- FC&P 25-2, p. 17, ID=3077^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian?; Geography: China, Guangxi^^1";
- 3171 s[3168] = "ZHANG XIONGHUA (1992).- Ecological-environment differentiation of the Early Permian rugose corals in Southern Guizhou and Central Hunan.- J. Graduate School, China Univ. Geosci. 6, 1: 23-29.- FC&P 21-1.1, p. 44, ID=3218^Topic(s):

ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Guizhou, Hunan^The ecological-environment differentiation of the Early Permian rugose corals in Southern Guizhou and Central Hunan is very obvious. According to quantitative analysis of the rugose corals of different facies in some major stages of the Early Permian, the ecological-environment differentiation of these corals is discussed as the following: (1) In turbulent shallow marine on platform margin, massive compound rugose corals dominated. (2) In tranquil shallow marine on platform margin, solitary rugose corals of trizone type, aphyroid and thamnasterioid compound corals dominated, but massive compound corals decreased. In this environment, the diversity of rugose corals is the largest. The elements of these corals usually occurred in this environment. (3) In basin sedimentary area, only non-dissepimented rugose corals occurred. These studies will provide some important paleontological evidences for the sedimentology and paleogeography of future.^1";

- 3172 s[3169] = "WANG XIANGDONG (1992).- Increase pattern and environmental significance of Kepingophyllum aksuense Wu & Zhou from early Permian, Xinjiang.- Chinese Science Bulletin 37, 13: 1108-1111.- FC&P 22-1, p. 33, ID=3387^Topic(s): astogeny; Rugosa, Kepingophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Xinjiang^The process in which a colony is developed from protocorallite by asexual reproduction that made the majority of compound coral skeleton is called "increase pattern". Different taxa and even different colonies of the same taxon could exhibit different increase patterns. Conversely, it is possible that different taxa have the same increase pattern. Therefore, study on the increase pattern has significant implications not only for the taxonomy but for paleoenvironmentology. This study reports the unusual increase pattern of Kepingophyllum aksuense from Aksu area in Xinjiang.^1";
- 3173 s[3170] = "WANG ZHIPING, ZHANG XIONGHUA (1993).- Microskeletal structures of Late Permian rugose corals from Zheng, Southern Shaanxi.- Courier Forschungsinstitut Senckenberg 164: 359-364. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 22, ID=3471^Topic(s): microstructures, SEM study; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: China, Shaanxi^Microskeletal structures of the Late Permian rugose corals of Zhengan, Southern Shaanxi, investigated by SEM and optical microscope, are revealed as follows: 1. Their septal structures may be divided into two types: a trabeculate type and a non-trabeculate type; with two types of septal thickening, one formed by the clustered arrangement of minor trabeculae; the other by thick trabeculae with carinae on both sides of septa completely constituted by fascicles, not extending as part of the trabeculae. 2. The walls of both solitary and fasciculate compound corals are composed of parallel needles or brachycolumns. Two types of intercorallite walls exist in the massive corals, in one type, an obvious dark-line formed by irregular granules or needles present in the central part of the intercorallite wall. The other form is composed of densely interlocked trabeculae of septal outer ends from neighbouring corallites. 3. Lateral structures and columellar walls of the corals consist of parallel needles or brachycolumns.^1";
- 3174 s[3171] = "XU SHOUYONG (1993).- New material of Rugose corals from Upper Carboniferous Maping formation at Loutishan, Liuzhou, Guangxi.- Acta Palaeontologica Sinica 32, 4: 188-195.- FC&P 22-2, p. 82, ID=3513^Topic(s): new records; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L Maping (?U Carb); Geography: China, Guangxi^The present paper describes the fossil rugose corals from Loutishan, with 7 genera and 10 species including 5 new species. * New taxa: Kionophyllum pedulum sp.nov,

- Paracarruthersella crassiendotherca sp.nov., Ivanovia loutishanensis sp.nov., Omiphyllum liuzhouense sp.nov., Omiphyllum epithecum sp.nov.¹";
- 3175 s[3172] = "ILYINA T.G. (1997).- Distribution, taxonomy and morphology of Permian Rugosa of Southeastern Pamir (Tadzhikistan).- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 127-141.- FC&P 26-2, p. 12, ID=3679^Topic(s):distribution; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian; Geography:Tajikistan, Pamirs^Two new genera (Timorocarinoephyllum, Pseudoverbeekiella) and 10 new species are described from Lower and Upper Permian deposits of southeastern Pamir. Rugose assemblages characterizing the stages from the Bolorian (Lower Permian) to the Dorashamian (Upper Permian) are recognized. The following rugose zones are established: the Pseudoverbeekiella - Timorocarinoephyllum - Ufimia (Kochusu assemblage), the Iranophyllum-Pavastephyllum (Gana assemblage) and the Waagenophyllum (W.) - (W.) (Huayunophyllum) (Takhtabulak assemblage). The family Verbeekiellidae is placed in synonymy with the Timorphyllumidae, and the wannerophyllumidae with the Lophophyllumidae on the basis of the arrangement of trabeculae in their septa. The former pair is characterized by a fan-shaped arrangement, and the latter by a monoclinial arrangement of trabeculae.¹";
- 3176 s[3173] = "SHEN JIANWEI, KAWAMURA T., YANG WANRONG (1998).- Upper Permian coral reef and colonial rugose corals in Northwest Hunan, South China.- Facies 39, 1: 35-65.- FC&P 27-2, p. 52, ID=3946^Topic(s):coral reefs; coral reef; Systematics:Cnidaria; Rugosa; Stratigraphy:Permian U; Geography:China, Hunan^The roles of Permian colonial corals in forming organic reefs have not been adequately assessed, although they are common fossils in the Permian strata. It is now known that colonial corals were important contributors to reef framework during the middle and -late Permian such as those in South China, northeast Japan, Oman and Thailand. A coral reef occurs in Kanjia-ping, Cili County, Hunan, South China. It is formed by erect and unscathed colonies of Waagenophyllum growing on top of one another in situ to form a baffle and framework. Palaeontological data of the Cili coral reef indicates a middle to late Changhsing age (Late Permian), corresponding to the Palaeofusulina zone. The coral reef exposure extends along the inner platform margin striking in E-S direction for nearly 4 km laterally and generally 35 to 57 m thick. The Cili coral reef exhibits a lateral differentiation into three main reef facies; reef core facies, fore-reef facies, and marginal slope facies. The major reef-core facies is well exposed in Shenxian-wan and Guanyin-an sections where it rests on the marginal slope facies. Colonial corals are dispersed and preserved in non-living position westward. Sponges become major stabilizing organisms in the eastern part of Changhsing limestone outcrop in Kanjia-ping, but no real sponge reefs were formed. Coral reefs at Cili County in Hunan are different distinctly from calcisponge reefs in South China in their palaeogeography, lithofacies development, organic constituents, palaeoecology and diagenesis. The Cili coral reef also shows differences in age, depositional facies association, reef organisms and diagenesis from coral reefs in South Kitakami of Japan, Horat Plateau of Thailand, and Saih Hatat of Oman. Although some sponge reefs and mounds can reach up to the unconformable Permian/Triassic boundary, coral reef at Kanjia-ping, Cili County, is the latest Permian reef known. This reef appears to have been formed in a palaeoenvironment that is different from that of the sponge reefs and provides an example of new and unique Permian reef type in South China, and could help us to: 1) understand the significance of colonial corals in Permian carbonate buildups; 2) evaluate the importance of coral community evolution prior to the collapse of reef ecosystems at the Permian/Triassic boundary; 3) better understand the effects of the biotic extinction events in Palaeotethys realm; 4) look for environmental factors that may have controlled reefs through time and

space, and 5) provide valuable data for the study of Permian palaeoclimate and global evolutionary changes of Permian reefs and reef community.¹¹;

- 3177 s[3174] = "EZAKI Y. (1994).- Patterns and palaeoenvironmental implications of end-Permian extinction of Rugosa in South China.- Palaeogeography, Palaeoclimatology, Palaeoecology 107: 165-177.- FC&P 23-1.1, p. 59, ID=4126^Topic(s): extinctions P/T; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: China S^Late Permian rugose corals are undoubtedly the last phylogenetic representatives of the Rugosa. These corals are widely, though sporadically, distributed, notably in South China. The Late Permian corals of South China decrease markedly in diversity and are represented by surviving genera from the Maokouan, showing common patterns of disappearance, morphologically and phylogenetically. Colonial wentzelellinae mostly disappeared by the end of the Maokouan, followed by solitary wentzelellinae and later waagenophyllinae having simple morphologies. Non-dissepimented solitary corals and fasciculate waagenophyllinae, though morphologically simple, are common during the Late Permian, ranging up to the latest Permian. Permian Rugosa apparently show two terminal patterns, suggesting environmental differences. One pattern is terminated with a progressive reduction, leaving only non-dissepimented solitary corals as survivors, and the other pattern is distinguished by the disappearance of the platform-dwelling colonial corals at the end of Permian. The general trend, characterized by later disappearance of the simpler corals, reflects progressively adverse changes in the marine environment. The persistence and disappearance of a latest Permian waagenophyllum fauna suggests that the regional continuation of favorable environments followed by the onset abrupt and severe, though temporary, environmental changes for coral growth. The causes of rugosan extinction are not necessarily attributed to factors characteristic of the latest Permian time, and the extinction was individually stepwise, each different disappearance event correlating with, and possibly caused by variable factors, such as sea-level fluctuations and volcanic activity. Multiple interactions of individual factors on a local and global scale affected each faunal component, resulting in selection of corals that culminates in the regional, and finally global, disappearance of Rugosa.¹¹";
- 3178 s[3175] = "WANG XIANGDONG (1993).- On internal Growth lines in Rugose Corals - with an example of Kepingophyllum aksuense Wu et Zhou from early Permian in Xinjiang.- Acta Palaeontologica Sinica 32, 3: 352-369.- FC&P 23-1.1, p. 65, ID=4141^Topic(s): growth bands; Rugosa, growth lines; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Xinjiang^[For extensive and corrected summary see Acta Palaeontologica Sinica 32, 4]^11";
- 3179 s[3176] = "LIN BAoyu, RODRIGUEZ S. (1994).- Permian rugose corals from South Gansu, Northwest China.- Geobios 27, 3: 293-302. [in English, with French summary].- FC&P 23-2.1, p. 36, ID=4231^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: China, Gansu^Lower Permian (Guadalupian) outcrops in Luqu and Xiahe Counties and adjacent regions yield abundant fossils of rugose corals and other benthic organisms and have been selected as the standard exposures for marine Permian in west Qinling. Collected fossils in these areas are systematically described. Nine species and subspecies of massive and solitary rugose corals of Guadalupian age belonging to 9 genera and subgenera are described. Among them, one genus and 5 species and subspecies are new: Lophocarinophyllum triangulariseptum sp.nov., Carinowaagenophyllum xiaheense gen. et sp.nov., Parawentzelella (Parawentzelella) gansuense sp.nov., Ipciphyllum bijishanense rariseptum subsp.nov., and Iranophyllum (Laophyllum) gansuense sp.nov. This assemblage is characteristic of warm shallow water. The presence of the genera Parawentzelella (Parawentzelella), Ipciphyllum,

- wentzelelloides, Londaleiastraea and Iranophyllum indicates that this rugose coral assemblage belongs to the Tethyan zoogeographical Province (Fedorowski 1981).^1";
- 3180 s[3177] = "XU S.Y., GAN Y. (1992).- The zoogeographical province of the Permian rugose corals of China.- Earth Science - Journal of China University of Geosciences 17, 2: 131-139. [in Chinese, with English abstract].- FC&P 23-2.1, p. 48, ID=4380^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: China^^1";
- 3181 s[3178] = "ZHAO J.M., ZHU X.S. (1991).- Early Permian Maoku Formation rugose corals from Xintang, Yichun, Jiangxi.- Acta Palaeontologica Sinica 30, 1: 90-99.- FC&P 23-2.1, p. 48, ID=4383^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Jiangxi^^1";
- 3182 s[3179] = "KROPACHEVA G.S. (1978).- Pozdnepermskiye tetrakoralla Yuzhnogo Primorya. [Upper Permian tetracorals of southern Primorye; in Russian].- Verkhniy paleozoy Severo-Vostochnoy Azyi: 44-50, pls 4-6; Vladivostok.- FC&P 9-1, p. 40, ID=5796^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Russia, Primorye^[waagenophyllum, wentzelella, wentzelelloides]^1";
- 3183 s[3180] = "WANG Z., LIU S. (1982).- Early Lower Permian rugose corals from the Saga, Zhongba, and Namco areas of Xizang. [in Chinese, with English abstract].- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 7: 59-85.- FC&P 12-2, p. 35, ID=6219^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Tibet^^1";
- 3184 s[3181] = "GUO W., LIN Y.-D., LIU G.-H. (2003).- Early Permian Rugose coral assemblage and its geological significances in Xiwuqi of Inner Mongolia. [in Chinese, with English abstract].- Journal of Jilin University (Earth Science Edition) 33, 4: 399-405.- FC&P 33-1, p. 54, ID=7209^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Nei Mongol^Based on biostratigraphical discussion, the paper gives a detailed description to the rugose fauna of the early-Permian, including 7 new species. Two coral assemblages are distinguished: Lytvolasma-Cyathocarina and Lytvolasma-Caninophyllum-Pseudopolythecalis. The first assemblage is mainly made up of minitype, monocase. Septa and their ectecines are all thickened; the second assemblages exhibits mixed fauna including colony and monocase corals. The paper also puts forward the overlapped type and mixed type of the mixed fauna in the area, and points out that the appearance of the mixed fauna in this area is consistent with the general decreased temperature from late Carboniferous to early Permian, and also reflects climate changes from warm to cold, then to warm again. The study also reveals that the nature of the Paleo-Asian oceanic crust had essentially changed a little before the early Permian; it was shallow sea in an arch-island environment, not an open sea. [original abstract]^1";
- 3185 s[3182] = "ZHAO JIAMING, ZHOU GUANGDI (1987).- Discovery of Lytvolasma Fauna from Western Section of Eastern Kunlun Mountains.- Acta Palaeontologica Sinica 28, 4: 486-491. VOL PP ???.- FC&P 17-1, p. 24, ID=2133^Topic(s): new records; Rugosa, Lytvolasma fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: China, Kunlun Mts^Our knowledge of the Lytvolasma fauna from Qinghai is, on the whole, quite insufficient, especially of those from the Kunlun-Qinling geosyncline province. However, new findings have been made in recent years at some localities from the western section of the Eastern Kunlun mountains in western Qinghai. Here described are seven species in six genera from this area, namely: Pleramplexus similis Schindewolf, wannerophyllum

sp., *Lytvolasma asymmetricum* Soshkina, *Lophophyllidium wichmanni* (Gerth), *L. nucleum* sp.nov., *Timorphyllum variabilis* Gerth and *Stereostylus* sp. In palaeoecological conditions, this coral fauna, which is characterized by all simple forms with no dissepiments, belongs to the cold-water type. Besides, the *Lytvolasma* fauna-bearing beds are regarded as belonging to late Early Permian, and may be compared with the Langcuo Formation in the Saga, Zhongba, Namfo Areas of Xizang and the Basleo beds in Timor. [fragment of original summary]^1";

- 3186 s[3183] = "WU WANGSHI, ZHAO JIAMING (1983).- Polythecalids (Rugose corals) from the Chihsia Formation in Najing, Jiangu.- *Acta Palaeontologica Sinica* 22, 3: 255-261.- FC&P 13-1, p. 37, ID=0455^Topic(s): ; Rugosa, Polythecaliidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: China, Jiangu^Recent studies on specimens of Polythecalids from the Chihsia Formation in Nanjing of Jiangu lead to the conclusion that many forms of the Polythecalids show different skeletal elements, especially where the external wall is concerned.^1";
- 3187 s[3184] = "KACHANOV E.I. (1984).- Permskiy korall (waagenophyllidae) iz Koryakskogo Nagor'ya.- *Paleontologicheskii Zhurnal* 1984, . 93-95.- FC&P 14-1, p. 49, ID=0995^Topic(s): ; Rugosa, Waagenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Russia, Far East^^1";
- 3188 s[3185] = "PYZHYANOV I.V. (1975).- Novye vidy vaagenofillid severnogo Pamira. [new waagenophyllid species of N Pamirs; in Russian].- In: M.R. Dzhaliilov (ed.): *Voprosy paleontologii Tajikistana*: 40-52.- FC&P 7-2, p. 23, ID=5650^Topic(s): new taxa; Rugosa, Waagenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Pamirs N^^1";
- 3189 s[3186] = "EZAKI Y. (2000).- Palaeoecological and phylogenetic implications of a new scleractiniamorph genus from Permian sponge reefs, South China.- *Palaeontology* 43, 2: 199-217.- FC&P 29-1, p. 48, ID=1530^Topic(s): new taxa; Scleractiniamorpha; Systematics: Cnidaria; Scleractinia; Stratigraphy: Permian; Geography: China S^Scleractinian corals are the most important constituents of modern coralgal reefs. For many years, it as thought that they first appeared in the Middle Triassic and subsequently underwent explosive radiation. However, abundant scleractinian-like corals within ancestral morphological traits have recently been recovered from the Middle Permian sponge reefs in China, which not only confirms a role in Permian reef ecology but also suggests a possible Palaeozoic origin for the group. Two species of a new Permian scleractiniamorph genus from China are described herein as *Houchangocyathus wangi* gen. et sp.nov. and *Houchangocyathus yaoli* gen. et sp.nov. Putative Palaeozoic Scleractinia may have evolved over a substantial time interval and diverged into stem lineages by the end of the Permian. These forms evolved within both the rigid framework of their basic body plan and the morphological constraints characteristic of each lineage. The Middle Permian development of calcisponges reefs was closely related to habitat expansion, which would have provided an ideal dwelling for scleractinian-like corals and enhanced their chances of fossilization. Such scleractiniamorphs disappeared at the end-Permian extinction, but may have survived as progenitors of Triassic Scleractinia.^1";
- 3190 s[3187] = "RIGBY J.K., FAN JIASONG, ZHANG WEI (1988).- The sphinctozoan sponge Intraporeocoelia from the Middle and Late Permian of China; re-examination of its filling structures.- *Journal of Paleontology* 62, 5: 747-753.- FC&P 18-1, p. 50, ID=2294^Topic(s): structures; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Permian M U; Geography: China^^1";
- 3191 s[3188] = "RIGBY J.K., FAN JIASONG, ZHANG WEI (1989).- Sphinctozoan Sponges from the Permian Reefs of South China.- *Journal of Paleontology*

- 63, 4: 404-439.- **FC#038**;P 18-2
- , p. 47, ID=2508^
- Topic(s)**
- :
-
- ; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa;
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- Stratigraphy: Permian; Geography: China S^^1";
- 3192 s [3189] = "RIGBY J.K., FAN JIASONG, ZHANG WEI, WANG SHENGHAI, ZHANG XIAOLIN, (1994).- Sphinctozoa and Inozoa sponges from Permian reefs of South China.- Brigham Young University, Geology Studies 40: 43-109.- **FC#038**;P 23-2.1
- , p. 57, ID=4411^
- Topic(s)**
- : ; Porifera, Sphinctozoa, Inozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Permian; Geography: China S^^1";
- 3193 s [3190] = "ZHAO JIAMING, CHENG ZHENGXIU (1988).- A Tabulate Coral from Lower Permian Toeling Formation at Douling of Changning County, Hunan, China.- Acta Palaeontologica Sinica 27, 5: 550-552.- **FC#038**;P 18-1
- , p. 44, ID=2280^
- Topic(s)**
- : ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian L; Geography: China, Hunan^^1";
- 3194 s [3191] = "LELESHUS V.L. (1993).- Liauria und Gundaria, zwei neue Korallen-Gattungen aus dem Perm des Darwaz-Gebirges in Tadshikistan.- Senckenbergiana lethaea 73, 1: 31-35.- **FC#038**;P 22-2
- , p. 80, ID=3506^
- Topic(s)**
- : ; Tabulata, Liauria; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: Tajikistan, Darwaz Mts^Two new coral genera are described from lower Permian strata of the Darwaz Mountains, Tadzhikistan. The skeleton of the small rugose coral Liauria multiplex n.g. et n.sp. consists almost entirely of a pleonophoran (bizonal) basal apparatus. The species occurs in association with an aulopoid tabulate coral Gundarina nana n.g. et n.sp. The unusual skeletal morphology of the two new species provides the basis for description of the two new genera, for which they are the type species.^1";
- 3195 s [3192] = "LELESHUS V.L. (1997).- Permian tabulates from Afghanistan and the Pamirs.- Coral Research Bulletin 05: 191-195.- **FC#038**;P 27-1
- , p. 83, ID=3825^
- Topic(s)**
- : ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: Tajikistan, Pamirs^Three species of Permian Tabulates from Afghanistan are described: Protomichelina sinensis Lin, P. guizhouensis Lin, Multithecopora dendroidea (Yoh). All of them are widespread in Permian of the Pamirs and South China. The intraspecific variability of Protomichelina sinensis Lin is studied.^1";
- 3196 s [3193] = "LELESHUS V.L. (1994).- Minatolites gen. nov. (Tabulata) iz nizhnej Permi Darvaza (Tadzhikistan).- Paleontologicheskii Zhurnal 1994, 4: 127-130.- **FC#038**;P 24-1
- , p. 66, ID=4484^
- Topic(s)**
- : ; Tabulata, Minatolites; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: Tajikistan, Darwaz Mts^The new genus Minatolites, named in honour of Prof. Masao Minato, with the type species M. mutatus sp.nov. is described. It is assigned to the family Pseudofavositidae Sokolov 1950.^1";
- 3197 s [3194] = "LIN BAO-YU (1977).- A preliminary study on the stratigraphical distribution and zoogeographical provinces of the Permian tabulate corals of China. [in Chinese, with English summary].- Acta Geologica Sinica 1977, 2: 174-189.- **FC#038**;P 7-2
- , p. 19, ID=5624^
- Topic(s)**
- : ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: China^The present article deals with the following contents: (1) For the Lower Permian Tabulata two distinct zoogeographical provinces in China - the South China and North China provinces are recognized. In the South China province, the tabulate coral fauna comprises Tetraporinus, Thamnopora, Sinopora, Protomichelina Michelina, Cystomichelina and abundant Hayasakaia. This tabulate coral fauna marks an independent zoogeographical province. In the North China province, Tabulata are few, lacking the typical South China genera Hayasakaia and Cystomichelina. (2) In the Lower Permian two major tabulate zones and three tabulate subzones are established in descending order as follows: Maokou Limestone 2. Zone of Protomichelina multitabulata Yabe et Hayasaka. Chihsia Limestone 1. Zone of Hayasakaia (3) Subzone of

- Protomichelinia microstoma (Yabe et Hayasaka)-Protomichelinia siyangensis (Reed) (2) Subzone of Hayasakaia elegantula (Yabe et Hayasaka)-Tetraporinus nankingensis (Yoh) (1) Subzone of Hayasakaia syringoporoides (Yoh).^1";
- 3198 s[3195] = "IVANOVSKIY A.B., KROPACHEVA G.S. (1980).- Nakhodka Pseudofavosites (Tabulata) v Permi Dalnego Vostoka. [Pseudofavosites (Tabulata) in the Permian of the Far East; in Russian].- Dokl. Akad. Nauk SSSR 252, 2: 467-468.- FC&P 12-1, p. 40, ID=6166^Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: Russia, Far East^From Upper Permian beds, the Tchandalazhskiy horizon, in the Far East near Nakhodka the new species Pseudofavosites kotljarae is described.^1";
- 3199 s[3196] = "HAN J.X., GUO S.Z. (1979).- Discovery of the Nipponitella fauna In Sonid Right Banner of Inner Mongolia.- Acta Palaeontologica Sinica 18, 1: 83-88.- FC&P 9-2, p. 40, ID=0312^Topic(s): ; forams, Nipponitella; Systematics: Foraminifera; Stratigraphy: Permian L; Geography: China, Nei Mongol^^1";
- 3200 s[3197] = "DENG ZHANQIU (1981).- Upper Permian sponges from Laibin of Guangxi.- Acta Palaeontologica Sinica 20, 5: 418-427.- FC&P 11-2, p. 25, ID=1823^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Permian U; Geography: China, Guangxi^^1";
- 3201 s[3198] = "RIGBY J.K., FAN JIASONG (1988).- An unusual sponge root tuft from the Middle Permian Maokou Formation, Guangxi Province, South China.- Journal of Paleontology 62, 5: 822-826.- FC&P 18-1, p. 50, ID=2296^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Permian M; Geography: China, Guangxi^^1";
- 3202 s[3199] = "DENG ZHANQIU (1990).- New materials of Permian Sponges.- Acta Palaeontologica Sinica 29, 3: 315-320.- FC&P 19-2.1, p. 39, ID=2762^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Permian; Geography: China^Two species of calcareous sponges are described in this paper. One is the type species of a new genus, Corynospongia tubuliforma gen. et sp.nov. found from the upper Lower Permian Maokou Formation, Hongqiao, Xingwen County, south Sichuan; the new genus, Corynospongia, is characterized by the body wall with two types of canals. The other is a fragment of sponge body collected from the Lower Permian strata in Laibin of Guangxi; this form belongs to the order Heteractinida and is referred to Talpaspongia clavata King 1943. ^1";
- 3203 s[3200] = "RIGBY J.K., FAN JIASONG, NAIREN H. (1995).- Upper Permian silicified sponges from central Guangxi and western Hubei, South China.- Journal of Paleontology 69, 2: 232-250.- FC&P 24-2, p. 93, ID=4599^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Permian Chang; Geography: China, Guangxi, Hubei^Well-preserved silicified sponges have been recovered from the Upper Permian Changxing Formation at Huangnitang in western Hubei province. The new species Cystauletes grossa and Cystothalamia irregulara are associated with Cystothalamia sp., Colospongia salinaria irregularis Zhang 1983, Sollasia ostiolata Steinmann 1882, Virgola? osiensis (de Gregorio 1930), a questionable inozoan species, and a form questionably referred to the genus Hikorodium? sp. These sponges were detrital fragments that accumulated at the toe of the forereef, at the margin of slope facies and basin facies, at Huangnitang. Amblysiphonella vesiculosa minima Zhang 1983, is represented in the collections from the Upper Permian Heshan Formation at the village of Guwu, near Heshan City in central Guangxi. Heshan beds that produced the silicified sponges are of wujiapingiang age and accumulated on a normal-marine, shallow-water carbonate platform, or in skeletal shoals within the carbonate platform, and represent a level-bottom community.^1";
- 3204 s[3201] = "RIGBY J.K., FAN JIASONG, ZHANG WEI (1989).- Inozoan

calcareous Porifera from the Permian reefs in South China.- Journal of Paleontology 63, 6: 778-800.- FC&P 19-1.1, p. 63, ID=2696^Topic(s): taxonomy; Porifera Inozoa; Systematics: Porifera; Stratigraphy: Permian; Geography: China S^Inozoans are described from patch reefs on the carbonate platform of eastern Sichuan, from the uppermost Permian Laolongdong reefs in the Changxing Formation (Kazanian-Tatarian) at Beipei, northwest of Chongqing, and from the Middle to Upper Permian reefs from the Maokou (Kungurian), Wujiaping (Ufimian), and Changxing Formation at Xiangbo, Longlin County, in northwestern Guangxi. Classification of inozoans, particularly late Paleozoic ones, is still in a state of flux, but genera recognized to date can be keyed using the general nature of the spongocoel, canals, and growth form. New genera described are Intratubospongia, Grossotubellenella, Cavusonella, and Radicanalospongia. The new species described are Stellispongia radiata, S. minor, Peronidella beipeiensis, P. regulara, P. parva, Intratubospongia typica, I. tenuiperforata, I. multisiphonata, I. minima, Grossotubellenella parallela, Cavusonella cavema, and Radicanalospongia normala. A Corynella that is not identifiable to species and a sphinctozoan-like inozoan (?) sp. A that has a fibrous-appearing internal skeleton but is poorly preserved are also described. Inozoans and other sponges are major frame-builders in the Permian reefs of South China and our fauna is one of the most diverse late Paleozoic assemblages described to date.^1";

- 3205 s[3202] = "YANG Z.-Y., LIU Z.-H. (2003).- Inozoan, Major Reef frame-building organisms in Late Permian, Hunan. [in Chinese, with English abstract].- Oil & Gas Geology 24, 1: 70-74.- FC&P 33-1, p. 104, ID=7247^Topic(s): reef sponges; Porifera Inozoa; Systematics: Porifera; Stratigraphy: Permian U; Geography: China, Hunan^The late Permian reefs are distributed in Chengxian, Guiyang and Chenxi Counties in southern Hunan province. Reefs in Bangxian and Guiyang are patch reefs developed along Chengru shallow sea. Reefs in Chenxi are bioherms, undeveloped patch reefs. The reefs in both sites occur in the late Permian Changxing Formation. A lot of samples of fossils and rocks have been collected while surveying 8 reef composite sections in southern Hunan. We find that the most important frame-building organisms are calcisponges, just as other Permian reefs in southern China. By systematically researching Inozoans, one of the important frame-building calcisponges, it is thought that the water system and fibres might be important evidence in classification. Twelve species and 8 genera of Inozoans including one new species, one comparative species and one undefined species are found, and some species are newly classified. [original abstract]^1";
- 3206 s[3203] = "WANG SHENG-HAI, FAN JIA-SONG, RIGBY J.K. (1994).- Archaeolithoporella and Tubiphytes: affinities and Paleontology in Permian reefs, South China.- Science in China, series B, 37, 6: 723-743.- FC&P 23-2.1, p. 57, ID=4413^Topic(s): systematic position; ??? Archaeolithoporella; Systematics: problematica; Stratigraphy: Permian; Geography: China S^^1";
- 3207 s[3204] = "ZHENG DINGQIAN, [TSENG T.C.] (1984).- A memory of Permian in Huayingshan, Sichuan Province.- Chinese Academy of Geological Sciences Bulletin 1984, 9: 109-117.- FC&P 15-2, p. 34, ID=0716^Topic(s): ; fossils; Systematics: ; Stratigraphy: Permian; Geography: China, Sichuan^^1";
- 3208 s[3205] = "WANG XIAOJUAN, WANG XIANGDONG, LI WENZHONG, SHEN SHUZHONG, SHI G.R. (2004).- Correlation of Gondwana Permian Strata in the Baoshan area of West Yunnan, western and southern Thailand, and southern Sydney Basin.- Journal of Stratigraphy 28, 4: 336-343.- FC&P 33-2, p. 13, ID=1108^Topic(s): stratigraphy, correlation table; stratigraphy; Systematics: ; Stratigraphy: Permian; Geography: China, Gondwana^An overview on the Permian lithological characters and faunas of three Gondwana-related

regions, namely the Baoshan area of West Yunnan, western and southern Thailand, and southern Sydney Basin, is here introduced. During Asselian and Sakmarian time, these three regions are very similar not only in lithology that is characterized by marine glacio-origin diamictites but also in faunas that are mainly composed of cold water brachiopods and small nondissepimental corals. Started from Artinskian, differences on lithology and faunal characters occur among these three regions. Warmwater faunas such as fusulinid *Pseudofusulina* and conodont *Sweetognathus*, and carbonated deposition are present in the Baoshan area during the Artinskian. A warm water fusulinid *Monodiexodina* fauna occurs in western Thailand during the Kungurian. These two regions possibly located in relatively northern area comparing to the Sydney Basin due to rifting from Gondwanaland and drifting northward closing to the Tethyan continent. And more later time, during the Roadian to Capitanian or even Wuchiapingian, particular Cimmerian mixed fauna and complete carbonate sequence dominated in the Baoshan block and western and southern Thailand. In the contrast, southern Sydney Basin continued to be characterized by siliciclastics and cold-water brachiopods, bivalves, and small nondissepimental corals during the Middle Permian.¹¹;

- 3209 s[3206] = "YANG WANRONG, LI XU (1995).- Permian reef types and controlling factors of reef formation in South China.- *Acta Palaeontologica Sinica* 34, 1: 67-75.- FC&P 25-1, p. 35, ID=3019^Topic(s): reefs, typology, ecology; reefs; Systematics: ; Stratigraphy: Permian; Geography: China S^In South China, the Permian is a period of maximal marine transgression in Late Paleozoic and the best reef-formation since Middle Devonian. There are two major Permian reef-formation cycles, the Maokouan and the Changhsingian. In the Changhsingian, reefs are better developed and common in occurrence, mainly occurring in Guizhou, Guangxi, eastern Sichuan, Hunan, western Hubei and the Lower Yangtze Region. Based on the reef-forming origin, composition and texture, abundance of reef-forming organisms and reef rock types, with reference to the classification of Dunham (1962), the Permian reef in South China are of the premagmatic origin and may be divided into 4 types: (1) Organic reefs; (2) Bioherms; (3) Lime-mud mounds; and (4) Stratigraphic reefs. The Changhsingian reefs in Cili of Hunan are the largest Permian organic reefs in China, which are entirely built of corals (*Waagenophyllum*) and preserved with original growing conditions in situ (ecological reef), with clumpy branching corals closely woven together. There are many types of Permian reefs developed in South China. Their growth, development and disappearance were controlled not only by internal biological factors, but also by external factors such as tectogenesis (especially fault-block movement), paleogeography, paleoenvironments, transgression-regression and eustatic changes. The bioherms and stratigraphic reefs formed on platforms are especially sensitive to sea-level changes. Since the reef growing rate is sometimes in accordance and sometimes in discordance with the rise of sea-level, the vertical distribution of reefs shows multicyclic and rhythmic characteristics in stratigraphic sequence.¹¹;
- 3210 s[3207] = "WU YASHENG (1991).- Organisms and communities of the Permian reef of Xiangbo, southern China - Calcisponges, hydrozoans, bryozoans, algae and microproblematica.- International Academic Publishers, Academia Sinica; Beijing; 192 pp.- FC&P 22-1, p. 45, ID=3417^Topic(s): reefs, paleontology, biocoenoses; reefs; Systematics: ; Stratigraphy: Permian; Geography: China S^^1";
- 3211 s[3208] = "LELESHUS V.L. (1993).- Organic world of Permian in Middle Asia.- *Izvestiya AN Respubliki Tajikistan, otd. nauk o zemle*, 1993, 1/2, 1: 3-9.- FC&P 23-1.1, p. 40, ID=4113^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Permian; Geography: Asia Central^^1";
- 3212 s[3209] = "HUANG B.H. (1991).- The Permian System of northern northeast China.- *Pre-Jurassic geology of Inner Mongolia, China* [K.I. Ishii et

- a1. (eds)]: 149-157; China-Japan Cooperative Research Group, Osaka, Japan.- FC&P 23-2.1, p. 45, ID=4266^Topic(s): geology; geology; Systematics: ; Stratigraphy: Permian; Geography: China, Nei Mongol^^1";
- 3213 s[3210] = "WANG SHENG-HAI, FAN JIA-SONG, RIGBY J.K. (1994).- The Permian reefs in Ziyun County, Southern Guizhou, China.- Brigham Young University, Geology Studies 40: 155-183.- FC&P 23-2.1, p. 57, ID=4410^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian; Geography: China, Guizhou^^1";
- 3214 s[3211] = "LELESHUS V.L., NIKOLENKO V.I., KASHIN A.A. (1991).- Permian deposits of the North Pamirs.- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 66, 4: 30-36.- FC&P 23-1.1, p. 40, ID=6834^Topic(s): geology; geology; Systematics: ; Stratigraphy: Permian; Geography: Pamirs^^1";
- 3215 s[3212] = "WANG XIANGDONG, SHI GUANGRONG, SUGIYAMA T. (2002).- Permian of West Yunnan, Southwest China: a biostratigraphic synthesis.- Journal of Asian Earth Sciences 20, 6: 647-656.- FC&P 32-2, p. 54, ID=7158^Topic(s): geology; geology; Systematics: ; Stratigraphy: Permian; Geography: China, Yunnan^Recent progress in the study of Permian stratigraphy in western Yunnan, southwest China, is reviewed with particular references to the Tengchong and Baoshan blocks and the Changning-Menglian Belt. Where confusion or controversy exists in stratigraphical nomenclature and/or dating, we attempt to clarify the situation based on our recent field observations and newly obtained research results. The Permian within the Changning-Menglian Belt embraces different stratigraphic successions, suggesting different tectonic settings, ranging from passive margin and active margin, to oceanic basin and seamounts. Permo-Carboniferous faunas in the carbonate sequences of the Changning-Menglian Belt are of typical Cathaysian affinity, as demonstrated by abundant fusulinaceans and compound rugose corals. The Permian stratigraphy and faunas of the Tengchong and Baoshan blocks are markedly different from those of the Changning-Menglian Belt. The Baoshan Block lacks Upper Carboniferous deposits, and its subsequent Lower Permian sequence consists predominantly of siliciclastic strata yielding cool-water faunas and possibly glaciogenic diamictites, overlain by thick basaltic lava and volcanoclastics of probably rift origin. The upper part of the Permian in the Baoshan Block is characterized by carbonates containing mixed Cathaysian and Gondwana faunas. The Tengchong Block has a similar evolutionary history to the Baoshan Block, but completely lacks volcanic rocks. [original abstract]^1";
- 3216 s[3213] = "LIN Q.-X., DENG Z.-L., WANG G.-C. (2003).- Study on Early-Middle Permian Reef and its sequence stratigraphy in Maerzheng Area, Eastern Kunlun. [in Chinese, with English abstract].- Earth Science-Journal of China University of Geosciences 28, 6: 601-605.- FC&P 33-1, p. 91, ID=7236^Topic(s): reefs, sequence stratigraphy; reefs; Systematics: ; Stratigraphy: Permian L-M; Geography: China, Kunlun Mts^The paper discusses the nature and evolution of reef based on the study of the Early-Middle Permian reef section in Maerzheng, eastern Kunlun and the sequence stratigraphy of the reef. The reef can be divided into 12 reef-building cycles, including 5 third class sequences, on the basis of rock features, biocommunities and sea level changes. Moreover, it puts forward the basic rule of reef development on the continental margin in comparison with those reefs of Early-Middle Permian in eastern Kunlun and in the Yangtze platform. [original abstract]^1";
- 3217 s[3214] = "LIU Z.-H. (2003).- Communities, palaeogeography and reefs of Middle Permian Qixia period in Hunan. [in Chinese, with English abstract].- Chinese Journal of Geology 38, 2: 190-199.- FC&P 33-1, p. 93, ID=7238^Topic(s): reefs, ecology, geography; reefs; Systematics: ; Stratigraphy: Permian M;

Geography: China, Hunan^Various fossil communities on different places indicated a shallow marine with various depositional environments developed in Hunan during the Qixia Period of Middle Permian. The Stigmara and Skolithos communities indicated the environments of seamarsh (or littoral depression) and supratidal respectively. The Pycnostroma community meant a very shallow turbulent environment, including the intertidal zone and very shallow subtidal zone. The Orthotetina community was characteristic of the nearshore subtidal environment with soft-mud substratum. The Lophophyllidium community occupied the underturbulent subtidal environment, suffered occasionally by storm turbulence; and the Wentzellophyllum community showed the clear subturbulent subtidal environment, where compound rugose corals were broken and overthrown frequently by storms. The trace-fossil Zoophycos community developed in a clear and relatively turbulent subtidal environment, which was very suitable for flourishing of benthic organisms. * In the Sangzhi-Shimen, Chenxi-Huaihua and Dongkou-Xinhua areas, the Stigmara community developed well at the beginning of Qixia Period, indicating environments of seamarsh or littoral depression. Then the Orthotetina and Zoophycos communities dominated, meaning a relatively restricted sea near the old land. In Liangyuan-Liuyang, the Skolithos and Pycnostroma communities at the beginning of Qixia Period proved a wide tidal flat zone or very shallow subtidal zone. In Shaoyang-Leiyang, the Skolithos and Pycnostroma communities were never found, the Lophophyllidium and Zoophycos communities supported an evidence of the area far away from the old land and the environments being more restricted. * Based on distributions of the various communities, five paleogeographic units could be divided in Qixia Period; the Sangzhi-Shimen littoral-shallow sea, Chenxi-Huaihua littoral-shallow sea, Dongkou-Xinhua littoral-shallow sea, Liangyuan-Liuyang open shallow sea and Shaoyang-Leiyang restricted shallow sea. The reefs of Qixia Period, composed of the sponges of Pronidella community and firstly discovered from Shuangshouting to Xiandong of Liangyuan, Central Hunan, was located on the margin of the Liangyuan-Liuyang open shallow sea. [original abstract]^1";

3218 s [3215] = "WU Y.-S., FAN J.-S., JIN Y.-G. (2003).- Emergence of the Late Permian Changhsingian reefs at the end of the Permian. [in Chinese, with English abstract].- Acta Geologica Sinica 77, 3: 289-296.- FC#038;P 33-1, p. 103, ID=7246^Topic(s):reefs; reefs; Systematics:; Stratigraphy:Permian Chang; Geography:China, Guizhou^Dolostones occur on the top of the reef core, reef front and back reef sequences of the Upper Permian. The Changhsingian reef in Ziyun County, Guizhou Province, southwestern China. Comprehensive study on them reveals that these dolostones are of the supratidal sabkha genesis: (1) all have $\delta^{18}O$ values higher than those of their precursor limestones, (2) all have Sr and Fe contents similar to those of know typical supratidal sabkha evaporative finely crystalline dolostones from a well in the Ordos Basin, Shaanxi-Gansu-Ningxia provinces, China, (3) all are composed of finely crystalline euhedral-subhedral dolomite, (4) all occur on the top of reef core, reef front and back reef, (5) algal laminated structure, bird-eyes, mudcracks and crustose limonite occur in the reef front and back reef. These features indicate that this reef was once emerged at the terminal Permian. The emergence of the Changhsingian reefs at the terminal Permian might be caused by sea-level drop. This inference is in agreement with the sedimentary environmental changes in China and North Italy. The Cadore Basin in North Italy changed from a mid-shelf environment to a meteoric phreatic diagenetic environment at the end of the Permian. During the Permian-Triassic transition, the water depth of the Lower Yangtze Basin changed from more than 1000m (below the carbonate compensation depth) to less than 1000m (near the carbonate compensation depth). The sea-level drop indicated by evidence from not only reefs but also non-reef deposits might be one aspect of the

- mechanism that caused the mass extinction of biota at the end of Permian. [original abstract]^1";
- 3219 s[3216] = "KERSHAW S., ZHANG TINGSHAN, LAN GUANGZHI (1999).- A ?microbialite carbonate crust at the Permian-Triassic boundary in South China, and its palaeoenvironmental significance.- Palaeogeography, Palaeoclimatology, Palaeoecology 146, 1-4: 1-18.- FC&P 27-2, p. 10, ID=6918^Topic(s): carbonates microbial; microbialite crusts; Systematics: ; Stratigraphy: Permian / Triassic; Geography: China, Sichuan^A 1m thick carbonate crust, layered and commonly domal, caps crinoidal limestones on reef complexes of the top Permian Changxing Formation in the Huaying Mountains, eastern Sichuan, China. The crust's stratigraphic level lies at a sharp change in facies, and is overlain by poorly fossiliferous laminated micrites and shales of the Lower Triassic Feixianguan Formation. The crust therefore appears to coincide with the end-Permian extinction event, although the dating of the strata is currently imprecise. The crust is composed mostly of digitate carbonate, locally thrombolitic, with remnant lobate fabric, and resembles microbialites, but is mostly recrystallised and a microbial origin is unconfirmed. It is enclosed in micrite with pyrite crystals, ostracode and other shell debris. The crust is absent from interreef areas. Previous interpretations of karstification and calcrete formation are not upheld, and the facies were deposited under water. Overlying sediments are low energy, with abundant ferroan calcite and pyrite, reflecting anoxia associated with rising sea level. Various interpretations of the crust are possible: (1) it was organic, and microbia grew preferentially on topographic highs of reef tops; (2) microbia were a disaster biota in the absence of grazers; (3) microbia took advantage of favourable conditions for calcification, associated with a rapidly rising environmental-CO2 content during the Late Permian; (4) the crust was an inorganic precipitate associated with CO2-rich water. Microbial crusts are rare after the Cambrian, but whether this crust is organic or not, its presence in these strata reinforces the view that oceanic-atmospheric conditions in the Permian-Triassic boundary interval were unusual. [original abstract; paper announced as "in press" in FC&P 27, 2: 10-11]^1";
- 3220 s[3217] = "DENG ZHANQIU, KONG LEI (1984).- Middle Triassic corals and sponges from Southern Guizhou and Eastern Yunnan.- Acta Palaeontologica Sinica ??, 8: 305-322.- FC&P 14-1, p. 60, ID=1068^Topic(s): ; Anthozoa, Porifera; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: Triassic M; Geography: China, Guizhou, Yunnan^The scleractinian corals and sponges were collected from the Qinyan Formation in Guiyang and the Yanglinjing Formation in Zhenfeng, S. Guizhou and from the Lanmu Formation in Shizong, E. Yunnan. Described are 18 species (of which 10 are new ones), belonging to 10 genera. The new genera are Semidistichophyllum, Neoconophyllia, Substuoeresis. All belong to Early Middle Triassic strata, corresponding to the Anisian of the Alps. Besides endemic corals, there is a close relationship of the Scleractinians with those of the Wellenkalk of German Triassic facies.^1";
- 3221 s[3218] = "WENDT J., WU XICHUN, REINHARDT J.W. (1989).- Deep-water hexactinellid sponge mounds from the Upper Triassic of northern Sichuan (China).- Palaeogeography, Palaeoclimatology, Palaeoecology 76: 17-29.- FC&P 19-1.1, p. 63, ID=2697^Topic(s): reefs; reefs; Systematics: Porifera; Hexactinellida; Stratigraphy: Triassic U; Geography: China, Sichuan^A belt of Upper Triassic (Carnian) sponge mounds was discovered in northern Sichuan in the transition zone between a shallow shelf sea in the SE (Chuan-Dian Shelf) and a deeper marine trough (Ganzi-Aba Trough) in the NW. Individual sponge mounds are up to 60 m high and 150 m wide and interfinger laterally with dark shales. Main framebuilders of the mounds are Lychniscosa and Lyssacinosa, accompanied by (much rare)

Hexactinosa, Lithistida, annelid worms, occasional crinoids and Bryozoa. The reef-dwelling fauna consists of brachiopods, ostracods, foraminifera, pelecypods, gastropods and ammonites. Typical shallow water reef builders (scleractinian corals) and calcareous algae are lacking or extremely rare (coralline sponges). This supports the interpretation of the mounds as buildups in deeper water of several tens up to one hundred meters. The sponge mounds of northern Sichuan are thus an equivalent of similar buildups of late Jurassic age in central and western Europe. They provide the first well-established record of *Lychniscosa* in the Triassic and their first reported pre-Tertiary occurrence outside of Europe.^1";

- 3222 s[3219] = "GOU ZONGHAI, YANG JIKAI (1985).- New material of Triassic Conularida from Jiangyou of Sichuan, SW China.- *Acta Palaeontologica Sinica* 24, 4: 358-360.- FC&P 15-1.2, p. 39, ID=0836^Topic(s): taxonomy; Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Triassic Carn; Geography: China, Sichuan^In this paper two new species and one indeterminate species of Conularida are described, namely, *Conularia sichuanensis* sp.nov., *C. maantangensis* sp.nov. and *Conulariopsis* sp. All of them were found from the Carnian of Late Triassic in the Maantang district, Jiangyou County, Sichuan Province. As far as known, the Carnian in this region is the highest Conularida-bearing horizon in China. This discovery is of both theoretical and practical significance in studying the fauna and stratigraphic correlation of this region. [original summary, part only]^1";
- 3223 s[3220] = "MELNIKOVA G.K. (1975).- Late Triassic Scleractinia of South Eastern Pamirs.- *Pozdnetryasovye skleraktinii yugo-vostochnogo Pamira* [Late Triassic Scleractinia of South Eastern Pamirs]: 236 pp., 38 pls.- FC&P 6-1, p. 29, ID=0098^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Pamirs^^1";
- 3224 s[3221] = "MELNIKOVA G.K. (1983).- *Novye pozdnetriasovye skleraktinii Pamira*. [new post-Triassic Scleractinians from Pamir; in Russian].- *Paleontologicheskii Zhurnal* 1983, 1: 45-53.- FC&P 13-1, p. 46, ID=0501^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Pamirs^The taxonomical significance of pennulae elements is discussed holding up Late Triassic Scleractinia as an example. The new family Cuifastraeidae is erected together with the new genera *Cuifastraea* and *Gillastraea* as well as the new species *C. granulata*, *C. incurva* and *C. delicata*.^1";
- 3225 s[3222] = "MELNIKOVA G.K., BYCHKOV Yu.M. (1986).- *Pozdnetriasovye skleraktinii chrebta Kenkeren (Koryakskoe Nagore)* [Upper Triassic Scleractinia of the Kenkeren ridge (the Korjak upland)]; in Russian, with English summary].- *Zacharov Yu. D. et Onoprienko Yu. I. (eds): Korrelyatsia Permo-Triasovykh otlozhenij vostoka SSSR*: 63-81, 15 figs., 4 pls; Vladivostok.- FC&P 16-1, p. 67, ID=1980^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Russia, Far East^The extraordinary for the North-East USSR heat-loving (Tethyan) Upper Triassic fauna (hydroids, scleractinia, brachiopods, bivalves, cephalopods, crinoids, calcareous algae) was established in the Kenkeren ridge. Some Norian scleractinia including *Thamnotropis rarus* Melnikova sp.nov. *Stuorezia libratoseptata* Melnikova sp.nov., *Beneckastraea kenkerensis* Melnikova sp.nov. are described [original summary]. Species described are: *Distichophyllia* cf. *norica*, *Retiophyllia dawsoni*, *Palaeastraea granulata*, *Kuinastraea cowichanensis*, *Astraeomorpha crassisepta*, *Thamnotropis rarus* Melnikova sp.nov., *Stuorezia libratoseptata* Melnikova sp.nov., *Rhaetiastrea? vesiculosa*, *Beneckastraea kenkerensis* Melnikova sp.nov.^1";
- 3226 s[3223] = "DENG ZHANQIU (2006).- Middle Triassic Corals from W. Guangxi and S. Guizhou.- *Acta Palaeontologica Sinica* 45, 1: 42-51.- FC&P 35, p. 73, ID=2381^Topic(s): ; Scleractinia;

- Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: China, Guangxi, Guizhou^^1";
- 3227 s[3224] = "MELNIKOVA G.K. (1996).- New Triassic Colonial Scleractinians from the Southeastern Pamirs.- Paleontologicheskii Zhurnal 1996, 2: 8-13.- FC&P 27-1, p. 27, ID=3794^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Tajikistan, Pamirs^Established is a new family Curtoseriidae to encompass Rhaetian Curtoseris gen. nov. and Jurassic-Cretaceous genus Mesomorpha Pratz, and described is a new margarophylliid Carnian-Norian coral Thamnomargarosmia prima gen. et sp.nov. as well as the earliest representative of the genus Thamnasteria Lesuavage, Rhaetian Th. rhaetica sp.nov.^1";
- 3228 s[3225] = "MELNIKOVA G.K. (1995).- The Late Norian-Rhaetian faunal assemblage of the Lokzun Group in the South-East Pamirs.- Doklady Akad. Nauk RAN 343, 3: [pp?].- FC&P 24-2, p. 74, ID=4550^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Nor - Rhaet; Geography: Tajikistan, Pamirs^The data on the distribution, the Late Norian-Rhaetian age and the stratigraphic subdivisions of the Lokzun Group in the South-East Pamirs are given. The Lokzun Group includes four Formations: Igrimyuz - with an assemblage of Late Norian (Sevatian) bivalves and cephalopods, as well as Bostanak, Jilgakochui and Gudar Formations with the diverse Rhaetian faunas. The coral assemblage assigned to the Jilgakochui Formation includes the following genera: Stylophylloopsis (1 species), Retiophyllia (2 species), Parastraeomorpha (2 species), Pamiroseris (1 species), Crassistella (2 species).^1";
- 3229 s[3226] = "MELNIKOVA G.K. (1995).- The Rhaetian faunal assemblage of the Bortepa Formation in the South-East Pamirs.- Doklady Akad. Nauk RAN 343, 4: [pp?].- FC&P 24-2, p. 74, ID=4551^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Rhaet; Geography: Tajikistan, Pamirs^The data on the distribution, the lithological composition, the Rhaetian age and the complete faunal characteristics of the Bortepa Formation in the South-East Pamirs are given. The Rhaetian coral assemblage includes the following genera: Stylophylloopsis (3 species), Pamirophyllum (1 species), Coryphyllia (2 species), Distichophyllia (1 species), Retiophyllia (1 species), Palaeastraea (1 species), Margarosmia (2 species), Astraeomorpha (4 species), Pamiroseris (3 species), Morycastraea (1 species), Crassistella (1 species), Chondrocoenia (2 species), Chevalieria (1 species), Cuifastraea (2 species), Gillastraea (1 species).^1";
- 3230 s[3227] = "MELNIKOVA G.K. (1980).- Ekologo-facyalnaya differencyacya kompleksov skleraktiniy yugo-vostochnogo Pamira v pozdnetriasovuyu epokhu. [ecological-facies distribution of scleractinian assemblages of SE Pamirs in Late Triassic; in Russian].- Korally i rify fanerozooya SSSR [B.S. Sokolov (ed.)]: 156-162.- FC&P 9-1, p. 42, ID=5818^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Pamirs^^1";
- 3231 s[3228] = "MELNIKOVA G.K. (2001).- Skleraktinii.- Atlas triasovykh bespozvonochnykh Pamira [A.Yu. Rozanov & A.A. Shevyrev (eds)]; Moskva, Nauka. [atlas of fossils] - FC&P 31-1, p. 12, ID=7094^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Pamirs^[64 species of corals are described, all are from south-east Pamir: * Ladinian: Pachysolenia, Volzeia; * Carnian: Cerioheterastraea, Conophyllia, Craspedophyllia, Lubowastraea Melnikova, 1986, Myriophyllum, Pachysolenia, Protoheterastraea, Rhopalophyllia, Thamnomargarosmia Melnikova, 1996, Tropiastrea, Tropicodendron, Volzeia * Norian: Astraeomorpha, Cerioheterastraea, Cuifia Melnikova, 1975, Lubowastraea, Margarosmia, Pachydendron, Pachysolenia,

- Protoheterastraea, Paracuifia Melnikova, 2001, Paradistichophyllum Melnikova, 1975, Retiophyllia, Stylophyllopsis, Thamnomargarosmia; * Rhaetian: Astraemorpha, Chevalieria Melnikova, 1984, Chondrocoenia, Crassistella, Cuifastraea Melnikova, 1983, Cuifia, Curtoseris Melnikova, 1996, Distichophyllia, Gillastraea Melnikova, 1983, Margarosmia, Morycastraea Melnikova, 1984, Palaeastraea, Pamirastraea Melnikova, 1975, Pamirophyllum Melnikova et Ronievich, 1990, Pamiroseris Melnikova, 1971, Paracuifia, Paradistichophyllum, Parastraeomorpha, Procyclolites, Protostylophyllum, Retiophyllia, Stylophyllopsis, Thamnasteria]^1";
- 3232 s[3229] = "XIA LINBAO, LIAO Wei-Hua (1986).- Some Scleractinian Corals of Procyclolitidae from Liaoning.- Acta Palaeontologica Sinica 25, 1: 37-48.- FC&P 15-2, p. 38, ID=0727^Topic(s): ; Scleractinia, Procyclolitidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: China, Tibet^The Scleractinian corals of Family Procyclolitidae dealt with in this paper were collected from Mailonggang, 60km NE of Lhasa, in July 1982. They occur in association with the typical Triassic bivalves Unionites grisbachi (Bittner), Cardium (Tulongocardium) sp., Trigonina (Kumatrignonia) sp., and Gervillia (Odontoperna)? sp.^1";
- 3233 s[3230] = "MELNIKOVA G.K., RONIEWICZ E. (2007).- The Middle Triassic scleractinia-like coral Furcophyllia from the Pamir Mountains.- Acta Palaeontologica Polonica 52, 2: 401-406.http:// www.a pp.pan.pl/article/item/app52-401.html.- FC&P 35, p. 84, ID=2404^Topic(s): taxonomy, morphology; Scleractiniomorpha, Furcophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic M; Geography: Tajikistan, Pamirs^Furcophyllia is an unusual coral with septa regularly splitting into branching sets called septal brooms. This pattern of septal apparatus is so alien to scleractinians, that, despite a trabecular microstructure of septa resembling that of the Scleractinia, the genus was originally ascribed to a rare group of corals informally referred to as scleractiniomorphs, previously known from the Ordovician and Permian. Genus Furcophyllia emerged together with corals of several groups, after the post-Permian crisis diversification of skeletonized anthozoans, some of them markedly differing in their skeletal features from typical Scleractinia. So far, the genus was represented by middle Carnian Furcophyllia septafindens from the Dolomites, in the Southern Alps. Here, we report Furcophyllia shaitanica sp.nov. from limestone boulders found in the volcano-clastic deposits of the upper Ladinian Shajtan suite of the South Eastern Pamirs. A new species of Furcophyllia signifies that the genus was a faunal element widely distributed in the Tethys.^1";
- 3234 s[3231] = "YANG JINGZHI (1982).- A new species of Stromatoporina from west hill of Tingri, Tibet.- Report of the Expedition of the Xihsiabama Region in Tibet, China: 300-301 [Science Press, Beijing].- FC&P 13-1, p. 49, ID=0533^Topic(s): new taxa; stroms, Stromatoporina; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Triassic U; Geography: China, Tibet^The new species S. tibetensis Yang is described from Upper Triassic beds.^1";
- 3235 s[3232] = "BOIKO E.V. (1979).- Late Triassic Hydrozoa of the southeastern Pamirs.- Donish, Dushanbe: 113 pp., 29 pls.- FC&P 9-2, p. 50, ID=0363^Topic(s): ; stroms, Chaetetida; Systematics: Porifera; Stromatoporoidea Chaetetida; Stratigraphy: Triassic U; Geography: Tajikistan, Pamirs^The new genera Actinostromellites and Aksaeporella are established. In addition species of the following genera are described: Actinostromaria, Stromatomorpha, Spongiomorpha, Pamirostroma, Aksupora, Parastromatopora, and Heterastridium. Many species of chaetetids are also described.^1";
- 3236 s[3233] = "DONG DEYUAN, WANG BAOYU (1985).- Cnidaria Fauna from the Mesozoic of South Xinjiang.- Acta Palaeontologica Sinica ??, 4: 449-452.- FC&P 15-1.2, p. 45, ID=0783^Topic(s): ;

- stroms; Systematics: Cnidaria; Stratigraphy: Triassic U; Geography: China, Xinjiang^[two species of Parastromatopora, one new, from the Upper Triassic beds of the Karokoram Range are described]^1";
- 3237 s[3234] = "DENG ZHANQIU (2005).- Middle Triassic sponges from Qingyan, Guizhou.- Acta Palaeontologica Sinica 44, 2: 283-295.- FC&P 34, p. 23, ID=1214^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Triassic M; Geography: China, Guizhou^Middle Triassic sponges from Qingyan, Guizhou.^1";
- 3238 s[3235] = "WU XICHUN (1989).- Carnian (Upper Triassic) Sponge Mounds of the Northwestern Sichuan Basin, China: Stratigraphy, Facies and Paleoecology.- Facies 21: 171-188.- FC&P 19-1.1, p. 62, ID=2693^Topic(s): reefs, sponge mounds; reefs; Systematics: Porifera; Stratigraphy: Triassic Carn; Geography: China, Sichuan^^1";
- 3239 s[3236] = "STILLER F. (1998).- Sponges from the lower Upper Anisian (Middle Triassic) of Bangtoupou near Qingyan, SW-China.- Muenster. Forsch. Geol. Palaont. 85: 251-271.- FC&P 27-2, p. 66, ID=3935^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Triassic M; Geography: China SW^From the lower Upper Anisian (Middle Triassic) of Bangtoupou in the vicinity of Qingyan, Guizhou Province, SW-China, three sponge taxa are described. Two taxa of large lyssacinosa sponges, Hexactinoderma? cf. roemeri (Rauff 1937) and Lyssacinosa gen. et sp. indet. A, lived on soft substrate. These fossil sponges are calcified, but in parts relics of their spicules and their spicular skeleton are preserved. One specimen of Hexactinoderma? cf. roemeri is an usual twinned sponge. Hartmanina? bangtoupouensis n.sp., a new sclerosponge species (Demospongia), on the other hand, was attached to (secondary) hard substrates. Its variable growth form largely depends on the size of the substrate. In spite of their rarity in the fossil associations preserved at Bangtoupou, sponges had some ecological importance as substrates for the attachment of other invertebrates. [original abstract]^1";
- 3240 s[3237] = "BOIKO E.V. (1972).- Spongiomorphae (Hydrozoa) du Trias supérieur du Pamir Sud-Est. [en russe] .- Paleontologicheskii Zhurnal 1972, 2: 20-25.- FC&P 3-2, p. 43, ID=4970^Topic(s): stroms ?; Systematics: Porifera; Stratigraphy: Triassic U; Geography: Tajikistan, Pamirs^Description de Spongiomorpha ampluramosa sp.nov., Stromatomorpha pamirica sp.nov.^1";
- 3241 s[3238] = "DRONOV V.I., MELNIKOVA G.K. (1994).- Facies zonation of the Triassic Basin in the SE Pamirs.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 275-282.- FC&P 23-1.1, p. 21, ID=4084^Topic(s): facies; geology; Systematics: ; Stratigraphy: Triassic; Geography: Tajikistan, Pamirs^Additional data on the stratigraphy and the correlation of the SE Pamirian Triassic sediments have been gathered since the publication by Dronov et al. (1982). The age of the Karatash, Sarytash (Dronov & Polubotko 1988; Dagys & Dronov 1989), Aktash, Lokzun and Buryukurmes Groups and their formations (Dronov 1982; Dronov et al. 1982; Dronov & Melnikova 1985) was specified, based on the new findings of different faunas in many zones and subzones of this region. A fourth subzone of the Axial Zone (Sarygorum Subzone) has been established in addition to three previously distinguished subzones. Additional palaeontological data were contributed by many palaeontologists: foraminifers by O.A. Korchagin; sphinctozoans, hydroids and sponges by E.V. Boiko; corals by G.K. Melnikova; brachiopods by A.S. Dagys; bivalves by E.B. Payevskaya, I. V. Polubotko, Yu. S. Repin; ammonoids by A. A. Shevyrev; conodonts by A. A. Dagys.^1";
- 3242 s[3239] = "DRONOV V.I., MELNIKOVA G.K. (1992).- Facial zonation and correlation of Triassic deposits in the South-East Pamirs.- Izvestiya AN Respubliki Tajikistan, otd. nauk o zemle, 1992, 3-4: 25-34.-

- FC&P 23-1.1, p. 41, ID=4118^Topic(s): facies, stratigraphy; geology; Systematics: ; Stratigraphy: Triassic; Geography: Tajikistan, Pamirs^^1";
- 3243 s [3240] = "MELNIKOVA G.K. (1994).- The Triassic organic world of the Pamirs and Darvaz.- Izvestiya AN Respubliki Tajikistan, otd. nauk o Zemle 1, 6: 3-11. [in Russian].- FC&P 24-1, p. 49, ID=4457^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Triassic; Geography: Tajikistan, Pamirs, Darwaz^^1";
- 3244 s [3241] = "MELNIKOVA G.K. (1999).- The Late Carnian - Middle Norian (Upper Triassic) faunal assemblage from Shaimak formation of the South-East Pamirs.- Doklady Rossiyskoy Akademii Nauk 364, 4: 520-522.- FC&P 31-1, p. 12, ID=7091^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Triassic U; Geography: Pamirs SE^^1";
- 3245 s [3242] = "MELNIKOVA G.K. (1999).- The Late Ladinian - Early Carnian faunal assemblage from the peripheral zone of the South-East Pamirs.- Doklady Rossiyskoy Akademii Nauk 369, 1: 86-88.- FC&P 31-1, p. 12, ID=7092^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Triassic M / U; Geography: Pamirs SE^^1";
- 3246 s [3243] = "MELNIKOVA G.K. (2001).- The Rhaetian faunal assemblage from Chichkautek formation of the South-East Pamirs.- Doklady Rossiyskoy Akademii Nauk 381, 9: 1012-1014.- FC&P 31-1, p. 12, ID=7093^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Triassic Rhaet; Geography: Pamirs SE^^1";
- 3247 s [3244] = "KRASNOV Ye.V. (1997).- Early Mesozoic reef-like coral communities development in the Russian Far East.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 061-064.- FC&P 26-2, p. 23, ID=3702^Topic(s): reefs; reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Lad -, Jurassic Hett; Geography: Russia, Far East^The distribution and some paleoecological peculiarities of Early Mesozoic colonial and simple scleractinian coral development in the near-shore marginal volcanic belts and archipelago basins are observed. Changes of coral communities from the Middle Triassic (Ladinian) to the Early Jurassic (Hettangian) are discussed together with analysis of their reflections to tectonic events, sedimentation differences and temperature fluctuations on the basis of several previous studies in Primorye regions of the Russian Far East. The Coral community is compared with that of conodonts, megalodonts, sponges and some planktonic groups. Paleotemperatures calculated by Ca/Mg ratios are also given.^1";
- 3248 s [3245] = "MELNIKOVA G.K. (1972).- A revision of some Late Triassic and Early Jurassic Stylophyllidae. [in Russian] .- Paleontologicheskii Zhurnal 1972, 2: 53-63.- FC&P 2-1, p. 17, ID=4726^Topic(s): revision; scleractinia, Stylophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U Jurassic L; Geography: Asia Central^A revision of some Late Triassic and Early Jurassic representative forms of the family Stylophyllidae is based on large collections from Southeastern Pamir, Northwestern Afghanistan and Central Iran and on published literature. The independence of the genus Stylophyllopsis Frech 1890 is proved as a consequence of a study of skeletal morphology, septal microstructure and forms of habitus. The diagnosis of the ancient genera Stylophyllum and Stylophyllopsis is rendered more precise and a new genus, Phacelostylophyllum is proposed. Six species are described: Stylophyllopsis polyactis (Frech), S. bortepensis sp.nov., Stylophyllum pamiricum sp.nov., S. iranicum sp.nov., Phacelostylophyllum zitteli (Frech), Ph. karaulclyndalaensis sp.nov.^1";
- 3249 s [3246] = "DENG ZHANQIU, ZHANG YANSHENG (1989).- Supplemental Notes on Mesozoic Scleractinia from Mts. Hengduan, Southwest China.- Bulletin Nanjing Inst. Geol. Palaeont., Acad. Sinica 1989, 9: 285-307. [in Chinese, with English summary].- FC&P 18-2, p. 39,

ID=2489^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: China SW^Here are the supplemental notes on the Mesozoic corals from the Mts. Hengduan in Southwest China. Altogether, twenty-five species and fifteen genera of scleractinian corals (including eleven new species and one new genus) as listed below: Pinacophyllum cf. parallelum Frech, Sichuanophyllia sichuanensis (gen. et sp.nov.), S. sp., Pachysolenia ? sp., Volzeia aff. badiotica Cuif, Astraeomorpha minima sp.nov., Distichophyllia decora sp.nov., D. cf. norica Cuif, Paradistichophyllum delicatum sp.nov., P. cf. dichotomum Melnikova, Craspedophyllia spinifera sp.nov., Procyclolites elongatus sp.nov., Margarophyllia persticta sp.nov., M. aff. capitata (Muenster), M. sp., Omphalophyllia cf. gracilia (Muenster), Thamnotropis megaxis sp.nov., Beneckastraea medialis sp.nov., B. ruida sp.nov., B. multigranulata sp.nov., Montlivaltia aff. degenensis Deng & Zhang, M. sp. 1, M. sp. 2, Plesiocunolites aff. ellipticus subcircularis (Oppenheim), P. sp. Except the two forms of Plesiocunolites collected from the possible Upper Cretaceous in the Markam of eastern Xizang, all the above-stated corals were found from the Upper Triassic deposits in western Sichuan and northern Yunnan. In general respects they are similar to those of the Alps and Turkey. [part of extensive summary]^1";

3250 s[3247] = "HE XINYI (1987).- Jurassic and Early Cretaceous scleractinian corals from Nyalam area, Xizang (Tibet).- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 18: 122-133.- FC&P 23-1.1, p. 75, ID=4163^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic - Cretaceous L; Geography: China, Tibet^From the Upper Triassic to Lower Cretaceous of Tibet corals of the genera Actinastrea, Caryophyllia, Discocyathus, Dungulia, Epistreptophyllum, Isastrea, Microsmilia, Montlivaltia, Prothetmos, Thamnasteria and Trochocyathus are described and particularly depicted. Four species, Isastrea deriyangensis (? Upper Triassic), Dungulia minor (Tithonian), Discocyathus petaliformis and D. ellipticus (both Lower Cretaceous) are described as new. The fauna is compared to those of Spiti and Kachchh (India) and Portugal.^1";

3251 s[3248] = "LIAO Wei-Hua, XIA JINBAO (1993).- Mesozoic and Early Cenozoic scleractinian corals from Tibet.- Courier Forschungsinstitut Senckenberg 164: 205-210. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 17, ID=3455^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic Paleogene; Geography: China, Tibet^The Mesozoic and Early Cenozoic marine strata of Tibet are very rich in scleractinian corals. The fossil Scleractinia on which the present study is based include 108 genera comprising 221 species, some of which are new. The occurrences indicate strong palaeogeographical relations between the Tibetan and the other Tethyan scleractinian corals. The Triassic strata are widespread in Tibet, especially in the Hengduanshan Mts. and in the Himalayas. The marine Jurassic strata of Tibet have been well known, except for those east of the Lancang Jiang River area. The Early Cretaceous corals have been found in the area south of the Nagqu-Ngari highway and the area west of the Qinghai-Tibet highway. The marine Upper Cretaceous beds are only distributed in the Himalayan Mts. of S Tibet. The Early Tertiary (Palaeocene and Eocene) marine strata are also restricted to the Himalayas of S Tibet. The highest marine strata in Tibet are known to be of Middle Eocene age. It seems that in Tibet the history of marine sedimentation came to an end during post-Eocene time. After the Middle Eocene, the sea withdrew completely from the Himalayas, although the tremendous uplift forming the Tibetan Plateau did not occur until the Pliocene epoch. Based on the scleractinian corals occurring in the stratigraphic sequence, 11 scleractinian assemblages of Mesozoic and Early Cenozoic from Tibet are recognized.^1";

3252 s[3249] = "YANG T.-T., WANG C.-Y. (????).- Stromatoporoids and

Hydrozoans from the Mt. Everest Area.- Nanking Inst. Geol. Paleont., Chinese Acad. Science.- FC&P 5-2, p. 13, ID=5459^Topic(s): taxonomy; stroms, Hydrozoa; Systematics: Porifera Cnidaria; Stromatoporoidea Hydrozoa; Stratigraphy: Triassic - Paleogene; Geography: China, Tibet, Himalaya^Four species of stromatoporoids belonging to three genera are recognized: Actinostromina cf. grossa (Germovsek), Actinostromaria taenia Yang and Wang, sp.nov., A. tibetensis Yang and Wang sp.nov., Stromatoporina? stromatoporiforma Yang and Wang sp.nov. Five species of hydrozoans belonging to three genera are also present: Ptychochaetes cf. globosus Koechlin, Spongiomorpha robusta Yang and Wang sp.nov., Spongiomorpha (Heptastylopsis) cf. ramosa Frech, Bauneia irregularia Yang and Wu, sp.nov., B. gangbaensis Yang and Wu sp.nov. Among these the geological age of S. cf ramosa collected from Chue-Tsung-Pei Shan, Ting-Jih Hsein is Late Triassic, B. gangbaensis from Ho Shan, Gang-Ba Hsien, Eocene; the remainder of the fauna all from Hsi-Mu-TiHsi Shan, Ting Jih Hsien - although mostly new species are considered by us to be Late Jurassic because A. grossa was first described from the Upper Jurassic of Yugoslavia and P. globosus from the Upper Jurassic of Germany. Other areas of Late Jurassic strata along the Mediterranean coast, in the Middle and Far East also have stromatoporoids similar to those of the Mt Everest Area. Occurrences of the genus Spongiomorpha from several localities show its geological range to be Late Triassic to Late Jurassic. S. ramosa reported from the Alps and Alaska occurs in Late Noric rocks and the specimens reported here should come from Late Triassic or late Noric rocks. The genus Bauneia occurs commonly in Mesozoic strata. However, B. gangbaensis from Ho Shan occurs with the Eocene forams Orbitolites, Nummulites and Fasciolites indicating an age range of Mesozoic to Eocene. The geographic distribution of these fossils indicates that during Jurassic and Triassic time the Mt Everest Sea was closely related to basins in the areas mentioned above. Depositional environments and conditions support the presence of a Tethys Sea. [abstract translated and abridged by C. Fong]^1";

3253 s[3250] = "LIAO WEI-HUA, XIA JINBAO (1994).- Mesozoic and Cenozoic Scleractinian corals from Xizang.- Palaeontologia Sinica 184, NS B31: 252 pp., 68 pls. [in Chinese, English abstract of 24 pages].- FC&P 25-1, p. 41, ID=3032^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic Cenozoic; Geography: China, Tibet^[From the Qinghai-Tibetan plateau 221 species in 108 genera are described and illustrated. The most species are from the Upper Jurassic to Lower Cretaceous. But several species are also reported from the Triassic respectively Upper Cretaceous to Eocene. In the English abstract, all new species and species created since 1982 by Liao Xia and Yoh are described in detail. The following new species are described: Latusastraea xigazeensis (Albian), Stylosmilia tingriensis (Upper Jurassic), Styliina shamoloensis (Upper Jurassic) and Montlivaltia bifida. (Upper Jurassic).]^1";

3254 s[3251] = "BOIKO E.V. (1975).- Jurassic Chaetetids of Pamir. [in Russian].- Voprosy Paleontologii Tajik SSR: 89-107.- FC&P 6-2, p. 18, ID=5545^Topic(s): Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Jurassic; Geography: Tajikistan, Pamirs^[species of the genera Pseudoseptifer, Bauneia, Blastochaetetes, and Ptychochaetetes are described]^1";

3255 s[3252] = "MELNIKOVA G.K. (1990).- New finds of Early Jurassic scleractinian in the South-East Pamirs.- New species of Phanerozoic fauna and flora in Tajikistan: 71-83; Donish, Dushanbe.- FC&P 23-1.1, p. 40, ID=4114^Topic(s): new records; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic L; Geography: Tajikistan, Pamirs^^1";

3256 s[3253] = "LIAO Wei-Hua, LI ZHANGRONG (1980).- Jurassic Scleractinia from Amdo, Northern Xizang. [in Chinese, with English summary].- Acta Palaeontologica Sinica 19, 3: 228-238.- FC&P 10-1, p. 21,

- ID=5888^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: China, Tibet^^1";
- 3257 s [3254] = "DONG DEYUAN, WANG MINGZHOU (1983).- New materials of the Upper Jurassic stromatoporoids in the Ando Country of North Xizang.- Acta Palaeontologica Sinica ??, 4: 413-427.- FC&P 13-1, p. 48, ID=0516^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic U; Geography: China, Tibet^The following new genera are established: Dongqiaostroma, Dongqiaostromaria. Atelostromia, Axiotubullina, Paratubuliella.^1";
- 3258 s [3255] = "BOIKO E.V. (1984).- Ranneyurskie stromatoporaty yugo-vostochnogo Pamira [Early Jurassic stromatoporata of SE Pamirs].- Akademiya Nauk SSSR, Sibirskoye Otdeleniye, Institut Geologii i Geofiziki 597 [Sokolov B. S. (ed.): Problematiki Paleozoya i Mesozoya]: 58-66.- FC&P 14-2, p. 43, ID=0929^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic L; Geography: Tajikistan, Pamirs^Three new genera are proposed: Sedekiastroma (and its new species S. bassica, S. qurumdae). Convexistroma (and its new species C. irregularis), Gurumdistroma (and its new species G. astrorizoides), and the new species Cyclicopsis antingua.^1";
- 3259 s [3256] = "BOIKO E.V. (1984).- Mikrostruktura kelloveyskikh stromatoporat Pamira [microstructure of Callovian stromatoporata of Pamir].- Akademiya Nauk SSSR, Sibirskoye Otdeleniye, Institut Geologii i Geofiziki 597 [Sokolov B. S. (ed.): Problematiki Paleozoya i Mesozoya]: 67-72.- FC&P 14-2, p. 43, ID=0930^Topic(s): microstructures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic Call; Geography: Tajikistan, Pamirs^^1";
- 3260 s [3257] = "DONG DEYUAN (1981).- Upper Jurassic stromatoporoids from northern Xizang.- Paleontology of Xizang, book III; The Scientific Expedition to the Qinghai-Xizang plateau: 115-126, 3 pls.- FC&P 11-2, p. 35, ID=1850^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic U; Geography: China, Tibet^Fourteen species and subspecies belonging to 6 different genera are described. The new genus is Xizangstromatopora with type species X. densata Dong. The new species and subspecies include: Milleporella xizangensis, Xizangstromatopora densata, X. nagguensis, Parastromatopora amdoensis, Cladocoropsis hybrdina, C. mirabilis abeona.^1";
- 3261 s [3258] = "BOIKO E.V. (1992).- Jurskiye Promillepora kokujbelli centralnogo Pamira [Jurassic Promillepora kokujbelli from central Pamirs].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatoporoids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3371^Topic(s): ; stroms ?, Phromillepora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic; Geography: Tajikistan, Pamirs^^1";
- 3262 s [3259] = "BOIKO E.V. (1989).- Callovian parastromatoporoids of Central and South-East Pamirs.- New species of Phanerozoic fauna and flora in Tajikistan: 48-61; Donish, Dushanbe.- FC&P 23-1.1, p. 39, ID=4100^Topic(s): parastromatoporoids; stroms ?; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic Call; Geography: Tajikistan, Pamirs^^1";
- 3263 s [3260] = "BOIKO E.V. (1980).- Kelloveyskiye sferaktinidy (Porifera) Pamira [Callovian Sphaeractiniidae (Porifera) of the Pamirs].- Paleontologicheskii Zhurnal 1979, 4: 13-18.- FC&P 11-2, p. 35, ID=1847^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Jurassic Call; Geography: Pamirs^The family Sphaeractiniidae is assigned to the calcareous sponges on the basis of the presence of spherulites and spicules in the

- calcareous skeletons of Callovian members of the genus Sphaeractinia. Descriptions are given of three new species: *S. clathrata*, *S. delicata*, *S. magna*.¹";
- 3264 s[3261] = "MELNIKOVA G.K. (1997).- Organic world in Jurassic of the Pamirs.- In G.Kh. Salibayev (ed.): Paleontology and Stratigraphy of Phanerozoic of Tajikistan 1: 58-70. Donish, Dushanbe.- FC&P 27-1, p. 27, ID=3795Topic(s): ; paleontology; Systematics: ; Stratigraphy: Jurassic; Geography: TajikistanIn the Jurassic of the Pamirs Foraminifera, Porifera, Stromatoporoidea, Chaetetida, Scleractinia, Brachiopoda, Bivalvia, Gastropoda, Ammonoidea, Crinoidea are determined. The most numerous and diverse of them are Scleractinia, Brachiopoda, Bivalvia and Ammonoidea. They are most studied and each of them are found in the lower, middle and upper Jurassic of the Pamirs.";
- 3265 s[3262] = "MIKHEEV I.G., FORTUNATOVA N.K., TSEISLER V.M. (1974).- Organogenic structures in the Upper Jurassic Carbonate rocks of southwestern Gissar. [in Russian; English translation in Lithol. miner. Resources (USA), 1974, 9, 1: 43-52] .- Litol. polezn. Iskopaem. SSSR, 1974, 9, 1: 54-66.- FC&P 4-2, p. 53, ID=5243Topic(s): structures; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Tajikistan, Hissar Mts5 types of organogenic structures are distinguished: biostromes, bioherms and reefs. Biostromes (coral and sponge) are tabular bodies 15-17m thick, 5-10km long in outcrop. Bioherms are lenticular or mound-like bodies composed of massive limestones and dolomites containing numerous entire fossil shells. Reef complexes are made up of a combination of bioherms and their erosion products, differing in age, visible dimensions, nature of their relations to the enclosing rocks, assemblage of reef-building organisms, and so forth. In Middle Callovian time, shallow water conditions of marine sedimentation were dominant, with weakly differentiated submarine relief. In Late Callovian time the basin became differentiated and the Karasan reef formed, the position of which marks the facies change of the Late Callovian. Change in facies of Lower Callovian rocks takes place to the south. In Late Callovian time, the zone of reef formation shifted still farther to the south.";
- 3266 s[3263] = "LIAO Wei-Hua, XIA JINBAO (1985).- Upper Jurassic and Lower Cretaceous Scleractinia from Bangoin district of Northern Xizang (Tibet).- Memoir Nanjing Institute Geology 21: 119-174.- FC&P 14-2, p. 33, ID=0950Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U, Cretaceous L; Geography: China, TibetLate Jurassic was a period of extensive reef-building, especially in the Tethys. In Xizang, there are a lot of such species as Actinastrea ramulifera (Etallon), Cryptocoenia tabulata Koby, C. octoseptata (Etallon), Epistreptophyllum giganteum Roniewicz, E. cf. densum Roniewicz, Heliocoenia bandukdzeae Babaev, Kobyastrea tenuis Roniewicz, Latiastrea foulassensis Beauvais, Pseudocoenia decipiens (Etallon), P. hexaphyllia (d'orbigny), Stylina parvicosta Koby and Stylosmilia michelini Edwards et Haime. The fauna, as a whole, shows close affinities to those of the Late Jurassic in Portugal, France, W.Germany, Switzerland, Poland, Romania, Yugoslavia as well as the Caucasus of USSR. Thus the fossil-bearing bed may be Late Oxfordian-Early Kimmeridgian in age. * The Lower Cretaceous may be subdivided in ascending order into the Xarqung Group (Berriasian to Hauterivian) and the Bangoin Group (Barremian to Cenomanian). The corals described in this paper were collected from the lower part of Xarqung Group and the upper part of Bangoin Group respectively. Those from the Xarqung Group appear to bear, to some extent, a Jurassic aspect. Among them Montlivaltia continued to develop slowly, and some old forms still survived, such as Montlivaltia cf. gigas Fromentel and M. caryophyllata Lamouroux. Besides, a few new elements such as Leptoria (Dictuophylia) collignoni Alloiteau, Placotrochus cf. texanus

- (Vaughan), *Stylina* cf. *regularia* Fromentel, *S. parvistella* Volz, etc., are also present in this group. The latter group contains *Eohydnophora tosaensis* Yabe et Eguchi, *Blothrocyathus harrisi* Wells, *Pleurcora crassa* (Reuss), *Agathelia asperella* Reuss, *Preverastraea iseli* (Prever) and some new species, bearing a close relationship with those from France, Poland, Yugoslavia, Japan as well as Texas of USA. [extracted from original summary]^1";
- 3267 s[3264] = "HE XINYI, XIAO JINDONG (1990).- Jurassic and Cretaceous hexacorals of Ngari area.- Paleontology of Ngari, Tibet (Xizang) [Zunyi Yang & Zetong Nie (eds)]: 146-158 + 247-250, pls. 16-22; China University Geoscience Press, Beijing. [in Chinese, with English description of the new taxa].- FC&P 23-1.1, p. 75, ID=4164^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Cretaceous; Geography: China, Tibet^The paper deals with Upper Jurassic to Lower Cretaceous corals from the Ngari area (Tibet), including the genera *Actinastrea*, *Amphiastrea*, *Astraraea*, *Aulosmilium*, *Axosmilium*, *Blothrocyathus*, *Budia*, *Calamophylliopsis*, *Carantoseris*, *Cladophyllia*, *Cladophylliopsis*, *Coelomsilium*, *Collignonastraea*, *Complexastrea*, *Dermosmilium*, *Donacosmilium*, *Ellipsocoenia*, *Eohydnophora*, *Epistreptophyllum*, *Eugyra*, *Fungiastraea*, *Grandifavia*, *Latimeandrea*, *Leptoria*, *Microsolena*, *Mitrodendron*, *Montlivaltia*, *Ogilviella*, *Opisthophyllum*, *Parepismilium*, *Protethmos*, *Rhaphidophyllia*, *Silingastraea*, *Stylina*, *Stylosmilium*, *Thamnoseris* and *Thecosmilium*. Numerous species as well as the genera *Montlivaltoides* and *Budiopsis* are described as new.^1";
- 3268 s[3265] = "XIA LINBAO, LIAO Wei-Hua (1991).- [Some Jurassic and Cretaceous Scleractinian Corals from Gegyai of NW Xizang (Tibet)].- Permian, Jurassic and Cretaceous Stratigraphy and Palaeontology from Rutog district, Tibet [Sun Dongli (ed.)]: 127-146, pls 1-5; Nanjing.- FC&P 29-1, p. 41, ID=7031^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Cretaceous; Geography: China, Tibet^1";
- 3269 s[3266] = "WANG MINGZHOU, BONG DEYUAN (1984).- Stromatoporoids from the Dongqiao Formation (Upper Jurassic-Lower Cretaceous) in northern Xizang (Tibet).- *Acta Palaeontologica Sinica* 23, 3: 343-348.- FC&P 13-2, p. 48, ID=0575^Topic(s): ; Stromatopora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic Cretaceous; Geography: China, Tibet^Nine species of five genera are described. Five new species are *Milleporella amodensis*, *M. dongqiaoensis*, *Xizangstomatopora robusta*, *Milleporidium gracile*, *Cladocoropsis dongqiaoensis*.^1";
- 3270 s[3267] = "DZHALILOV M.R., (ed.) (1975).- *Voprosy paleontologii Tadzhikistana* [problems of paleontology of Tadzhikistan].- ???.- FC&P 6-1, p. 29, ID=0091^Topic(s): ; paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Seno; Geography: Tajikistan^Among many Phanerozoic groups Senonian corals are discussed^1";
- 3271 s[3268] = "CHERCHI A., SCHROEDER R. (1989).- Le &microcells&; dello scheletto di *Pseudomillestroma reticulata* Deng 1982 (Demospongiae) del Cretaceo inferiore del Tibet.- *Bolletino della Societa Paleontologica Italiana* 27, 3: 379-382.- FC&P 18-1, p. 51, ID=2301^Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Cretaceous L; Geography: China, Tibet^The abundant &microcells&; within the skeleton of *Pseudomillestroma reticulata* Deng 1982 from the Lower Cretaceous of Tibet are interpreted as reniform microscleres. The skeletal texture of this species shows affinities with that of some Demospongiae (*Rhaxella*, *Geodia*) and with that of another representant of this class, described by Termier et al. (1975) from the Upper Permian of Djebel Tebaga (Tunisia).^1";
- 3272 s[3269] = "LOSER H., LIAO Wei-Hua (2001).- Cretaceous corals from Tibet (China) - stratigraphic and paleobiogeographic aspects.- *Journal of*

- Asian Earth Sciences 19, 5: 661-667.- FC&P 30-2, p. 28, ID=1089^Topic(s): stratigraphy, biogeography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: China, Tibet^The spatial and temporal distribution of Cretaceous coral faunas from the Tibet range is reviewed in detail. The relationship of the Tibetan faunas to other Tethyan or Caribbean faunas is discussed. Obviously the faunas had closer relationships with Tethyan faunas in Asia and Europe than with Caribbean faunas. The rather large number of new species results from a general abundance of corals in certain time spans. The paper is complemented by an appendix, which lists all formations with their localities and coral occurrences. [original abstract]^1";
- 3273 s[3270] = "KUZMICHEVA E.I. (2002).- Skeletal morphology, systematics and evolution of the Scleractinia.- Trudy Paleontologicheskogo Instituta 286, 211 pp.- FC&P 33-2, p. 31, ID=1157^Topic(s): morphology, phylogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Asia Central^The author describes 114 coral species, mainly from the Early Cretaceous of Afghanistan, Armenia, Azerbaidshan, Ukraine, and Turkmenistan. Thirty eight species and ten genera (including two homonyms) are described as new. One new suborder is established. Most of the material is known from earlier publications, but the illustrations of the present paper are much better (not to say excellent!) and give a very good impression of the material. Unfortunately, the author missed most literature of the past 20 years, therefore the taxonomy appears antiquated; Loeser]^1";
- 3274 s[3271] = "BUGROVA I.Yu. (1991).- Extremely large Montlivatia (Scleractinia) from Early Hauterivian of Turkmenia.- Annual Meeting of All-Union Paleontological Society 34: 259-262.- FC&P 24-2, p. 73, ID=4549^Topic(s): ; Scleractinia, Montlivaltia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Haut; Geography: Turkmenia^^1";
- 3275 s[3272] = "BUGROVA I.Yu., PREOBRAZHENSKIY M.B., PROZOROVSKIY V.A. (1985).- Nizhnemelovye rifovye komplekсы zapadnoy Turkmenii.- Vestnik Leningradskogo universiteta 7, 1: 22-30. [in Russian: Lower Cretaceous reefal complex in western Turkmenia].- FC&P 24-1, p. 68, ID=4490^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Cretaceous L; Geography: Turkmenia^Fossil reefs of the Lower Cretaceous are found in South-western Turkmenia. The characteristic features of the fossil fauna and specific facial and tectonical allow to search the potential oil and gas reservoirs of the reef origin. The data could be used in stratigraphical and palaeogeographical treatment of deposits in question.^1";
- 3276 s[3273] = "CHEN MING, WANG JIAN, TAN FUWEN, DU BAIWEI (2003).- The planar distribution and significance of the organic reefs in the Lower Cretaceous Nangshan Formation in the Coqen Basin, Xizang. [in Chinese, with English abstract].- Sedimentary Geology and Tethyan Geology 23, 4: 68-70.- FC&P 33-1, p. 82, ID=7230^Topic(s): reefs, geohistory, ecology; reefs; Systematics: ; Stratigraphy: Cretaceous L; Geography: China, Tibet^The Coqen Basin is located in the hinterland of the Qing-Xizang Plateau. Eight organic reef sections have been identified in the basin along the Qiekan-Guchang-Luobo-Dangqiongco fault zone. It is inferred, from the radiolarian siliceous rocks and volcanic rocks, that the fault zone should be a facies-controlling fault zone, where the deep-water deposits including platform-margin slope and basin deposits were once accumulated. Afterwards these deep-water deposits disappeared within the fault zone due to subsequent reactivation of faulting. The organic reefs along the both sides of the fault zone should be assigned to the platform-margin reefs. [original abstract]^1";
- 3277 s[3274] = "REJMAN V.M. (1974).- Deux coraux ahermatypiques des formations argileuses de l''Eocene et du Cenomanien dans le sud de l''Asie centrale. [en russe] .- Dokl. AN Tadzhik. SSSR 17, 8:

- 55-58.- FC&P 4-2, p. 53, ID=5246^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous -, Eocene; Geography: Asia Central^Description et figuration de Caryophyllia babkovi Reiman et Micrabacia coronula (Goldfuss) 1826.^1";
- 3278 s[3275] = "YU CHANGMING, WANG HUIJII (1981).- Some tube-like fossils from the Early Tertiary of northern Jiangsu. [in Chinese with English summary].- Acta Palaeontologica Sinica 20, 5: 406-417.- FC&P 11-2, p. 25, ID=6152^Topic(s): ; enigmatics; Systematics: problematica; Stratigraphy: Paleogene; Geography: China, Jiangsu^^1";
- 3279 s[3276] = "RANDALL R.H., CHENG Y.M. (1977).- Recent corals of Taiwan. Part I. Description of Reefs and Coral Environment.- Acta Geologica Taiwanica 19: 79-102.- FC&P 15-1.2, p. 42, ID=0771^Topic(s): reefs, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: China, Taiwan^About 2240 distinct coralla specimens were collected from fifty-two field stations in northern and southern Taiwan coasts. A general physiographic description of the reef zone; note on current, sedimentation, and turbidity; and records of the dominant associated corals, flora, and other fauna at each collecting station were given. In general, two principal types of coral growth and development occurring in Taiwan were recognized: (a) the "fringing reefs" mostly developed in the southern coasts, and (b) "coral community" chiefly distributed in the northern and eastern coasts.^1";
- 3280 s[3277] = "RANDALL R.H., CHENG Y.M. (1979).- Recent corals of Taiwan. Part II. Description of Reefs and coral Environment.- Acta Geologica Taiwanica 20: 1-32.- FC&P 11-2, p. 43, ID=0772^Topic(s): reefs, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: China, Taiwan^This is the second part of a series of a study of the Recent corals of Taiwan. Part I described the reefs and other coral environments at 52 field stations located along the northern and southern coasts and at Liu-Chiu Island situated off the southwest coast. A general physiographic description of the field stations and their associated coral communities are given that will provide a detailed ecological setting for a systematic study of the coral fauna to follow. Part II is a continuation of the descriptions of reef and other coral environments at additional 37 field stations (stations 53-89) located along the eastern coast of Taiwan and at some additional locations along the northern and southern coasts as well.^1";
- 3281 s[3278] = "ZHOU RENLING, ZHOU JINMING (1982).- Studies on the Antipatharians of China. I. The genus Cirrhipathes with the description of a new species.- Tropical Oceanology 1, 1: 82-91.- FC&P 13-1, p. 28, ID=0416^Topic(s): new taxa; Antipatharia, Cirrhipates; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: China^^1";
- 3282 s[3279] = "RANDALL R.H., CHENG Y.M. (1984).- Recent corals of Taiwan. Part III. Shallow water Hydrozoan Corals.- Acta Geologica Taiwanica 22: 35-39.- FC&P 15-1.2, p. 39, ID=0838^Topic(s): reefs; Hydrocorallina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: China, Taiwan^This is the third part of a study of the Recent corals of Taiwan. In Parts I and II the reefs and other coral environments are described at 89 field stations located along the northern, eastern and southern coasts of Taiwan and at Liu-Chiu Island situated a short distance off the southwest coast. In Part III, taxonomic descriptions and keys to the genera and species and the field ecology, community structure, and distribution patterns of the shallow water hydrozoan corals in the orders Milleporina and Stylasterina are given. Eight species in the genus Millepora and one species each in the genera Stylaster, Allopora, and Distichopora are described. Special attention is given to

- describing the range of variation observed in the hydrozoan coral species, especially in respect to their ecological setting.^1";
- 3283 s[3280] = "ZHOU RENLING, SCOTT P.J.B. (1982).- The Gorgonacea of Hong Kong.- The Gorgonacea of Hong Kong [in: . ; Hong Kong University Press: 135-159].- FC&P 13-1, p. 28, ID=0415^Topic(s): ; Octocorallia, Gorgonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: China, Hong Kong^^1";
- 3284 s[3281] = "ZHOU RENLING (1982).- A numerical taxonomic study of Turbinaria (Scleractinia) from Hong Kong.- Proceedings international Workshop marine Biology [Morton B. S. & Tseng C. K. (eds); Hong Kong University Press]: 127-134.- FC&P 13-1, p. 28, ID=0414^Topic(s): numerical taxonomy; Scleractinia, Turbinaria; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: China, Hong Kong^^1";
- 3285 s[3282] = "ZHOU RENLING, CHEN YOUZHANG (1983).- Preliminary study on the geographical distribution of shallow-water scleractinian corals from China.- Nanhai Studia Marina Sinica 4: 89-96.- FC&P 13-1, p. 28, ID=0418^Topic(s): geography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: China^^1";
- 3286 s[3283] = "SHEN CHUANCHOU, LEE TYPHOON, LIU KONKEE, HSU GUANGHSIUNG, LAWRENCE EDWARDS R., WANG CHUNGHO, LEE MENG YANG, CHEN YUEGAU, LEE HUANGJEN, SUN HSIAOTIEN (2005).- An evaluation of quantitative reconstruction of past precipitation records using coral skeletal Sr/Ca and δ180 data.- Earth and Planetary Science Letters 237, 3-4: 370-386.- FC&P 34, p. 101, ID=1366^Topic(s): ecology; fossil precipitation records; Systematics: Cnidaria; Scleractinia; Stratigraphy: Holocene; Geography: China, Taiwan^Coupled records of δ180 and Sr/Ca in Porites coral have been used to derive hydrological conditions by removing the Sr/Ca-inferred temperature component from the δ180 signal. Nanwan, a semi-enclosed bay in southern Taiwan, provides an opportunity to demonstrate the feasibility of quantitatively reconstruction past precipitation history. Recurrence of seawater δ180 offsets between wet and dry seasons in the early 1990s is well correlated with the precipitation record. Even though the hydrological signal only accounts for 20% of the total annual coral δ180 variation of ca. 1%, offsets can be found in the residual δ180 of modern corals after removing the thermal effect, which contributes to the other 80%. The observation timing and amplitude of the seasonal seawater δ180 offsets in Nanwan and their correlation with precipitation are reproduced by hydrological models. In the mid-Holocene, the seasonal anomaly of residual δ180 was twice of the modern value based on the 9-yr Sr/Ca- δ180 data recorded in a 6.73-ka Porites coral. Hydrological models suggest an annual rainfall of 1800-3000 mm/yr at the window during mid-Holocene, 20% higher than that of the average of 30yr modern instrumental records of 1500-2500mm, consistent with the qualitative pollen record from lake sediments. The seasonal decrease of residual δ180 in 5 of 9 yr was earlier than the increase of the coral Sr/Ca-inferred temperature, which implies that these rainy seasons probably occurred from the early-mid spring to midsummer, earlier than that from late spring to late summer today. The driving force may be related to the changes of solar insolation and the East Asian monsoon. It [is] cautioned that the variation of hydrographic conditions impose restrictions on a precise calculation of the amount of paleo-precipitation. The dynamic nature of local tectonics, monsoons and water circulation should be further addressed to precisely quantify precipitation over the past 10,000yr from coral geochemical records.^1";
- 3287 s[3284] = "WALLACE C.C., DAI C.-F. (1997).- Scleractinia of Taiwan (IV): Review of the Coral Genus Acropora from Taiwan.- Zoological Studies 36, 4: 288-324.- FC&P 27-1, p. 100, ID=3850^Topic(s): taxonomy, new taxa; Scleractinia, Acropora;

- Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: China, Taiwan^The coral genus Acropora is reviewed from Taiwan for the first time. Forty species belonging to the coral genus Acropora occurring in waters of Taiwan are briefly described and illustrated. The Acropora fauna of Taiwan is seen to come from an essentially Pacific Ocean or broad Indo-Pacific fauna: all 40 species found also occur on the Pacific coast of Australia; 2 species (Acropora verweyi and A. azurea) are not found in the central Indo-Pacific (Indonesian) region, although A. verweyi is also found in the western Indian Ocean. The dominant species in the Taiwan Straits, Acropora formosa, occurs in extensive polymorphic populations, which invite further exploration of species boundaries within this species in this locality. The 40 species of Acropora herein recorded from Taiwan show an 89% similarity in species composition compared with 49 species recorded from islands in the Capricorn group of SE Australia, which is at a similar latitude south. The Acropora fauna of Taiwan is seen to be less diverse compared with 74 species recorded from Japan to the north, 67 species recorded from the Philippines to the south; 83 species recorded from Indonesia, and 51 species recorded from the South China Sea. This variation is possibly due to differences in sampling effort and species interpretation; however, differences in the areas of reef available for colonization, and fewer types of reef habitat within Taiwanese waters, would also imply that many species recorded from those other localities will not be found in Taiwan.^1";
- 3288 s[3285] = "LIZHEN W. (1997).- A Study of the Freshwater Sponges of the Lakes in Yunnan.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6899^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: China, Yunnan^^1";
- 3289 s[3286] = "NEUMANN V., FIEGE D., LI JINHE (1994).- Korallenriffe im Suedchinesischen Meer: Unterwasserbeobachtungen an der Kueste der Insel Hainan (China).- Natur und Museum 124, 4/5: 136-145. [in German].- FC&P 23-1.1, p. 90, ID=4206^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: China, Hainan^^1";
- 3290 s[3287] = "JIA HUIZHEN, XU SHOUYONG (1975).- New material of a few coral fossils from Central-south region.- Stratigraphical Paleontological Essays, Part 2: 90-97 [Committee of Stratigraphical and Paleontological Essays of Geological Research Institute, Peking].- FC&P 13-2, p. 40, ID=0551^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: China Central-S^^1";
- 3291 s[3288] = "CAI TUCI (1988).- A preliminary study on the ecology of corals from the Donggulubashitao Formation and Narigala Formation.- Xinjiang Geology 6, 3:.- FC&P 18-2, p. 17, ID=2462^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: China^^1";
- 3292 s[3289] = "WU W.-S. (1975).- Coral fossils from the Qomolangma Feng region. [in Chinese] .- In Report of scientific investigation in the Qomolangma Feng region 1966-1968, Paleontology, 1: 83-113; Academia Sinica, Tibetan Scientific Investigation Team; Beijing.- FC&P 5-1, p. 31, ID=5374^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: China, Tibet^[describes and illustrates an Early Permian fauna from Tibet that includes 15 rugose coral species of which 5 are new; also describes and illustrates some Silurian and Mesozoic corals]^1";
- 3293 s[3290] = "OSPANOVA N.K. (2001).- Izmenchivost vida Propora speciosa (korally) iz sredneaziatskogo regiona.- Geologija i mineraljno-syrjevye resursy Respubliki Tadzhiqistan: 68-76; 9 figs., 2 Tabl.; Dushanbe.- FC&P 31-1, p. 12, ID=7090^Topic(s): variability; Heliolitida Propora; Systematics: Cnidaria; Heliolitida;

- Stratigraphy: ???; Geography: Asia Central^Classification of types of variability in Heliolitida is adduced. Four morphogroups of species Propora speciosa are described and range of variability made more exact.^1";
- 3294 s[3291] = "WANG Z. (1980).- Geographic distribution and stratigraphic significance of the heterocoral Hexaphyllia in China.- Report of Chinese Academy of Geology, Research Institute of Geology, 1(1): 42-48.- FC&P 11-1, p. 54, ID=1795^Topic(s): distribution; Heterocorallia, Hexaphyllia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: China^^1";
- 3295 s[3292] = "LIN Y., WU S., HUANG Z., PENG X. (1995).- Heterocoral of China.- Journal Changchun Univ. Earth Sci. 25, 3: 251-300.- FC&P 27-1, p. 88, ID=3832^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: China^Since 1960's, 13 genera and over 160 species have been found and published by Chinese authors, the number of which is more than that found by alien authors. Chinese scientists have gotten outstanding achievement in the classification, microstructure and septal evolution of the heterocoral. After we found a kind of heterocoral with 3 septa, the septal variety of the different genera and the developmental model of the septa have been clearly revealed. The heterocoral can be divided into two series, one with fossula and another without fossula. The geologic age of the heterocoral should be from the Early Devonian to the Late Carboniferous in mainland China. In our country most of the heterocoral are found at the Datang stage of Early Carboniferous and they frequently associate with the elements of the rugose coral in the Yuanophyllum zone, so the heterocoral is an important fossil group in classifying the lower Carboniferous of China.^1";
- 3296 s[3293] = "DENG ZHANQIU, ZHANG YANSHENG (1982).- Hydrozooids from the Ningjing Mountains of southwestern China.- Paleontological atlas of W Sichuan and E Xizang, vol. 2: 260-272.- FC&P 11-2, p. 25, ID=1822^Topic(s): atlas of fossils; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: ; Geography: China SW^^1";
- 3297 s[3294] = "GUO SHENGZHE (1982).- Rugose coral assemblages in the geosynclinal region of Nei Mongol and Northeast China.- Shenyang Institute of Geology and Mineral Resources, Chinese Academy of Geological Sciences, Bulletin 4: 84-92.- FC&P 13-2, p. 40, ID=0548^Topic(s): oceanic bocoenoses; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: China, Nei Mongol^^1";
- 3298 s[3295] = "YU X.-G., ZHU X.-S. (1988).- Rugose corals from upper part of Hutian Group of Gaon, Jiangxi.- Professional Papers of Stratigraphy and Palaeontology 21: 81-101. [in Chinese with English abstract].- FC&P 20-2, p. 60, ID=2949^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ???; Geography: China, Jiangxi^^1";
- 3299 s[3296] = "YU X.-G. (1991).- Two new genera of tetracorals from the Chuanshan Formation in Dushan, Guangde of Anhui.- Changchun University of Earth Sciences, Journal 21, 1: 13-16.- FC&P 21-1.1, p. 49, ID=3250^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ???; Geography: China, Anhui^^1";
- 3300 s[3297] = "YU X.-G., WANG Z.-J. (1987).- Some tetracorals from Taiyuan Formation in western mountains, Shaanxi.- Coal Science and Technology 1987, 6 [special issue of Xishan Coalfield in Taiyuan]: 48-56.- FC&P 21-1.1, p. 49, ID=3251^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: China, Shaanxi^^1";
- 3301 s[3298] = "LI SHEGAO, LIAO Wei-Hua (1994).- Note on a new species of Rhizophyllum from Junggar.- Acta Palaeontologica Sinica 33, 2: .

- [pp?].- FC&P 24-2, p. 41, ID=4541Topic(s): ; Rugosa, Rhizophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: China, Junggar^^1";
- 3302 s [3299] = "ULITINA L.M. (1975).- Rugozy.- Materialy Geol. Tsentral. Kazakhstana 18: 36-41.- FC&P 5-2, p. 9, ID=5435Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Kazakhstan^Describes and illustrates 6 species, 2 of them new.^1";
- 3303 s [3300] = "GUO SHENGZHE (1976).- Tetracoralla. [in Chinese].- Atlas of Fossils of North China, Inner Mongolia volume, pt 1. [atlas of fossils] - FC&P 9-1, p. 12, ID=5742Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: China, Nei Mongol^^1";
- 3304 s [3301] = "LI ZHANGRONG (1979).- Tetracoralla. [in Chinese].- Atlas of Fossils of Northwest China, Qinghai Volume. [atlas of fossils] - FC&P 9-1, p. 13, ID=5760Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: China, Qinghai^^1";
- 3305 s [3302] = "XU S. (1982).- Discussion of the correlation of the Ceshui Formation in relation to rugose corals. [in Chinese, with English abstract].- Geological Review 28, 1: 69-73.- FC&P 11-2, p. 28, ID=6162Topic(s): biostratigraphy; stratigraphy, Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ???; Geography: China?^^1";
- 3306 s [3303] = "HE XINYI, WANG ZHIPING, LI MINLU (1989).- Skeletal structures and classification of the Order Columnarida of China.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 89-107 (chapter 5); Science Press, Beijing.- FC&P 19-1.1, p. 42, ID=2635Topic(s): structures, classification; Rugosa, Columnariida; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: China^^1";
- 3307 s [3304] = "WANG HONGZHEN, WANG ZHIPING, CHENG JIANQIANG (1989).- Skeletal structures and classification of the Order Zaphrentida, Suborder Plerophyllina, and Order Heterocorallia of China.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 127-139 (chapter 7); Science Press, Beijing.- FC&P 19-1.1, p. 44, ID=2633Topic(s): classification; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: ; Geography: China^^1";
- 3308 s [3305] = "LIAO Wei-Hua, LI ZHANGRONG (1979).- Hexacoralla. [in Chinese].- Atlas of Fossils of Northwest China, Qinghai Volume. [atlas of fossils] - FC&P 9-1, p. 13, ID=5761Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: China, Qinghai^^1";
- 3309 s [3306] = "DONG DEYUAN (1983).- Type and microstructure of the pillars in Stromatoporoids [in Chinese with English summary].- Bulletin Nanjing Institute Geology and Palaeontology, Academia Sinica 6: ?-? [pages?].- FC&P 15-1.2, p. 44, ID=0780Topic(s): microstructures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: China^Twenty-nine types of pillars are recognized and illustrated in 3 plates in vertical and tangential section.^1";
- 3310 s [3307] = "LIN BAORYU (1993).- Geological and Geographical Distribution of Ordovician stromatoporoids in China.- Stratigraphy and Palaeontology of China 2: 135-138.- FC&P 25-1, p. 6, ID=2989Topic(s): distribution; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: China^^1";
- 3311 s [3308] = "WANG SHUBEI (1978).- Stromatoporoids. [in Chinese].- Atlas of Fossils of Southwest China, Guizhou Volume; pt 2: Carboniferous - Quaternary. [atlas of fossils] - FC&P 9-1, p. 12, ID=5752Topic(s): ; stroms; Systematics: Porifera;

- Stromatoporoidea; Stratigraphy: ; Geography: China, Guizhou^^1";
- 3312 s [3309] = "WANG SHUBEI (1978).- Stromatoporoids. [in Chinese].- Atlas of Fossils of Southwest China, Sichuan Volume; pt 2: Carboniferous - Mesozoic; pp 123-137 + 616-618, pls 35-44. [atlas of fossils] - FC&P 12-1, p. 48, ID=5758^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: China, Sichuan^Two new genera, Sichuanstroma and Spinostroma, of labechiids from the extensive fauna of this group in the Early Carboniferous of China are described. Species of the following genera are also described (number of new species in brackets): Cystostroma (1), Rosenella (2), Stylostroma (4), Pachystylostroma (1), Labechia (8), Labechiella (1), Platiferostroma (1), Anostylostroma (2), Stictostroma (1), Geronostroma (1), Clathrostroma (2).^1";
- 3313 s [3310] = "CHEN H., YEN Y. (1978).- Some tabulates from the Qixia Formation of Dongzhi, Anqing, Anhui.- Stratigrafiya i Paleontologiya Paleozoya vostoka Russkoy platformy: 74-76 [Izdatelstvo Kazanskogo Universiteta].- FC&P 9-2, p. 40, ID=0307^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: China, Anhui^^1";
- 3314 s [3311] = "TCHI YONGYI (1982).- Some Tabulate Corals from Heitai Formation in Eastern Heilongjiang Province.- Bulletin Shengyang Inst. Geol. Min. Res., Chin. Acad. Geol. Sci. 04: 67-83.- FC&P 13-1, p. 30, ID=0433^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: China, Heilongjiang^^1";
- 3315 s [3312] = "WANG BAoyu (????).- New material of tabulate corals from the Kunlun-Altun Mountains with their stratigraphical significance.- Publication unknown: 170-186.- FC&P 14-1, p. 51, ID=1012^Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: China, Kunlun Mts^^1";
- 3316 s [3313] = "LI ZHIMING (1989).- Skeletal structures and classification of the non-favositid Tabulata of China.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 140-158 (chapter 8); Science Press, Beijing.- FC&P 19-1.1, p. 42, ID=2647^Topic(s): structures; Tabulata (non favositid); Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: China^^1";
- 3317 s [3314] = "ZHU XIANGSHUI, ZHAO JIAMING (1991).- Cystomichelina and Protomichelina from Chihsia Formation of Leping and Ruijin, Jiangxi.- Acta Palaeontologica Sinica 30, 5: 582-591.- FC&P 21-2, p. 38, ID=3324^Topic(s): taxonomy, new taxa; Tabulata, Cystomichelina; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: China, Jiangxi^Four species (with three new ones) of Cystomichelina and three species (with one new species) and one subspecies of Protomichelina are dealt with. * In the outline of the corallum, Cystomichelina is very similar to Protomichelina, but differs in having peripheral vesicles. However, some members of the former have very rare peripheral vesicles and are almost similar to the latter, such as C. equitabulata Ting, C. multispinosa King, C. vesicata Chen & Qi, C. simplex Deng & Zhang and C. michelinoidea n.sp. In the structure of peripheral vesicles and tabulae, Cystomichelina is more complex than Protomichelina. In the growth time, the former is shorter than the latter.^1";
- 3318 s [3315] = "CHEN HUACHENG, YEN YUYING (1978).- Some Tabulata from the Qixia Formation of Dongzhi, Anqing, Anhui. [in Chinese].- Professional Papers of Stratigraphy and Palaeontology 06: 74-110.- FC&P 9-1, p. 11, ID=5738^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: China, Anhui^^1";

- 3319 s[3316] = "LI YAOXI (1989).- Skeletal structures and classification of the favositid Tabulata of China.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 159-174 (chapter 9); Science Press, Beijing.- FC&P 19-1.1, p. 42, ID=2645^Topic(s): structures; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy:; Geography: China^^1";
- 3320 s[3317] = "CHI YONGYI (1976).- Tabulata, Heliolitida, Chaetetida. [in Chinese].- Atlas of Fossils of North China, Inner Mongolia volume, pt 1. [atlas of fossils] - FC&P 9-1, p. 12, ID=5743^Topic(s):; Tabulata, Heliolitida, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Heliolitida Chaetetida; Stratigraphy:; Geography: China, Nei Mongol^^1";
- 3321 s[3318] = "DENG ZHANQIU (1979).- Tabulata, Heliolitida, Chaetetida. [in Chinese].- Atlas of Fossils of Northwest China, Qinghai Volume. [atlas of fossils] - FC&P 9-1, p. 13, ID=5759^Topic(s):; Tabulata, Heliolitida, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Heliolitida Chaetetida; Stratigraphy:; Geography: China, Qinghai^^1";
- 3322 s[3319] = "WU X. (1989).- Sponge mounds of the northwestern Sichuan Basin, China: Stratigraphy, facies and paleoecology.- Facies 21: 171-188.- FC&P 19-1.1, p. 20, ID=2576^Topic(s): reefs, sponge mounds; reefs; Systematics: Porifera; Stratigraphy: ???; Geography: China, Sichuan^^1";
- 3323 s[3320] = "Southwestern Geological Institute (China) (1978).- Paleontological atlas of Southwestern China.- Paleontological atlas of Southwestern China, Sichuan Province.- FC&P 9-2, p. 42, ID=0333^Topic(s): atlas of fossils; paleontology; Systematics:; Stratigraphy:; Geography: China, Guizhou?^Stratigraphic-paleontological Working Team of Guizhou Province 1978. Paleontological atlas of Southwestern China, Guizhou Province 2: 638 pp.^1";
- 3324 s[3321] = "LI GUANGCEN, LIN BAORYU (1982).- On some geological problems in Eastern Kunlun Mountains.- Contributions to Geology of the Qinghai-Xizang (Tibet) Plateau 01: 28-52.- FC&P 13-1, p. 29, ID=0421^Topic(s): geology; geology; Systematics:; Stratigraphy:; Geography: China, Kunlun Mts^^1";
- 3325 s[3322] = "YU X.-G. (1988).- Restudy of the Kaolishan Sandstone near Nanjing.- Journal of Stratigraphy 12, 4: 311-317.- FC&P 21-1.1, p. 49, ID=3249^Topic(s): geology; Systematics:; Stratigraphy:; Geography: China^^1";
- 3326 s[3323] = "GUO S.Z. (1991).- Timing of convergence process of Sino-Korean plate inferred from biostratigraphic evidence.- Pre-Jurassic geology of Inner Mongolia, China [K.I. Ishii et al. (eds)]: 113-125; China-Japan Cooperative Research Group, Osaka, Japan.- FC&P 23-2.1, p. 45, ID=4264^Topic(s): timing of accretion; paleontology; Systematics:; Stratigraphy:; Geography: Sino-Korean Plate^^1";
- 3327 s[3324] = "anonymous (1974).- Handbook of the Stratigraphy and Paleontology in SW China. [in Chinese without English abstract] .- Nanking Inst. of Geology and Paleontology, Acad. Sinica Science Press: 454 pp., 66 figs, 202 pls.- FC&P 4-2, p. 54, ID=5252^Topic(s): atlas of fossils; atlas of fossils; Systematics:; Stratigraphy:; Geography: China SW^[description and figuration of Archeocyatha, Tabulata, Tetracoralla and Stromatoporoidea]^1";
- 3328 s[3325] = "Central Southern Geological Institute and Geological Bureaus of Henan, Hubei, Hunan, Guangdong, and Guangxi Provinces (1977).- Paleontological atlas of Central southern China, pt 2.- Paleontological atlas of Central Southern China, pt 2; 856 pp.- FC&P 9-2, p. 40, ID=5874^Topic(s): atlas of fossils; atlas of fossils; Systematics:; Stratigraphy:; Geography: China Central-S^^1";

- 3329 s[3326] = "Northeastern Geological Institute and Geological Bureau of Inner Mongolia (1976).- Paleontological atlas of Northern China, Inner Mongolia volume, pt 1.- Paleontological atlas of Northern China, Inner Mongolia volume, pt 1; 502 pp.- FC&P 9-2, p. 41, ID=5875^Topic(s): atlas of fossils; atlas of fossils; Systematics: ; Stratigraphy: ; Geography: China, Nei Mongol^^1";
- 3330 s[3327] = "Stratigraphic-paleontological working Team of Guizhou Province (1978).- Paleontological atlas of Southwestern China, Guizhou volume, pt 2.- Paleontological atlas of Southwestern China, Guizhou volume, pt 2; 638 pp.- FC&P 9-2, p. 42, ID=5876^Topic(s): atlas of fossils; atlas of fossils; Systematics: ; Stratigraphy: ; Geography: China, Guizhou^^1";
- 3331 s[3328] = "LOBANOV Ye.Yu., LEONOVA L.V. (1999).- New genus of Heliolitoidea from Paleozoic of Central Asia and Urals.- Materialy po stratigrafii i paleontologii Urala. Vypusk 2. [Chuvashov B. I. (ed.); Institut Geologii i Geokhimii Ural'skogo Otdeleniya Rossiyskoy Akademii Nauk, Ural'skaya Regional'naya Mezhdovedomstvennaya Stratigraficheskaya Komissiya; 1-270, figs., tabs, pls. (175-177, 1 pl.); Ekaterinburg].- FC&P 32-2, p. 64, ID=1400^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian / Devonian; Geography: Asia Central, Urals^Description of Ornatopora Lobanov gen. n. (Innaporidae), with Ornatopora aquae Lobanov sp.n. from Silurian/Devonian boundary beds of Central Asia (sorry, without indication of more precise locality and horizon data), and Ornatopora? snigirevae Lobanov sp.n. from probably Lochkovian of the Central Ural.^1";
- 3332 s[3329] = "MUCHEZ P., BOULVAIN F., DREESEN R., HOU H.-F. (1996).- Sequence stratigraphy of the Frasnian-Famennian transitional strata: a comparison between South China and southern Belgium.- Palaeogeography, Palaeoclimatology, Palaeoecology 123, 1-4: 289-296.- FC&P 25-2, p. 40, ID=3628^Topic(s): sequence stratigraphy; sequence stratigraphy; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: China S, Ardennes^The sedimentological evolution of the Frasnian-Famennian transitional strata in South China and southern Belgium has been investigated. A similar trend in the deepening and shallowing of the sedimentation environment occurs in the two palaeogeographically distinct areas. The stratigraphic succession has been subdivided into depositional sequences. A general deepening occurs in the Palmatolepis rhenana conodont zone. During the most rapid rise in sea level, a transgressive systems tract formed. This transgressive systems tract is followed by a highstand systems tract in the late P. rhenana zone. A major sequence boundary within the latter zone is indicated by an unconformity in intraplateau and plateau areas and by a conformity in the basinal area. The uppermost sediments within the late rhenana zone correspond to a lowstand systems tract. A rapid flooding took place near the base of the Palmatolepis linguiformis zone and dark shales and limestones formed. A second sequence boundary coincides with or is very close to the Frasnian-Famennian boundary (base P. triangularis zone). The global extinction event at the Frasnian-Famennian boundary coincides with an important eustatic fall in sea level. The proposed stratigraphic subdivision should allow worldwide correlations of shallow and deep water deposits.^1";
- 3333 s[3330] = "BRICE D., DEGARDIN J.M., DERYCKE C., HOU HONGFEI, MILHAU B., MISTIAEN B., ROHART J.-C., VACHARD D., WU XIANTAO, (1996).- Comparative faunal content between Strunian of Etouacun (Guanxi, South China) and the stratotype area (Etroungt, North of France).- 30th Internat. Geol. Congress, Abstract vol. 2, p. 109, Beijing. [abstract] - FC&P 26-2, p. 55, ID=4241^Topic(s): biostratigraphy; fossils; Systematics: ; Stratigraphy: Devonian Fam; Geography:

China, Guangxi,, Ardennes^In the Etaoucun area (Guanxi, South China), a well developed and continuous section is exposed at the Devonian-Carboniferous boundary, in a platform environment context. The following formations have been sampled.- The Dongchium Formation (upper Famennian) consists of thick, bird-eyes limestone, they are azoic except in the uppermost part in which several Leperditidae Ostracod bearing beds have been observed and one reefal level recognised for the first time.- The Etaoucun Formation (uppermost Famennian = Strunian) consists of grey and dark thick bedded limestone; many reefal levels are present (with a lot of Stromatoporoids and Tabulate corals but few Rugose corals). The other groups are usually very poorly represented and slightly diversified (Brachiopods, Ostracods, …); however, Gastropods are abundant, but often very badly preserved in dolomitized beds; Foraminifera are also very common and allow some good biostratigraphical zonation.The D/C boundary is located about two meters below the top of this formation. The lower part of the overlying Zaoyunling Formation (Lower Carboniferous), beginning with the Shanyeshan Member, mainly consists of thin bedded, dark limestones; they contain a more open marine fauna with very diversified Ostracods, few Brachiopods and also Foraminifera.This Chinese fauna is compared with the fauna of the Strunian stratotype in Etroeungt (Avesnois, North of France), where precise bed to bed sampling has been done; Except Foraminifera, which allow some correlations, the other benthic groups present very few taxa in common; this support the endemism of the Strunian faunas, already underlined by some authors.^1";

- 3334 s[3331] = "XU SHAOCHUN, POTY E. (1998).- Correlation of coral zonation near the Devonian-Carboniferous boundary between South China and the Franco-Belgian Basin.- Scientia Geologica Sinica 1.- FC&P 28-1, p. 11, ID=3952^Topic(s): biozonation; stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: China S, Ardennes^^1";
- 3335 s[3332] = "MILHAU B., MISTIAEN B., BRICE D., DEGARDIN J.M., DERYCKE C., HONGFEI H., ROHART J.-C., VACHARD D., XIANTAO W. (1997).- Comparative Faunal Content of Strunian (Devonian) between Etaoucun (Guilin, Guangxi, South China) and the Stratotype Area (Etroeungt, Avesnois, North of France).- Proc. 30th International Geol. Congr. 12: 79-94.- FC&P 27-1, p. 56, ID=3809^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: ; Stratigraphy: Devonian Fam / Carboniferous Tour; Geography: China, Guangxi, Ardennes^In the Etaoucun area, near Guilin in Guangxi (South China), a continuous section is exposed through the Devonian-Carboniferous boundary, in a platform environment. The following formations have been sampled in detail: the upper part of the Dongcun Formation (Upper Famennian), the Etaoucun Formation (Uppermost Famennian = Strunian) and the lower part of the Yaoyunling Formation, Shangyueshan Member (Lower Carboniferous). Foraminifera, stromatoporoids, tabulate and rugose corals, brachiopods, ostracods, conodonts and vertebrates micro-remains have been investigated and compared with Strunian faunas of the stratotype area (Avesnois, North of France) near Avesnes (Godin), Avesnelles and Etroeungt, where precise bed-to-bed sampling has been done. Excepting foraminifera, which allow some correlations, the benthic fossil groups present very few taxa in common; this supports the endemism of the South-China Strunian faunas already emphasized by some authors.^1";
- 3336 s[3333] = "KULLMANN J. (1992).- Lower Carboniferous solitary horn corals (Rugosa) of China and western Europe.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Compte Rendu 2: 328-333.- FC&P 23-2.1, p. 46, ID=3228^Topic(s): ; Rugosa, Cyathaxonia fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Europe W^^1";
- 3337 s[3334] = "OEKENTORP K., DENG ZHANQIU (1989).- Relationship of Devonian Favositid Faunas from South China to Western Europe and North Africa.-

- Courier Forschungsinstitut Senckenberg 110: 106-110.- FC&P 18-2, p. 38, ID=2487^Topic(s): comparison; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Europe, Africa N, China^The Devonian favositid faunas of Europe / North Africa and China show differences in respect to their generic composition as well as in the range. Numerous species are common in both regions, others are known from only one of the regions.^1";
- 3338 s[3335] = "LIAO Wei-Hua, HUBMANN B. (2006).- Comparison of the Givetian Rugose Coral *Argutastraea* of Dushan (South China) and Graz (Austria).- *Acta Palaeontologica Sinica* 45, 1: 52-59.- FC&P 34, p. 33, ID=1234^Topic(s): ; Rugosa, Argustastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: China, Austria^^1";
- 3339 s[3336] = "RIGBY J.K., NITECKI M.H., ZHU ZHONGDE, LIU BINGLI, JIANG YANGWEN (1995).- Lower Ordovician reefs of Hubei, China, and the western United States.- *Ordovician Odyssey: Seventh International Symposium on the Ordovician System SEPM Pacific Section* [Cooper J.D., Droser M.L. & Finney S.C. (eds.)]; Las Vegas: 423-426.- FC&P 25-1, p. 45, ID=3047^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Ordovician L; Geography: China, Hubei, USA w^^1";
- 3340 s[3337] = "FLUGEL H.W. (1990).- *Rugosa aus dem Perm des N-Karakorum und der Aghil-Kette*.- *Geol. Palaeont. Mitt. Innsbruck* 17: 101-117. [in German, with English summary].- FC&P 20-1.1, p. 53, ID=2819^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian Art - Kung; Geography: Pakistan, China^From the Upper Artinskian and / or lower Kungurian of the Hunza-region (Pakistan) and the Shaksgam valley (China) coral faunas with the genera *Ufimia*, *Paracania*, *Duplocarina*, *Yatsengia*, *Verbeekiella*, *Euryphyllum*, *Lophophyllidium* (*Lophophyllidium*), *Allotropiochisma* (? A.) and *Amandophyllum* (?) are described. In addition two species of the new genus *Petrphyllum* are named *P. hunzaianum* and *P. columnum*. *Petrphyllum* is characterized by a fanlike arrangement of their septa of naos type and a septobasal columella. The genus belongs to the new family *Petrphyllidae*. The coral fauna shows very close similarities to the coldwater "Lytvolasma"-fauna of the Lower Permian of the Lhasa- and the Kunlun Terrane and the Permian coral faunas of the Himalaya-Timor zone, but no affinity to the *Waagenophyllum*-fauna of the Maokou of the Qiangtang and Lhasa Terrane of Tibet.^1";
- 3341 s[3338] = "FLUGEL H.W., GAETANI M. (1991).- Permian Rugosa from northern Karakorum and Aghil Ranges.- *Rivista Italiana di Paleontologia e Stratigrafia* 97, 1: 35-48.- FC&P 21-1.1, p. 45, ID=3224^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Pakistan, China^^1";
- 3342 s[3339] = "LIAO Wei-Hua (1990).- The biogeographic affinities of East Asian corals.- *Mem. Geol. Soc.* 12 [McKerrow W.S. & Scotese C.R. (eds): *Palaeozoic Palaeogeography and Biogeography*]: 175-179.- FC&P 19-2.1, p. 23, ID=2734^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Asia E^In East Asia the oldest tabulate and rugose corals appeared in the Early and Middle Ordovician. All rugose corals and most tabulate corals appear to have become extinct at the end of the Permian. The Ordovician corals of North China were most closely related to the Americo-Siberian region, but those of South China occupied an independent province. The Silurian corals of Junggar, Hinggan, Mongolia, Altai and Tuva are genera characteristic of the Uralian-Cordilleran region. The South China fauna had a close affinity to that of the East Australia in the Early Silurian, but was more akin to that of the Urals and Central Asia in the Middle and Late Silurian. During the Early and Middle Devonian, there were 5

- biogeographic provinces in East Asia, all belonging to the Old world Realm: (1) Arctic province; (2) Junggar-Hinggan province; (3) Uralo-Tian Shan province; (4) Palaeotethyan province and (5) South China province. In East Asia, two distinctive zoogeographic provinces are fairly clearly defined: a southern province, with occurrence of *Kueichouphyllum* and a northern province with occurrences of *Gangamophyllum* during the Early Carboniferous. In addition, during the Early Permian, an Uralo-Arctic province was dominated by *Durhaminidae* and a Tethyan province by *Waagenophyllidae*.¹;
- 3343 s[3340] = "GUO S.Z. (1991).- Correlation of Palaeozoic coral fauna between Inner Mongolia-Northeast China and Japan.- Pre-Jurassic geology of Inner Mongolia, China [K.I. Ishii et al. (eds)]: 201-212; China-Japan Cooperative Research Group, Osaka, Japan.- FC&P 23-2.1, p. 45, ID=4265Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: China, Nei Mongol, Japan^^1";
- 3344 s[3341] = "LIAO Wei-Hua, RUAN YIPING (1988).- Devonian of East Asia.- Canadian Society of Petroleum Geologists, Memoir 14 [McMillan N. J. et al. (eds): Devonian of the World], 597-606.- FC&P 18-1, p. 34, ID=2234Topic(s): biogeography; geography, geology; Systematics: ; Stratigraphy: Devonian; Geography: Asia E^The Devonian is widespread in East Asia and is represented by all three series. The Devonian of East Asia may be mainly differentiated into two categories: stable continental domain deposits and mobile intercontinental domain deposits. On the basis of different composition and thickness, the Devonian of East Asia may be separated into regions: Siberia; Mongolo-Sayan; Verkhojansk-Chukotka; Taimyr; Junggar-Hinggan; Southern Tianshan; North China-Tarim; Kunlun-Qinling; Xizang (Tibet); South China; Western Yunnan-Indochina; Himalaya; and West Pacific Island Arcs. Study of the fauna permits discrimination of five paleobiogeographical provinces, all belonging to the Old world Realm. They are: Palaeotethyan; Uralo-Tianshan; Arctic; Junggar-Hinggan; and South China.¹;
- 3345 s[3342] = "SMITH A.B. (1988).- Late Paleozoic biogeography of East Asia and palaeontological constraints on plate tectonic reconstructions.- Philosophical Transactions of Royal Society of London A 326: 189-227.- FC&P 23-2.1, p. 47, ID=4276Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Carboniferous, Permian; Geography: Asia E^^1";
- 3346 s[3343] = "FEDOROWSKI J. (2008).- Early Carboniferous Chinese and Australian "Siphonodendron" (Anthozoa, Rugosa): ecological and geographical influence on taxonomy.- *Geologos* 14, 1: 3-17.- FC&P 36, p. 54, ID=6438Topic(s): biogeography; Rugosa Siphonodendron; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: China, Australia^Normal marine salinity is the main limiting factor for the Subclass Rugosa. Water depth and temperature are less critical. Individual characteristics of specimens and some characteristics of species are, however, excellent environmental indicators. Being distributed exclusively by larvae, Rugosa required free distribution by means of marine currents, as well as midway areas suitable for settlement and metamorphosis of the larvae. Not distance but rather geography and midway environments are therefore the limiting factors for their distribution, relationships and stratigraphic value. Siphonodendron and Siphonodendron-like ("Siphonodendron") corals are discussed as examples of morphological similarity, but not necessarily representing a phylogenetic relationship. The known homeomorphy of European and western North American Siphonodendron taxa (Fedorowski & Bamber 2007) may be extended on the European, some southern Chinese and all south-eastern Australian Siphonodendron-like corals, but only the Chinese and SE Australian forms may be truly related. The latter relationship would extend the boundaries of the Early Carboniferous Australian rugose coral province. The Late

- Tournaisian age of the earliest Australian siphonodendrons; indicates an ancestry of the coral fauna within the province (SE Australia and S China). A mechanism for north-westward migration of this fauna, from SE Australia to S China, is not clear.¹";
- 3347 s[3344] = "FLUGEL E., SINGH I.B. (2003).- Stromatoporoid-grade and other sponge fossils from the upper Krol Formation of the Lesser Himalaya (India): implications for the biotic evolution around the Precambrian-Cambrian boundary interval.- Facies 49, 1: 351-372.- FC&P 33-1, p. 75, ID=7221Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Precambrian / Cambrian; Geography: India, Lesser Himalaya^A study of fossils in thin sections of a sample from the uppermost Krol E Member in the Mussoorie Hills of the Lesser Himalaya, India, proves the existence of morphologically differentiated calcified sponges within the Precambrian-Cambrian boundary time interval. The sponges described as Mussooriella kroli n.gen. n.sp. and Maldeotainia composita n.gen. n.sp. indicate the presence of different organization grades at the Precambrian-Cambrian interval. Mussooriella had a calcareous skeleton consisting of skeletal elements composed of an inner laminated part and a distinct peripheral layer with knobs. Maldeotainia is characterized by a stromato-poroid-grade growth pattern following a thalamid-grade pattern. The stromatoporoid grade part of the skeleton is very similar to skeletal elements common in labechiid Ordovician and younger stromatoporoids. Maldeotainia also shows criteria of Early Cambrian fossils originally described as stromatoporoids and later excluded from this group and transferred to archaeocyathids. These similarities point to an Early Cambrian age of the fossil - bearing horizon in the topmost Krol E member. Growth cavities within crypts indicate that the sponges might have contributed to the formation of small metazoan reef-like structures. Although the study is based on limited material, and many interpretations are still tentative, a thorough documentation of the preliminary results seems reliable considering the high potential of fossils of the upper Krol Formation as an important source in the understanding of early metazoan differentiation. [original abstract]¹";
- 3348 s[3345] = "FONTAINE H. (1997).- Paleontology of Thailand, the fossil corals.- FC&P 26, 2: 43-46. [short note] - FC&P 26-2, p. 43, ID=6879Topic(s): ; corals, reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: Thailand^[short paleontological note; briefly presents history of geological research in Thailand, and records of fossil corals (from Ordovician up to Jurassic) and reefs (Devonian - Jurassic)]¹";
- 3349 s[3346] = "FONTAINE H., SALLYPONGSE S., SUTEETHORN V. (2003).- Glimpses into fossil assemblages of Thailand: Coral perspectives.- Bulletin of Siam Society of Natural History 51, 1: 37-67.- FC&P 33-1, p. 44, ID=7202Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: Thailand^Fossil corals are widespread in Thailand. They belong to many geological intervals, from Ordovician to Quarternary. They have been studied actively during the last 20 years. They are better known, even though some research still needs to be carried out; for instances, Triassic corals, which occur in abundance at many localities of Thailand, remain inadequately known. Carboniferous, Permian and Triassic corals are widespread in Thailand. Devonian and Jurassic corals are in abundance in restricted areas. Ordovician and Silurian corals are rare and remain poorly known. Cretaceous corals are completely absent. In Thailand, the study of corals is the study of long history. One can observe living corals as well as many groups of fossil corals. Corals provide important information on past environments and help to reconstruct paleogeography; they also provide information on the ages of the rocks in which they are included. In this paper, two Devonian localities are mentioned for the first time; they were discovered in January 2002. [original abstract]¹";
- 3350 s[3347] = "FONTAINE H., SALLYPONGSE S., SUTEETHORN V. (2005).- Fossil

diversity in limestones of Thailand: a cornucopia of information about the history of life.- Siam Society Natural History, Bulletin 53, 1: 33-70.- FC&P 34, p. 94, ID=1353^Topic(s): carbonates; carbonates fossils; Systematics: Stratigraphy: Phanerozoic; Geography: Thailand^In Thailand, fossils are common and diverse. They come from bothterrestrial and marine environments. The belong to many time periods beginning with the Cambrian, thus spanning more than 500 millionyears (the Phanerozoic eon). This rich past emerges from extensive published data and is still very interesting to explore. This publication concerns only fossils included in limestones deposited in the seas of the past. Limestone is widespread in Thailand and of various ages. Marine floras (algae) and faunas are in abundance at many limestone exposures and their skeletons are an important component of the limestone. They give deep-time perspective on the evolution of the life in the seas of the past.The limestones of Thailand are not restricted to the widespread visible on the land. They have been found by hydrocarbon exploration at varied depths and in different areas. Permian limestone has been reached by wells under the Khorat Plateau and its extent has been determined by seismic interpretation; it is widespread (for instance, see Mouret, 1994).This publication is concerned only with limestones exposed at ground surface. Limestone is a general term for diverse types of rocks, deposited in different environments. Before describing their biodiversity, we discuss the origin of the limestones of Thailand.^1";

3351 s[3348] = "MAZUMDAR A., BANERJEE D.M. (1998).- Siliceous sponge spicules in the Early Cambrian chert-phosphorite member of the Lower Tal Formation, Krol belt, Lesser Himalaya.- Geology 26, 10: 899-902.- FC&P 27-2, p. 65, ID=3933^Topic(s): spicules; Porifera spicules; Systematics: Porifera; Stratigraphy: Cambrian L; Geography: Himalaya, Lesser^We present the first record of siliceous hexactinellid and demosponge (?) spicules from lower Tommotian chert and phosphorite of the Lower Tal Formation of the Mussoorie and Garhwal synclines in the Lesser Himalaya. Spicules include cross-shaped as well as single-rayed forms, and occur sporadically in a chert or phosphatic groundmass. Scanty records of siliceous sponge spicules in the Proterozoic sedimentary rocks and their abundance and rapid proliferation during the Early Cambrian are interpreted as a result of major change in seawater chemistry due to enhanced availability of nutrients, leading to progressive evolution of siliceous biological forms and phosphatic shelly faunas.^1";

3352 s[3349] = "GUPTA V.J. (1985).- Palaeozoic corals from Himalayas.- Bulletin of the Indian Geologists' Association 18, 2: 137-139. FRAUD!?.- FC&P 18-1, p. 36, ID=2243^Topic(s): fraud data [!?]; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: India, Himalaya^^1";

3353 s[3350] = "FONTAINE H. (1998).- Palaeontology of Malaysia: Palaeozoic corals.- FC&P 27, 2: 37-40.- FC&P 27-2, p. 37, ID=6919^Topic(s): sampling sites; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Malaysia^Very rare solitary corals have been noticed in the Terbat Limestone of Sarawak (Carboniferous and Permian). They have never been studied. They are the only Palaeozoic corals seen in East Malaysia (Sarawak and Sabah). On the contrary, corals younger than the Palaeozoic are known in East Malaysia and Jurassic corals are in abundance in the Bau Limestone of Sarawak. * All the published results mentioning Palaeozoic corals concern West Malaysia (=Peninsular Malaysia). They range from Permian down to Ordovician. However, Devonian, Silurian and Ordovician corals commonly have been collected in small quantity or have been found in a poor state of preservation; they have been the subject of few studies. [excerpt from the short note; presented is also history of paleontological research in Malaysia]^1";

- 3354 s[3351] = "NGUYEN DUC KHOA (1986).- Stromatoporoidea, Chaetetida, Heliolitida, Tabulata and Rugosa of Vietnam.- FC&P 15-2, p. 21, ID=6746^Topic(s): list of taxa and sampling horizons; stroms, corals; Systematics: Porifera Cnidaria; Stromatoporoidea Chaetetida Anthozoa; Stratigraphy: Paleozoic; Geography: Vietnam^Studies of the taxonomic groups under consideration were initiated in Vietnam by Mansuy (1908, 1912, 1913, 1914, 1916, 1920, 1921) and were subsequently continued by other French geologists (Patte, 1926; Fontaine, 1954, 1955a,b, 1961, 1967a,b, 1968, 1969). Considerable contribution to our knowledge of these groups have since been made through palaeontological and geological studies completed during the past 20 years by Vietnamese geologists. [introductory part of an extensive note, listing just few Ordovician and Silurian taxa, numerous Devonian and some Carboniferous locations and taxa]^1";
- 3355 s[3352] = "WEBBY B.D., WYATT D., BURRETT C. (1985).- Ordovician Stromatoporoids from the Langkawi Islands, Malaysia.- Alcheringa 9: 159-166.- FC&P 14-2, p. 45, ID=0909^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Malaysia^The taxa Labechia variabilis Yabe and Sugiyama, Rosenella woyuensis Ozaki, Labechia? sp., and Cystostroma sp. are described from unit J of the Setul Limestone. Tentative correlations suggest that these and some of the north Chinese labechiid occurrences may be pre-Chazyan whiterockian (Llanvirnian) in age and that they are the oldest stromatoporoids.^1";
- 3356 s[3353] = "KRUSE P.D. (1989).- A Thai Ordovician receptaculitalean.- Alcheringa 13: 141-144.- FC&P 19-1.1, p. 18, ID=2562^Topic(s): Receptaculida; Systematics: Porifera; Stratigraphy: Ordovician; Geography: Thailand^^1";
- 3357 s[3354] = "KALIA P., VASHISHT N., VARADARAJAN.S. (1978).- Occurrence of Stromatopora concentrica from the Chamoli Formation, northwest of Rudraprayag, Garhwal Himalaya.- Himalayan Geology 8, 1: 47-53.- FC&P 10-1, p. 59, ID=6017^Topic(s): stroms, Stromatopora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Silurian; Geography: Himalaya^Fossil Stromatopora Concentrica Goldfuss occurs in the phyllites intercalated with Karnaprayag Metavolcanics of the Chamoli Formation of the Garhwal Group about 19km NNW of Rudraprayag in the Srinagar-Nandprayag area. The geological range in time of the fossil is Ordovician-Silurian period. The correlation of the fossil bearing Karnaprayag Metavolcanics and Chamoli Formation with similar formations, in the adjacent area, is discussed.^1";
- 3358 s[3355] = "FONTAINE H., GAFOER S. (eds) (1989).- The Pre-Tertiary Fossils of Sumatra and their Environments.- CCOP Techn. Publication 19: xiii + 356 pp., 39 figs., 77 pls., 1 geol. map; Bangkok.- FC&P 19-1.1, p. 77, ID=2723^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic-pre; Geography: Indonesia, Sumatra^Besides many references to corals and sponges in the running text of each regional and stratigraphic chapter, six chapters deal with coral systematics.^1";
- 3359 s[3356] = "FONTAINE H. (ed.) (1990).- Ten Years of CCOP Research on the Pre-Tertiary of East Asia.- x + 375 pp., Bangkok.- FC&P 19-1.1, p. 73, ID=2714^Topic(s): geology, research history; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Asia SE^Contrary to the idea that oil and gas could be found only in Tertiary basins throughout most of East Asia, CCOP [Coordinating Committee for Geoscience Programmes in East and Southeast Asia] decided in 1973 to investigate the pre-Tertiary series which had already generated some interest in China and which were rather incompletely known in large areas of the CCOP region. Accordingly, it included in its programme of work a critical review of the current knowledge on the pre-Tertiary oil and gas potential of East Asia. In 1974, A. Bonnet started the "CCOP pre-Tertiary Programme"; his work is

continued by H. Fontaine. Very rapidly, interesting results on stratigraphy were obtained in areas easily accessible and previously investigated by geologists. The sedimentary rocks of these areas contained few macrofossils, and for example, Carboniferous microfossils, were poorly known and difficult to study in the past. Hence, the first fieldwork led to many new palaeontological and stratigraphical discoveries, especially in remote areas. Ten years of geological research with CCOP is indeed an adventure. Many fossils have been discovered and provided new data to stratigraphy and paleogeography. Results of the studies have been published regularly, giving the impression of plainly logical development of knowledge. [review by Kl. Oekentorp] Almost every article in this book refers to fossil corals and related groups. In the following - however - only the most important articles are mentioned here, this means only those dealing with systematic aspects.^1";

- 3360 s[3357] = "FONTAINE H. (1978).- Preliminary notes on a pre-Tertiary geological study of the Phillipines.- CCOP Newsletter 05, 1-2. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia; CCOP Technical Secretariat, Bangkok: 243-244].- FC&P 23-2.1, p. 44, ID=4250^Topic(s): geology, geohistory; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Philippines^^1";
- 3361 s[3358] = "FONTAINE H. (1990).- Carboniferous shelf around the Kontum plate.- Ten years of CCOP research on the pre-Tertiary of East Asia [H. Fontaine (ed.); CCOP Technical Secretariat, Bangkok]: 13-23.- FC&P 23-2.1, p. 44, ID=4254^Topic(s): carbonate platforms; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Kontum Plate^^1";
- 3362 s[3359] = "FONTAINE H., GAFOER S., SUHARSONO (1988).- well-dated horizons of the pre-Tertiary of Sumatra.- CCOP Newsletter 13, 2. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 55-58].- FC&P 23-2.1, p. 44, ID=4255^Topic(s): geology, stratigraphy; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Indonesia, Sumatra^^1";
- 3363 s[3360] = "FONTAINE H., KHOO H.P. (1988).- Palaeontological research in Terengganu State, peninsular Malaysia.- CCOP Newsletter 13, 1. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 97-103].- FC&P 23-2.1, p. 44, ID=4256^Topic(s): ; paleontology; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Malaysia, Terengganu^^1";
- 3364 s[3361] = "FONTAINE H., KHOO H.P., VACHARD D. (1988).- Note on Bukit Taat, Terengganu, Malaysia.- CCOP Newsletter 13, 4. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 107-109].- FC&P 23-2.1, p. 44, ID=4258^Topic(s): geology; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Malaysia, Terengganu^^1";
- 3365 s[3362] = "FONTAINE H., VACHARD D. (1988).- Preliminary remarks on a few fossiliferous localities of Thailand and Malaysia.- CCOP Newsletter 13, 3. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 7-12].- FC&P 23-2.1, p. 45, ID=4262^Topic(s): geology, fossils; geology paleontology; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Thailand, Malaysia^^1";
- 3366 s[3363] = "FONTAINE H. et al. (1986).- The Pretertiary fossils of Sumatra and their Environments.- CCOP Session 22; Guangzhou, China; November 11-21 1985: 287 pp., 77 pls.- FC&P 15-1.2, p. 49, ID=6727^Topic(s): ecology; paleontology, ecology, geology; Systematics: ; Stratigraphy: Cenozoic-pre; Geography: Sumatra^[the book contains 17 chapters on various aspects of

- paleontology, stratigraphy and paleoenvironments of Sumatra, authored by a group of 11 specialists: H. Fontaine, S. Gafoer, D. Vachard, I. Metcalfe, C. Vozenin-Serra, N.D. Tien, L. Beauvais, M.C. Bernet-Rollande, A.F. Maurin, J.P. Bassoulet, K. Brata] ^1";
- 3367 s[3364] = "GOEL R.K., KATO M., JAIN A.K., SRIVASTAVA S.S. (1987).- Fauna from the Muth Quartzite, Garhwal Himalaya, India.- Journal Faculty of Sciences, Hokkaido University 4, 22, 2: 247-257.- FC#038;P 17-1, p. 22, ID=2125^Topic(s): biostratigraphy; fossils stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: India, Himalaya^A form of pentamerid brachiopod denoting the Late Silurian age and some corals are recorded from the upper part of the Muth Quartzite in Kiogad valley of Garhwal Himalaya. This finding implies that, in spite of previous assignment of the Muth Quartzite as of exclusively Devonian, it is a lithostratigraphic unit of largely silurian age.^1";
- 3368 s[3365] = "BHARGAVA O.N., BASSI U.K. (1986).- Silurian Reefal Buildups: Spiti-Kinnaur, Himachal Himalaya, India.- Facies 15: 35-52.- FC#038;P 15-2, p. 41, ID=0734^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: India, Himalaya^The silurian sequence in Spiti and Kinnaur was studied at Takche, Gechang, Muth-Shian, Leo and Manchap. At all these localities the sequence commences with an intertidal - near-shore argillo-arenaceous succession. The overlying part at Takche comprises arenaceous dolomite, calcareous sandstone and dolomite. It sporadically contains rugose and tabulate corals deposited in a shallow undathem near the shore. The succession at Gechang is more calcareous and in some parts rich in corals; stromatoporoids occur locally. Here bioclastic wacke/packstones and framestones formed a buildup which was possibly formed in a lagoon. The Muth-Shian area is characterized by bioclastic mudstones, bioclastic wacke/packstones and framestones. Reef builders are corals, stromatoporoids and solenoporoids. These sediments seen to be lateral equivalent of the coastal arenaceous sequence exposed at Baldar and may represent a fringe reef.^1";
- 3369 s[3366] = "OLIVER W.A.jr, PEDDER A.E.H., WEILAND R.J., QUARLES van UFFORD A. (1995).- Middle Palaeozoic corals from the southern slope of the Central Ranges of Irian Jaya, Indonesia.- Alcheringa 19: 1-15.- FC#038;P 25-1, p. 34, ID=3015^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Silurian? Devonian; Geography: Indonesia, New Guinea W^Rugose and tabulate corals of Frasnian (early Late Devonian) and pre-Frasnian Devonian and Silurian(?) ages from Irian Jaya (western New Guinea), Indonesia, are described and illustrated for the the first time. The Frasnian corals are the most important; they occur in the uppermost part of the Modio Formation (redefined), are well-preserved and suggest a biogeographic linkage to western Australia. The source carbonates may represent a reef environment. The pre-Frasnian corals are from stream cobbles at two localities. They indicate the presence or former presence of a more complete Middle Palaeozoic sequence than was previously known in Irian Jaya.^1";
- 3370 s[3367] = "FLUGEL H.W., TINTORI A. (1993).- Late Devonian (Frasnian) corals from central Dolpo, Nepal.- Rivista Italiana di Paleontologia e Stratigrafia 99, 1: 3-26.- FC#038;P 22-2, p. 80, ID=3503^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Fra; Geography: Nepal^Rugosa and Tabulata from the Late Devonian of central Dolpo (Nepal) belong to the genera Kuangxiastraea, Scruttonia, Sinodisphyllum, Tabulophyllum (?), Fruehwirthia gen. n., Thamnopora, Cladopora, Alveolites and Alveolitella. The calcarenitic beds yielding the fossils are overlain by a prominent oolitic ironstone with thick ferruginous nodules and crusts. The age of the corals is probably Early Frasnian, thus younger than the Givetian fauna previously reported from eastern Dolpo. Biogeographic relations of the new fauna are with Western Europe and South China. ^1";

- 3371 s[3368] = "SCHRODER S. (2004).- Devonian rugose corals from the Karakorum Mountains (Northern Pakistan).- Rivista Italiana di Paleontologia e Stratigrafia 110, 3: 605-641.- FC#038;P 33-2, p. 22, ID=1131^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Pakistan, Karakorum Mts^The Karakorum Block is regarded as a microplate of "Gondwanan" origin and was part of the Cimmerian continent ("Mega Lhasa") which rifted away from the northern margin of Gondwana during the Late Palaeozoic/Early Mesozoic. From the Northern Karakorum Range (Yarkhun and Karambar River Valleys: structurally belonging to the Northern Sedimentary Belt) an Upper Givetian to Lower Frasnian rugose coral fauna of the Shogram Formation is described. The fauna is dominated by cosmopolitan genera such as Hexagonaria, Disphyllum, Macgeea and the Temnophyllum/Spinophyllum group, generally showing a geographically wide distribution, although being absent from the Eastern Americas Realm in the Upper Givetian/Lower Frasnian. Therefore its components are of little use for biogeographical deductions at sub-realm level, and in explaining the relation between the Karakorum Range and other Cimmerian crustal blocks. A remarkable exception is the first record of the genus Pseudopexiphyllum outside of Turkey, indicating a connection to the western part of the Cimmerides. On species level, the coral fauna of the Shogram Formation is characterized by the development of a diverse and rather unique fauna including about 35 taxa, that differs from the faunas known from neighbouring crustal blocks. So far, faunistic links to the Central Iranian Microcontinent (Yazd-, and Tabas-Block), the northwest Iranian Plate (Elburz), Central Pamir, the Lhasa Block and western Qiangtang are not clear, and although each of these fragments are believed to be closely connected they were apparently not in direct contact during the Devonian. However, the Karakorum fauna is remarkably close to one known from the Helmand Block in Afghanistan, showing a very similar generic composition that includes numerous morphologically closely related, although not identical species. Accordingly, the restricted faunal exchange led to the development of new taxa. Distribution of the new species of Spinophyllum, Pseudopexiphyllum and Pseudozaphrentis is limited to the Karakorum Mountains. Reasons for this individual faunistic development and the missing faunal exchange are unexplained, but suggest that some kind of active faunal barrier must have existed during the Devonian, which led to the development of the specific Karakorum fauna. With the exception of Phillipsastrea orientalis Smith, 1930, which is elsewhere only known from the Burmese Devonian, the occurrence of some other species suggest a connection to regions which are regarded as biogeographically unrelated. A weak relation to central European faunas is indicated by the occurrence of characteristic species of Macgeea and Hexagonaria known from the Ardennes and the Holy Cross Mountains. More unusual are the faunistic affinities to the Altai-Sayan region shown by the surprising occurrences of species of Spinophyllum and siphonophrentid corals morphologically very close to those known from the Altai Mtns. and Kazakhstan.^1";
- 3372 s[3369] = "NGUYEN DUC KHOA (1983).- On the presence of Calceola fossil in Vietnam.- Journ. Sci. Earth 3, 1: 29-30.- FC#038;P 14-2, p. 24, ID=6709^Topic(s): ; Rugosa Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Vietnam^^1";
- 3373 s[3370] = "NGUYEN HUU HUNG (2003).- Upper Devonian sediments, mass extinction of macrofossils, and Frasnian/Famennian boundary, North Viet Nam.- Journal of Geology [Viet Nam], Series B, 22: 19-30.- FC#038;P 34, p. 27, ID=1195^Topic(s): extinctions F/F; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra/Fam; Geography: Vietnam N^The stratigraphy of Givetian, Frasnian and Famennian beds in Vietnam is reviewed and the macrofossils in each of the stages are listed. Of stromatoporoids, 22 genera are reported from Givetian beds, 12 from Lower and Middle

- Frasnian beds and 6 genera from uppermost Famennian beds. The F/F boundary is drawn in 3 typical sections on the disappearance of several groups of macrofossils, including the stromatoporoids, and the appearance of Famennian conodonts and forams.¹¹;
- 3374 s[3371] = "NGUYEN HUU HUNG, MISTIAEN B. (1998).- Uppermost Famennian stromatoporoids of north central Viet Nam.- Journal of Geology [Viet Nam] Series B, 11-12: 57-75.- FC&P 28-1, p. 53, ID=3993Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: VietnamTen species of stromatoporoid belonging to 6 genera, including a new genus, are described. The fauna is closely similar to the one of south China and northeast Russia. The following species are described: Labechia densata Gorsky, Labechia kurganensis Yavorsky, Stylostroma ramosum Gorsky, Stylostroma sinensis (Dong), Stylostroma cf. convexa (Yavorsky), Platiferostroma hybridum (Dong), Platiferostroma phongnhaense n.sp., Clavidictyon regulare Dong, Rosenella aff. miniaensis, and the new genus Vietnamostroma with type species V. vietnamense.11;
- 3375 s[3372] = "NGUYEN HUU HUNG, MISTIAEN B. (1998).- Some new species of dendroid stromatoporoids from the Muc Bai Formation (Givetian) of north central Vietnam.- Journal of Geology [Viet Nam], Series B, No. 11-12: 41-45.- FC&P 28-1, p. 54, ID=3994Topic(s): dendroid stroms, taxonomy, biogeography; stroms dendroid; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv; Geography: VietnamThree new species of dendroid stromatoporoids including Idiostroma quydatensis, Vacuustroma minuta, V. concentrica, from the Muc Bai Formation are described and illustrated. They have close affinity with Middle-Upper Devonian stromatoporoids of Viet Nam, China and Europe.11;
- 3376 s[3373] = "FONTAINE H., MISTIAEN B., TANTIWANIT W., TONG-DZUY T. (1990).- Devonian fossils from Northeast Thailand: some new data from Tabulata and Stromatoporoidea.- Ten Years of CCOP Research on the Pre-Tertiary of East Asia [Fontaine H. (ed.)]: 319-330, 9 figs.- FC&P 19-1.1, p. 74, ID=2718Topic(s): ; paleontology; Systematics: ; Stratigraphy: Devonian; Geography: Thailand NEFaunal lists contain some stromatoporoids. Amphipora angusta, Hermatostroma beuthii and H. cf. pustulosum are briefly described and figured as sketches.11;
- 3377 s[3374] = "NGUYEN DUC KHOA (1996).- The Upper Famennian and Tournaisian Rugosa and stratigraphy of Viet Nam.- Geologos 1: 19-67.- FC&P 27-2, p. 15, ID=3897Topic(s): distribution; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam / Carboniferous Tour; Geography: VietnamUpper Famennian and Tournaisian deposits are present in the eastern, northern and western parts of North Viet Nam and in the northern part of Central Viet Nam. Argillaceous and siliceous limestones are predominant lithologies. Transitional deposits of Devonian / Carboniferous age represented by the Halong, Toctat, Bancai, Phongnha and Sebanghieng Formations. The Rugosa from Halong, Phongnha and Sebanghieng Formations have not previously been described. This is an endemic fauna, similar in some ways to the deep-water fauna from the Shaodong Formation of southern China. The Rugosa from the Chernyshinella Zone (Upper Tournaisian) are also described here. Two new genera: Fedorowskia and Cobaiphyllum, both from the Quasiendothyra Zone have been recognized. Cystophrentis, which is very common in Viet Nam, is present in the Halong and Sebanghieng Formations. Dematophyllum is typical of the Chernyshinella-Dainella Zones. Two Rugosa Assemblage Zones: Cystophrentis-Cobaiphyllum Ass. Zone (Middle Famennian to Early Tournaisian) and the Pseudouralina-Fedorowskia Ass. Zone (Middle and Late Tournaisian) have also been determined.11;
- 3378 s[3375] = "FONTAINE H., SUTEETHORN V. (2000).- Devonian and Lower Carboniferous corals found in Ba Na Klang area, Loei province, Northeast Thailand.- Journal of the Geological Society of Thailand

- 2000, 1: 27-33.- FC&P 29-1, p. ???, ID=1438^Topic(s):; Tabulata, Rugosa; Systematics:Cnidaria; Tabulata Rugosa; Stratigraphy:Devonian, Carboniferous L; Geography:Thailand NE^Diverse fossils of Devonian and Lower Carboniferous age have been found in the Ba Na Klang area in Loei Province, Northeast Thailand, in limestones previously mapped as Permian. The undescribed Devonian fauna consists of reefal corals and stromatoporoids. The Upper Visean - Serpuhkovian coral fauna consists of Syringopora, Chaetetipora, Rotiphyllum, Kueichowphyllum, Arachnolasma, Lithostrotion, Solenodendron, Aulokoninckophyllum, Lansdaleia, Heterophyllia and Hexaphyllia. It is associated with foraminifera, fenestellids, brachiopods and crinoids.^1";
- 3379 s[3376] = "FONTAINE H., POUMONT C., SONGSIRKUL B. (1981).- New upper Palaeozoic formations of northeast Thailand in Devonian and Lower Carboniferous.- CCOP Newsletter 8, 4. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 289-296].- FC&P 23-2.1, p. 45, ID=4260^Topic(s):geology; Systematics:Stratigraphy:Devonian, Carboniferous; Geography:Thailand NE^^1";
- 3380 s[3377] = "NGUYEN DUC KHOA (1980).- Devonian, Carboniferous and Permian rugose corals.- Characteristic fossils in the north of Vietnam; Science and Technics Publishing House, Hanoi.- FC&P 14-2, p. 24, ID=6708^Topic(s): Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian, Carboniferous, Permian; Geography:Vietnam^^1";
- 3381 s[3378] = "FONTAINE H., SUTEETHORN V. (eds) (1988).- Late Palaeozoic and Mesozoic Fossils of West Thailand and their Environments.- CCOP Technical Bulletin 20; v + 216 pp., 31 figs., 2 tbls., 46 pls.- FC&P 19-1.1, p. 76, ID=2720^Topic(s):ecology; paleontology; Systematics:Cnidaria; Anthozoa; Stratigraphy:Paleozoic U - Mesozoic; Geography:Thailand w^[The description of stratigraphic units in particular follow descriptions of faunas in several appendices. The appendices 2, 6 and 7 refer to corals.]^1";
- 3382 s[3379] = "FONTAINE H., INGAVAT R., VACHARD D. (1982).- Carboniferous corals from northeast Thailand.- Bulletin Geological Society of Malaysia 15: 47-56.- FC&P 13-1, p. 40, ID=0472^Topic(s): Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Carboniferous; Geography:Thailand NE^^1";
- 3383 s[3380] = "FONTAINE H., SUTEETHORN V. (2000).- Moscovian to Gshelian coral assemblages in northeastern Thailand: Field-relationship between Carboniferous and Permian strata.- Journal of the Geological Society of Thailand 2000, 1: 34- 41.- FC&P 29-1, p. ???, ID=1439^Topic(s):biostratigraphy; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Carboniferous Mos - Gzh; Geography:Thailand NE^In the Ban Na Duang area of Loei Province, Northeast Thailand, new Middle-Upper Carboniferous localities have been discovered. They have yielded coral assemblages consisting of Rugosa (Lublinophyllum, Caninia, Caninophyllum, Ivanovia) and Tabulata (Multithecopora, Chaetetes). These corals belong mainly to Moscovian. Higher up, only few corals are Kasimovian and Gshelian in age. Genus Ivanovia, rarely found in Thailand in the past and unknown in other countries of South East Asia, is reported at a locality near Ban Na Duang. Middle-Upper Carboniferous and Permian strata were deposited continuously, apparently without stratigraphic gap at the boundary between Carboniferous and Permian.^1";
- 3384 s[3381] = "FONTAINE H., SALYAPONGSE S., VACHARD D. (1999).- New Carboniferous fossils found in Ban Bo Nam Area, Central Thailand.- Symposium on Mineral, Energy, and Water Resources of Thailand: Towards the year 2000: 201-211.- FC&P 29-1, p. 55, ID=1496^Topic(s): paleontology; Systematics:Cnidaria; Anthozoa; Stratigraphy:Carboniferous; Geography:

Thailand^Carboniferous fossils have been collected from limestone lenses which intercalated with basic to intermediate volcanoclastic sediments in an area of central Thailand east of Lam Narai. They consist of calcispherids, algae, foraminifers and corals; they mainly indicate a Late Moscovian (Miatchkovian) age, locally extending to early Kasimovian. They bring interesting new information showing that the stratigraphic range of the sedimentary rocks of that area extends in continuity from Middle Carboniferous to the top of Middle Permian. [original summary; the taxa are: an undetermined Micheliniid genus, Multithecopora sp., Caninia sp., Bothrophyllum aff. conicum Trautschold 1879, Bothrophyllum sp., Amygdalophyllum sp., and Petalaxis siamensis Fontaine, 1994]^1";

- 3385 s[3382] = "FONTAINE H. (1990).- Preliminary note on the Carboniferous corals of Thailand.- Ten Years of CCOP Research on the Pre-Tertiary of East Asia [Fontaine H. (ed.)]: 281-285, 2 figs.- FC&P 19-1.1, p. 73, ID=2717^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Thailand^Since 1980, many Carboniferous localities have been found in Northeast Thailand (Northeast of Loei and southwest of Phetchabun); some of them have yielded corals. In 1988 and 1989, new Carboniferous sections have been discovered as well as new scattered outcrops, especially in the new area west of Phetchabun (Noen Maprang area). A summary of our knowledge on the Carboniferous corals of Thailand will show that several different coral assemblages have been indentified. This result is important because Carboniferous corals, which were almost unknown in Thailand ten years ago, indicate the presence of a shelf with shallow and warm sea water around the Khorat Plateau during the whole Carboniferous. Elsewhere in Thailand, no Carboniferous coral has been found yet.^1";
- 3386 s[3383] = "FONTAINE H. (1989).- Lower Carboniferous Corals.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary Fossils of Sumatra and their Environments]: 41-44.- FC&P 19-1.1, p. 77, ID=2724^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Indonesia, Sumatra^Mentioned are Syringopora, Siphonodendron and Zaphrentites.^1";
- 3387 s[3384] = "FONTAINE H., SUTEETHORN V., JONGKANJANASOONTORN Y. (1991).- Carboniferous corals of Thailand.- CCOP Technical Bulletin 22: iv + 1-82.- FC&P 20-2, p. 50, ID=2921^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Thailand^[The paper deals with the description of localities, the coral assemblages and the systematic description of the corals. The following genera are mentioned: Rugosa: Kizilia, Cyathaxonia, Amplexocarinia, Syringaxon, Rotiphyllum, Hapsiphyllum, Allotropiophyllum, Zaphrentites, Lophophyllidium, Caninia, Siphonophyllia, Lublinophyllum, Arachnolasma, Yuanophyllum, Kueichouphyllum, Sestrophyllum (S. carinatum n.sp.), Palaeosmia, Pseudotimania, Caninophyllum, Bothrophyllum, Aulokoninckophyllum, Siphonodendron (S. chonglomense n.sp.), Lithostrotion, Diphyphyllum, Solenodendron, Opiphyllum, Axophyllum, Gangamophyllum, Lonsdaleia, Actinocyathus, Dorlodotia, Petalaxis, Kionophyllum, Koninckocarinia, Amygdalophylloides. Heterocorallia: Heterophyllia, Hexaphyllia. Tabulata Syringopora, Multithecopora, Chaetetipora.]^1";
- 3388 s[3385] = "FONTAINE H., SALYAPONGSE S. (1997).- Unexpected discovery of Early Carboniferous (Late Viséan-Serpukhovian) corals in East Thailand.- The International Conference on Stratigraphy and Tectonic Evolution of Southeast Asia and the South Pacific Bangkok, 19-24 August, Thailand.- FC&P 27-1, p. 69, ID=3812^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Visé - Serp; Geography: Thailand E^A new research is currently carried out on the poorly known Carboniferous of East Thailand. A diverse coral assemblage has been found for the first time; it is described in this paper and

- consists of Tabulata, solitary (Kueichouphyllum ?) and compound (Siphonodendron and Solenodendron) Rugosa as well as abundant Heterocorallia (Hexaphyllia). It belongs to the Upper Visean and may extend to the Serpukhovian. It is associated with a rich fauna. A warm climate is suggested. The presence of these corals and the large development of limestone do not fit with the former attribution of the Carboniferous of East Thailand to the Kaeng Krachan Formation.¹;
- 3389 s[3386] = "FONTAINE H. (1990).- Carboniferous corals from northeast Thailand (northeast of Loei).- Geologisches Jahrbuch B73: 81-89.- FC&P 23-2.1, p. 44, ID=4253Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Thailand NE¹";
- 3390 s[3387] = "FONTAINE H., SUTEETHORN V., VACHARD D. (1994).- The Carboniferous corals of Southeast Asia with new discoveries in Laos and Thailand.- Proc. Intern Symposium on Stratigraphic Correlation of Southeast Asia 1994: 25-42.- FC&P 24-1, p. 61, ID=4474Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Asia SEThe geographic and Stratigraphic distribution of Carboniferous corals in Southeast Asia are briefly exposed and two distinctive parts of Southeast Asia are recognised. New data are provided on central Laos and northeastern Thailand. The following taxa are described: Lophophyllidium sp., Caninia lipoensis (Chi 1931), Lublinophyllum thailandicum Fontaine, Ingavat & Vachard 1982, Caninophyllum indonense n.sp., Petalaxis siamensis n.sp. and Ivanovia sigillata n.sp.¹;
- 3391 s[3388] = "SUGIYAMA T., TORIYAMA R. (1981).- Coral and Fusuline Faunas from the Kabin Buri Area, East Central Thailand.- Geology and Palaeontology of southeast Asia 22: 1-22. [repr. in 1992].- FC&P 22-2, p. 82, ID=3512Topic(s): ; corals forams; Systematics: Cnidaria Foraminifera; Anthozoa; Stratigraphy: Carboniferous ?; Geography: Thailand, Kabin Buri areaThe two species mentioned below are described: family Aulophyllidae Dybowski 1873, genus Koninckophyllum Thomson & Nicholson 1876, type species K. magnificum Thomson & Nicholson 1876; Koninckophyllum ingavatae Sugiyama n.sp.; family Lophophyllidiidae Moore & Jeffords 1945, genus Khmerophyllum Fontaine 1961, type-species Khmerophyllum cambodgense Fontaine 1961, Khmerophyllum cf. cambodgense Fontaine.¹;
- 3392 s[3389] = "GARZANTI E., ANGIOLINI L., BRUNTON H., SCIUNNACH D., BALINI M. (1998).- The Bashkirian & Fenestella Shales& and the Moscovian & Chaetetid Shales& of the Tethys Himalaya (S Tibet, Nepal, India).- Journal of Asian Earth Sciences 16, 2-3: 119-141.- FC&P 30-1, p. 32, ID=1517Topic(s): stratigraphy, ecology; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous Mos; Geography: India, HimalayaThe & Fenestella shales& are a mid-Carboniferous marker unit which has long been described from classic localities of the NW Himalaya (Kashmir, Spiti). Correlative shaly units have recently been traced in central Nepal and as far as South Tibet, where they yielded varied brachiopod assemblages indicative of Bashkirian age. * A second distinct interval of black shales, characterized by the abundance of chaetetids and directly underlying the widespread Gondwanan diamictites, has been dated as Moscovian in Spiti and represents the youngest fossiliferous horizon hitherto identified in the Upper Carboniferous of the Tethys Himalaya. The & Chaetetid shales& are recognized also in Manang, whereas in South Tibet the stratigraphic framework still needs improved definition. These major fossiliferous black shale units, marking repeated transgressive events in the middle part of the Himalayan rift sequence, have not only major stratigraphic significance but also represent a fundamental landmark in palaeogeographic and palaeoclimatic reconstructions of Northern Gondwana. with the onset of continental rifting, arid tropical climates

at the close of the Tournaisian were replaced by temperate humid conditions in the Viséan-Serpukhovian, when diamictites were deposited in South Tibet. After this first cooling stage, the Fenestella shales mark a widespread transgression at the very beginning of the Late Carboniferous, coupled with reduced tectonic activity and temperate to temperate-warm climates. After renewed tectonic activity during a second cooling episode, marked by local deposition of diamictites in central Nepal, the Chaetetid shales represent another major transgression in the Moscovian, shortly preceding the final and most intense cooling event marked by deposition of glacio-marine diamictites in the whole Tethys Himalaya from Kashmir to South Tibet during the latest Carboniferous to earliest Permian. Two fossiliferous horizons containing very similar brachiopod faunas of early Late Carboniferous age have recently been found also in North Karakorum, at lower southern latitudes, where climatic conditions always remained temperate and there is no trace of Upper Palaeozoic glacial deposits or ice-rafted debris. [original abstract]^1";

- 3393 s[3390] = "SUGIYAMA T., NAGAI K., YANAGIDA J., NAKORNSRI N. (1995).- A new occurrence of Heterophyllia from Northeast Thailand.- CCOP Newsletter 20, 3-4: 27.- FC#038;P 25-1, p. 39, ID=3025^Topic(s): ; Heterocorallia, Heterophyllia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: Thailand NE^A new occurrence of Heterophyllia was found in Northeast Thailand. A stratified limestone sequence with a thickness of 40 m was investigated at the point 89080701, located 500 m south of the Lower Carboniferous limestone outcrops of the Khao Sam Nge area, reported by Fontaine et al. sequence, which corresponds to a southern extension of the Lower Carboniferous limestones of the Ban Sangao Formation (Fontaine et al. 1991).^1";
- 3394 s[3391] = "STANLEY G.D.Jr, YANCEY T.E. (1986).- A new late paleozoic Chondrophorine (Hydrozoa, Velellidae) by-the-wind sailor from Malaysia.- Journal of Paleontology 60, 1: 76-83.- FC#038;P 15-1.2, p. 40, ID=0762^Topic(s): ; Hydrozoa, Velellidae; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Carboniferous; Geography: Malaysia^A new medusoid hydrozoan, Plectodiscus malayites n.sp., belonging to the Family Velellidae is described from Carboniferous rocks of the Malay Peninsula. They are preserved as flattened internal float structures or pneumatophores and are the first examples from this part of the world. In contrast to other occurrences, the great abundance of these sailed organisms were an important component of the pelagic fauna and were at least locally abundant in open seas of the late Paleozoic.^1";
- 3395 s[3392] = "FONTAINE H., BIN AMNAN I., VACHARD D. (2003).- Carboniferous corals from the Kuantan area, Peninsula Malaysia, and associated microfauna: peculiar faunas for Southeast Asia and puzzling faunas for stratigraphy.- Minerals and Geoscience Department Malaysia, Technical Papers 2: 69-99.- FC#038;P 32-2, p. 60, ID=1391^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Malaysia^In Malaysia, Carboniferous corals are few in number; usually scattered in the sediments and commonly represented by assemblages, which are not rich and diverse. The corals are commonly reworked; broken specimens and small fragments prevail. They do not build reefs at all. In contrary to other areas, the Kuantan area is relatively rich in corals. A peculiar Carboniferous coral fauna collected from four limestone hills i.e. Bukit Tenggek, Bukit Sagu, Bukit Charas and Bukit Panching in the Kuantan area has been studied. Systematic descriptions are given for the selected corals. In order to give better information on stratigraphy, associated algae and foraminifera have also been identified. The Kuantan fauna is not very diverse, but it is very interesting, even from an international point of view, because it belongs to the boundary between Lower and Middle Carboniferous, to a

- horizon of contention. Hexaphyllia is common, at least locally. Other corals belong to Fomichevella, Amygdalophyllum, Dibunophyllum and Axophyllum; such a fauna has not been found so far in other parts of Southeast Asia. Among the foraminifera, the important taxa are Howchinia, Monotaxinoides, Bradyina cribrostomata, Eastaffella mosquensis, Janichewskina and Archaediscus karreri.^1";
- 3396 s[3393] = "NGUYEN HUU HUNG (2001).- Astrorhizae-like structures on epitheca of rugose corals from the Carboniferous of Laos.- Acta Palaeontologica Polonica 46, 4: 583-588.- FC&P 31-1, p. 72, ID=1626^Topic(s): epibionts?; Rugosa, epibionts; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Laos^Stellate patterns, called astrorhizae, occurring in some Paleozoic stromatoporoids are, by most authors, regarded as integral elements of these enigmatic fossils. The finding of stellate structures on epithecae of rugose corals from the Lower Carboniferous of Central Laos seems to support, however, the idea that astrorhizae of Paleozoic stromatoporoids may represent traces of foreign organisms.^1";
- 3397 s[3394] = "FONTAINE H., WATTANA T. (2002).- The coral Koninckophyllum in the Early Carboniferous of Thailand.- The Symposium on Geology of Thailand, 26-31 August 2002, Bangkok: 35-37.- FC&P 31-2, p. 43, ID=1686^Topic(s): ; Rugosa, Koninckophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Thailand^Koninckophyllum is a Rugose coral genus; it is not common in the Carboniferous of Thailand. It was previously known in Thailand by a single specimen found in the eastern part of the country. In this paper, it is reported at a second locality, in central Thailand, where it may occur in moderate number. ^1";
- 3398 s[3395] = "GUPTA V.J. (1986).- Lower Carboniferous rugose corals from Lahaul, Himachal Pradesh.- Journal of Geological Society of India 27, 2: 223-224. FRAUD!?.- FC&P 18-1, p. 37, ID=2244^Topic(s): fraud data!?.; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: India, Himalaya^^1";
- 3399 s[3396] = "METCALFE I. (1984).- Stratigraphy, palaeontology, and palaeogeography of the Carboniferous of Southeast Asia.- Memoires de la Societe geologique de France, N.S. 147: 107-118.- FC&P 15-2, p. 31, ID=0680^Topic(s): stratigraphy, fossils; stratigraphy, paleontology; Systematics: ; Stratigraphy: Carboniferous; Geography: Asia SE^^1";
- 3400 s[3397] = "METCALFE I., IDRIS M., TAN J.T. (1980).- Stratigraphy and paleontology of the Carboniferous sediments in the Panching area, Pahang, West Malaysia.- Geological Society of Malaysia Bulletin 13: 1-26.- FC&P 15-2, p. 31, ID=0681^Topic(s): biostratigraphy; fossils; Systematics: ; Stratigraphy: Carboniferous; Geography: Malaysia^^1";
- 3401 s[3398] = "FONTAINE H., SUTEETHORN V., VACHARD D. (1995).- The Carboniferous of Northeast Thailand. A review with new data.- J. Southeast Asian Earth Sci. 12, 1/2: 1-7.- FC&P 25-1, p. 29, ID=3002^Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: Thailand NE^A synthesis is provided of the many papers published on the Carboniferous of northeast Thailand since 1960, which have been restricted to localities north of latitude 17°10'N. In addition, new data are provided on Carboniferous localities recently discovered south of latitude 17°10'N. All stages of the Carboniferous are represented in northeast Thailand and their exposures are delimited in this paper. In northeast Thailand Carboniferous rocks are widely exposed in an area where Loei and Wang Saphung are the main towns, an area 20-40km wide and 140km long. In parts of this area, they are overlain by Permian strata (mainly limestone) in the core of a syncline. Middle-Upper Devonian limestone, shale and chert occur occasionally in the central and northern parts of the area. They are less widely distributed than the Carboniferous rocks but are obvious features because the limestone

- forms karstic hills and the chert outcrops are prominent. An important development of shale during the Middle-Upper Carboniferous has favoured differential erosion so that today these rocks are distributed commonly in flat areas with paddy fields; the shale concealed under a few meters of earth. Their discovery has been due to farmers digging ponds at several places.^1";
- 3402 s[3399] = "FONTAINE H., LOVACHALASUPAPORN S., TIEN N.D., VACHARD D. (1983).- New data on the Lower Carboniferous in Thailand.- CCOP Newsletter 10, 1-2. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 297-306].- FC&P 23-2.1, p. 45, ID=4259^Topic(s): geology; Systematics: ; Stratigraphy: Carboniferous L; Geography: Thailand^^1";
- 3403 s[3400] = "FONTAINE H., SALYAPONGSE S., VACHARD D. (2002).- The Carboniferous of East Thailand - new information from microfossils.- Bulletin of the Geological Society Malaysia 45 [Proceedings of Geosea'98]: 461-465.- FC&P 32-1, p. 17, ID=7139^Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: Thailand E^In 1996 for the first time, Carboniferous microfossils were discovered in east Thailand, at a single limestone locality. In 1997, another locality of the same area yielded Early Carboniferous corals. Because of these two discoveries, a systematic search for microfossils has been carried out in all the limestone exposures at that area. Microfossils have been found almost everywhere; they are rare to common. The fossils and the facies focus on an age ranging from Late Viséan to Bashkirian. [initial part of extensive summary]^1";
- 3404 s[3401] = "KATO M., GUPTA V.J. (1989).- Late Palaeozoic Corals from the Himalayas.- Journal Faculty of Science Hokkaido University IV, 22, 3: 399-424.- FC&P 18-2, p. 32, ID=2476^Topic(s): fraud data [!?]; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: India, Himalaya^Permian corals, representing 3 typical Tethyan genera (Protomichelina, Iranophyllum and Ipciphyllum) are described from the Shyok Melange, near Shigar, Baltistan. The Carboniferous corals Pseudazaphrentoides, Pseudotimania, Arachnolasma and Bothrophyllum (?), and a Devonian Ceratophyllum are also described from a Devonian-Carboniferous sequence developed near Tanze, Zanskar Region. These fossils form the first records of Late Palaeozoic corals from the above-mentioned regions of the Himalayas. The Permian corals are of Chihsonian to Maokouan age. The Carboniferous are of late Viséan or early Namurian age, and the Devonian representative is of Famennian age.^1";
- 3405 s[3402] = "CHONGLAKMANI C., FONTAINE H., VACHARD D. (1983).- A Carboniferous-Lower Permian (?) section in Chon Daen area, central Thailand.- Conference on Geology and Mineral Resources of Thailand [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 307-314].- FC&P 23-2.1, p. 44, ID=4245^Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous, Permian L?; Geography: Thailand^^1";
- 3406 s[3403] = "FONTAINE H. (1983).- Some Permian corals from the highland of Padang, Sumatra, Indonesia.- Geological Research and Development Centre, Paleontology Series 4: 1-31.- FC&P 13-2, p. 40, ID=0547^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Indonesia, Sumatra^^1";
- 3407 s[3404] = "FONTAINE H. (1986).- Discovery of Lower Permian corals in Sumatra.- Bulletin geological Society of Malaysia 19: 183-191.- FC&P 15-2, p. 28, ID=0648^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Indonesia, Sumatra^Lower Permian corals (Protomichelina, Kepingophyllum, Chusenophyllum? and Polythecalis) are for the first time recorded from Sumatra. These corals are associated

- with fusulinids indicative of the Middle-Late Asselian, Pseudoschwagerina Zone. Lower Permian sediments appear to be widely developed in the upper Mesumai River area and appear to represent a forested volcanic arc surrounded by a shallow muddy sea. (Original summary)^1";
- 3408 s[3405] = "KATO M., EZAKI Y. (1986).- Permian corals from Pahang and Trengganu, Malaysia.- Hokkaido University, Faculty of Science Journal, ser. 4, 21, 4: 645-668.- FC&P 15-1.2, p. 30, ID=0808^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Malaysia^Corals belonging to genera Michelinia, waagenophyllum, Ipciphyllum, Aridophyllum, Wentzelloides and Yatsengia are described from Kampong Awah Quarry, Pahang. A Yatsengia is described from Bukit Biwah, Trenggau. The former occurrence denotes Yabeina Zone, while the latter Neoschwagerina Zone. All corals indicate Tethyan elements. (Original summary)^1";
- 3409 s[3406] = "FONTAINE H., SALYAPONGSE S. (2001).- Permian corals of peninsular Thailand and other associated fossils.- CCOP Newsletter 26, 3&4: 14-19.- FC&P 31-2, p. 43, ID=1685^Topic(s): fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand peninsular^[The Permian limestones of Peninsular Thailand range in age from the upper Lower Permian to Dzhulfian (Wuchiapingian). They are poor in many kinds of fossils at their base. Diverse fossils with corals become quite widespread at their top, especially in Murgabian-Midian horizons. In this conclusion, the corals are taken into account as well as the associated fossils for the sake of certainty and clarity. All the fossils focus on the same facts, which are important for paleogeography.1. Tabulata are widespread, but belong only to Sinopora at many localities. Rugosa are more interesting, but they are not actually diverse, even in younger Permian beds where they may be in abundance to a certain extent. They do not build reefs but are scattered. They do not include the well known genera of Central and Northeastern Thailand such as Ipciphyllum or Pseudohunagia. On the other hand, Paraipcyphyllum is a common genus of Peninsular Thailand whereas it is rare elsewhere in Thailand. This genus had been described for the first time in China (Wu, 1963).]^1";
- 3410 s[3407] = "KATO M., EZAKI Y. (1986).- Permian Corals of Salt Range. A Preliminary Report.- Proc. Japan Acad. 62, B: 231-234.- FC&P 17-1, p. 23, ID=2127^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Pakistan, Salt Range^^1";
- 3411 s[3408] = "FONTAINE H., LYS M., TIEN N.D. (1988).- Some Permian corals from East Peninsular Malaysia: associated microfossils, palaeogeographic significance.- Journal Southeast Asian Earth Sciences 2, 2: 65-78.- FC&P 17-2, p. 28, ID=2183^Topic(s): taxonomy, biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Malaysia^A few Permian corals from East Peninsular Malaysia are described; associated microfossils are identified. These fossils belong to the Kubergandian and to the upper Murghabian-Lower Midian boundary. The fossil assemblages of East Peninsular Malaysia are different from those of Northwest Peninsular Malaysia; they are richer and more diverse. The two palaeogeographic areas are conspicuously different. [original summary; described are waagenophyllum (w.) yini n.sp., Parawentzelella socialis (Mansuy 1913), Pseudouangia minimum Douglas 1950, and Michelinia cf indica waagen et Wentzel]^1";
- 3412 s[3409] = "FONTAINE H., LOVACHALASUPAPORN S., SEKTHEERA B. (1990).- Distribution of corals and coral reefs in the Permian of Thailand.- Ten Years of CCOP Research on the Pre-Tertiary of East Asia [Fontaine H. (ed.)]: 271-280, 2 figs.- FC&P 19-1.1, p. 73, ID=2716^Topic(s): distribution; Anthozoa reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography:

- 3413 s[3410] = "FONTAINE H. (1988).- Permian Corals of west Thailand.- CCOP Technical Bulletin 20 [Fontaine H. & Suteethorn V. (eds): Late Palaeozoic and Mesozoic Fossils of West Thailand and their Environments]: 112-127.- FC&P 19-1.1, p. 76, ID=2721^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand^Corals are not abundant in the Permian strata of West Thailand; moreover, they commonly belong to simple forms. The following taxa are represented: Tabulata: Sinopora asiatica and Protomichelina. Rugosa: Amplexocarinia, Paracarinia, Lophophyllidium [L. pendulum Grabau, L. orientale Smith], Pleramplexus, Pavastehphyllum (Pavastephyllum), Pavastehphyllum (Sakamotosawanela) [P. (S.) meesooki n.sp.], Pavastehphyllum (Pseudocarniaphyllum), Paraipciiphyllum [P. thailandicum n.sp., P. kulvanichi n.sp.], Iranophyllum, Polythecalis.^1";
- 3414 s[3411] = "FONTAINE H. (1989).- Lower Permian Corals of Sumatra.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary Fossils of Sumatra and their Environments]: 95-98.- FC&P 19-1.1, p. 77, ID=2725^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Indonesia, Sumatra^Protomichelina laosensis Mansuy 1914 and Kepingophyllum sp.^1";
- 3415 s[3412] = "FLUGEL H.W. (1989).- Permische Korallen aus dem Nord-Karakorum.- Österreichische Akademie der Wissenschaften, mathematisch-naturwissenschaftliche Klasse, Anz. 126: 121.- FC&P 20-2, p. 57, ID=2932^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Karakorum N^^1";
- 3416 s[3413] = "FONTAINE H. (1988).- Permian corals of west Thailand, Appendix 2 .- CCOP Technical Bulletin 20 [Fontaine H. & Suteethorn V. (eds): Late Paleozoic and Mesozoic fossils of west Thailand and their environments]: 112-121.- FC&P 20-2, p. 57, ID=2933^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand^^1";
- 3417 s[3414] = "FONTAINE H., JUNGYUSUK N. (1995).- Permian corals from Chom Bung area west of Bangkok: Their paleogeographic significance.- CCOP Newsletter 20, 3-4: 23-26.- FC&P 25-1, p. 29, ID=3001^Topic(s): geography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand^The Permian corals found in Chom Bung area belong to an aberrant fauna when compared to those of central and eastern Thailand. They are similar to other faunas known to the south in Peninsular Thailand. Chom Bung is 115 km westsouthwest of Bangkok as the crow flies and this town belongs to the extreme north of Peninsular Thailand. It is surrounded by a flat land where limestone hills are scattered. Limestone is bedded and massive, commonly dolomitised. It belongs to the "Ratburi Limestone" as shown by the following study of the corals. In the past, it yielded a few Murghabian foraminifers at Khao Chom Phon, a hill within the town of Chom Bung (Fontaine and Suteethorn 1988, p. 34-35). Recently, much more abundant fossils (foraminifers, Tabulata, solitary and massive Rugosa, bryozoans, brachiopods, gastropods and crinoids) have been found at other hills 5 to 10 km from Chom Bung: Khao Lan 5.5 km to the south, Khao Pak Kwang 10 km to the northeast, and Khao Kwak 9 km to north-northeast. The fauna is very interesting because of strong affinities with the fossils found to the south in Peninsular Thailand which is part of a distinctive biogeographic unit (Fontaine et al. 1994). It is different from the faunas known in central, eastern and northeastern Thailand.^1";
- 3418 s[3415] = "FONTAINE H., SUTEETHORN V. (1992).- Permian corals of Southeast Asia and the bearing of a recent discovery of Lower Permian corals in northeast Thailand.- National Conference on Geologic Resources of Thailand: Potential for Future Development: 346-354.-

FC&P 22-1, p. 29, ID=3366^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand^Permian corals have been mentioned in many papers concerning the geology of Southeast Asia; they are much more diverse and prolific than what is known in Australia during Permian. Even Timor or Peninsular Thailand where coral faunas are somewhat restricted are richer than Australia. Accordingly, the impression may be that coral reefs are common and geographically widespread in Southeast Asia from bottom to top of Permian sections. This is not actually correct although not entirely wrong. The aim of this paper is to access what we currently know. Lower Permian corals have been poorly known in Southeast Asia up to now. Therefore, the recent discovery of these corals in northeast Thailand is an important result which cannot be ignored by this paper.^1";

3419 s[3416] = "FONTAINE H., SALYAPONGSE S., TANSUWAN V., VACHARD D. (1997).- The Permian of East Thailand: Biostratigraphy, corals, discussion about the division of the Permian.- [journal?] The International Conference on Stratigraphy and Tectonic Evolution of Southeast Asia and the South Pacific Bangkok, 19-24 August, Thailand.- FC&P 27-1, p. 49, ID=3804^Topic(s): biostratigraphy; biostratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand E^Permian limestones are common in a large area of East Thailand near the Cambodian border; they are studied in this paper. They are clearly divided into two areas where they show different ages: Roadian with Cancellina and Neoschwagerina simplex (= Kubergandian-Early Murgabian) to the west and Capitanian with Yabeina and Lepidolina (= Midian) to the east. Corals are in abundance in the Capitanian limestones; they consist of rare Tabulata (Sinopora), solitary Rugosa (Tachylasma, Khmerophyllum Lophocarinophyllum, Paracaninia), fasciculate and massive Rugosa (Waagenophyllum and Multimurinus). They are described in this paper and a new species is established: Multimurinus makkaensis. These corals from east Thailand as well as those previously found in west Cambodia are clearly different from the corals collected from the Murgabian (sensu Leven 1981) of central Thailand and of other areas of Southeast Asia. They raise the problem of the Murgabian-Midian boundary and more generally of the Permian division.^1";

3420 s[3417] = "FONTAINE H. (1999).- Diverse Permian Coral Faunas are widely Distributed in Thailand.- Permophiles 33: 36-38.- FC&P 28-1, p. 33, ID=3964^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand^Permian corals are common in Thailand. They have been observed at more than one hundred localities. They are prolific in many areas where they are associated with diverse faunas and abundant algae. They may locally form reefs. However, their stratigraphic distribution is not uniform. The variation of the coral fauna composition provides information on Permian paleogeography.^1";

3421 s[3418] = "FONTAINE H., SATTAYARAK N., SUTEETHORN V. (1994).- Permian corals of Thailand.- CCOP Technical Bulletin 24: i-vi + 1-171, 19 figs., 3 tabs., 31 pls.- FC&P 23-2.1, p. 35, ID=4230^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Thailand^Permian corals are present at many localities distributed all over Thailand. They are locally prolific and diverse. Accordingly, they are very important fossils of this country. Even though their number has fluctuated with time, they are found in beds ranging from Early to Late Permian. Their assemblages change with depositional environment. In quiet and confined environments, assemblages are poor and restricted to solitary Rugosa without dissepiments. In more favourable environments, assemblages are luxuriant with high diversity. Moreover, Permian corals clearly show two biogeographic provinces. In Peninsular Thailand, they are different from those of central Thailand; they share this characteristic with fusulinids. A halt to the dispersal

of many corals and fusulinids into Peninsular Thailand is obvious. In Thailand, Permian corals went on the wane a long time before the closure of Permian; their decline was rapid during Late Permian. They are no more diverse in Dzhulfian limestones and are poorly known in Dorashamian limestones. In the past, Permian limestones of Thailand were called "Ratburi Limestone" (Brown et al. 1951) or were included in "Ratburi Group" (Javanaphet 1969 in the Geological Map of Thailand of scale 1:1,000,000). No type section was designated. Bunopas (1981) limited the "Ratburi Group" to limestone and interbedded shale exposed in Peninsular Thailand; he proposed several names for other Permian limestones, with an important name: "Saraburi Limestone" for the limestone exposures of central Thailand and Loei-Wang Saphung-Pha Nok Khao region. Local names for different limestone outcrops will be discussed in the next chapter. Recent studies show that the Ratburi Limestone of Peninsular Thailand is actually Permian and Triassic in age (Fontaine et al. 1993). Saraburi Limestone is restricted to Permian. Accordingly, Ratburi Limestone and Saraburi Limestone belong to two different paleogeographic units as indicated by their coral and fusulinid assemblages as well as by their stratigraphic ranges (Fontaine et al. 1992 and 1993). [part of introduction].¹;

- 3422 s[3419] = "FONTAINE H., SUTHEETHORN V. (1995).- Khao Tham Russi Laat: Early Permian Red Limestone.- CCOP Newsletter 20, 2: 13-18.- FC#038;P 24-2, p. 82, ID=4567^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Thailand^Description of an Early Permian coral assemblage which was unknown so far in Thailand and which consists of Akagophyllum, Chusenophyllum and Pseudozaphrentoides.¹;
- 3423 s[3420] = "SUGIYAMA T. (1982).- Middle Permian corals from the Ratburi Limestone in the Khao Khao area, Sara Buri, central Thailand.- Geology and Palaeontology of Southeast Asia 24 [T. Kobayashi, R. Toriyama & w. Hashimoto (eds)]: 15-29.- FC#038;P 12-2, p. 35, ID=6216^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian M; Geography: Thailand central^^1";
- 3424 s[3421] = "KATO M. (1976).- A Permian rugose coral, Euryphyllum from Kashmir.- Hokkaido University, Faculty of Science Journal, ser. 4, 17, 2: 357-364.- FC#038;P 6-1, p. 26, ID=0058^Topic(s): ; Rugosa, Euryphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Kashmir^Describes and illustrates one species and reviews the genus.¹;
- 3425 s[3422] = "FONTAINE H., SALYAPONGSE S., NGUYEN D.T., VACHARD D. (2002).- The Permian of Khao Tham Yai area in Northeast Thailand.- The Symposium on Geology of Thailand, 26-31 August 2002, Bangkok: 58-76.- FC#038;P 31-2, p. 44, ID=1687^Topic(s): fossils; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Thailand NE^A very fossiliferous limestone is exposed at Khao Tham Yai; it is thick and ranges from Murghabian to the top of the Midian. Fossils are diverse and in abundance. The fusulinacean genus Lepidolina occurs at the top of the limestones; it has a palaeogeographic meaning. Photographs of the main fossils are provided in this paper [including Ipciphyllum subelegans Minato & Kato, I. phadaengense Fontaine, 1992, Multimurinus fontainei Kato & Ezaki, 1986, M. cf. frechi Volz, M. sp.,]. In the valley east of Khao Tham Yai, a clastic sequence with predominant scale has yielded recently some fusulinaceans. Farther to the east, Khao Pa Khi limestone is very poor in fossils; its age was doubtful because of an apparent absence of fusulinaceans. Other samples have been collected recently; they bring new information suggesting a Permian age, but still with a slight doubt. The occurrence of a fault appears probable between Khao Tham Yai and Khao Pa Khi. South of the Khao Tham Yai - Khao Pa Khi area along the Lomsak - Chumphae Highway, other limestone outcrops contain characteristic fossils, in particular common Codonfusiella. [original

- abstract, but included coral taxa]^1";
- 3426 s[3423] = "KATO M. (1981).- Euryphyllum (Rugosa) from Kashmir.- Palaeontologia Indica NS 46 [K. Nakazawa & H.M. Kapoor (eds): The Upper Permian and Lower Triassic faunas of Kashmir]: 41-44.- FC&P 12-2, p. 34, ID=1805^Topic(s): ; Rugosa, Euryphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Kashmir^^1";
- 3427 s[3424] = "FONTAINE H. (1989).- Middle Permian Corals of Sumatra.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary Fossils of Sumatra and their Environments]: 149-165.- FC&P 19-1.1, p. 77, ID=2726^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: Indonesia, Sumatra^The following taxa are described: Sinopora asiatica Mansuy, Paracania sp., Lophophyllidium pendulum Grabau, Pavastehphyllum (Thomasiphyllum) sp., Ipciphyllum subelegans Minato & Kato, I. fliegeli Lange, I. laoense Patte, wentzelloides (Battambangina) frechi Volz, W. (B.) sumatrensis n.sp.^1";
- 3428 s[3425] = "FONTAINE H., JUNGYUSUK N. (1997).- Growth bands in Permian corals of Peninsular Thailand.- [journal?] The International Conference on Stratigraphy and Tectonic Evolution of Southeast Asia and the South Pacific Bangkok, 19-24 August, Thailand.- FC&P 27-1, p. 48, ID=3802^Topic(s): growth bands; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L M; Geography: Thailand peninsular^Corals (massive Rugosa) from the base of the Ratburi Limestone (Middle-Late Permian) display growth bands whereas these bands do not exist in corals from the top of the same limestone although all the corals belong to the same genus. A climatic change is inferred, with a shift from a seasonal climate to a uniformly warm climate.^1";
- 3429 s[3426] = "FONTAINE H., SONGSIRIKUL B., TANSUWAN V. (1990).- A massive colony of waagenophyllid from southern Peninsular Thailand.- Ten Years of CCOP Research on the Pre-Tertiary of East Asia [Fontaine H. (ed.)]: 361-365, 3figs., 1 pl. [re-edited paper] - FC&P 19-1.1, p. 74, ID=2719^Topic(s): ; Rugosa, Waagenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Thailand peninsular^The new species wentzelella megastomata n.sp. is described.^1";
- 3430 s[3427] = "LAFUSTE J. (1978).- Une analogie microstructurale entre Tetracoralla et Tabulata: lamelles en zig-zag chez un Cladonide du Permien du Nepal.- C. R. Acad. Sci. Paris 287, D: 13-16.- FC&P 8-1, p. 14, ID=5678^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: Nepal^L'examen de lames ultra-minces d'une forme permienne attribuable à Cladochonus crassus (McCoy) a révélé l'existence dans la partie médiane de la muraille d'une couche de lamelles "en zig-zag", entourée de deux couches de nature fibreuse. Ces lamelles onduleuses, à limites cupuliformes, sont identiques à celles reconnues chez le Tétracoralliaire Plerophyllum, également du Permien. La microstructure des Cladochonides du Carbonifère a été décrite comme finalement feuilletée, sans doute constituée de lamelles rectilignes, parallèles aux bords des structures. De ce fait, le matériel permien devra être rapporté à une unité générique différente de Cladochonus sensu stricto.^1";
- 3431 s[3428] = "BHATT D.K., JOSHI V.K. (1981).- Artinskian (Lower Permian) in Spiti, Tethys Himalaya.- Records of the Geological Survey of India 112, 8: 45-50.- FC&P 13-1, p. 40, ID=0471^Topic(s): geology; Systematics: ; Stratigraphy: Permian Art; Geography: India, Himalaya^^1";
- 3432 s[3429] = "FONTAINE H. (1989).- Peculiarities of the Permian of peninsular Thailand.- CCOP Newsletter 14, 1. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 369-375].- FC&P 23-2.1, p. 44, ID=4252^Topic(s): geology; Systematics:

- ; Stratigraphy: Permian; Geography: Thailand peninsular^1";
- 3433 s[3430] = "FONTAINE H. (2002).- Permian of Southeast Asia: an overview.- Journal of Asian Earth Sciences 20, 6: 567-588.- FC&P 31-2, p. 27, ID=7126^Topic(s): geology; geology; Systematics: ; Stratigraphy: Permian; Geography: Asia SE^Permian rocks are widely distributed throughout Southeast Asia. Because of the tropic-equatorial climate the rocks are commonly deeply weathered and covered by dense vegetation over much of the region. Elsewhere, Permian rocks are well exposed and easy to access, particularly where limestone outcrops have weathered to form spectacular, castellated, tower karst. Many limestone outcrops, containing abundant fusulinaceans, were early recognized to be of Permian age, but many outcrops without fusulinaceans, erroneously assigned to the Permian, were found subsequently to be of Triassic age, and more careful studies have established the Permian age of rocks of other lithologies. It is now recognized that different depositional environments are represented by the Permian deposits in various parts of the region. Massive limestones, widespread throughout the region, represent extensive carbonate platforms; local occurrences of thick bedded cherts indicate deposition in deep marine environment, coal, bauxite and clastic sediments with vertebrate remains in the North Vietnam and Laos indicate deposition in a continental environment, and pebbly mudstones in Myanmar, Peninsular Thailand, northwest Malaysia and Sumatra, are considered to have been formed in a glacial environment. Volcanic rocks are absent in northwest Peninsular Malaysia and Peninsular Thailand, but are extensively developed in North Vietnam, Sumatra, the eastern Malay Peninsula and Timor. Fossils, representing many fossil groups, are often prolific in Permian sediments, with fusulinaceans, for example, occurring in astronomical numbers in many limestone outcrops. Age-diagnostic fossils demonstrate that the whole of Permian is represented in different areas of Southeast Asia. Fossil faunal and floral assemblages have been used to establish climatic and environments of deposition, to define distinct crustal blocks and to provide the basis for reconstructing the palaeogeography during Permian times. [original abstract]^1";
- 3434 s[3431] = "FONTAINE H., SALYAPONGSE S., NGUYEN DUCTIEN, VACHARD D. (2002).- Permian fossils recently collected from limestones of Nan area, North Thailand.- The Symposium on Geology of Thailand, 26-31 August 2002, Bangkok: 46-57.- FC&P 31-2, p. 43, ID=7134^Topic(s): geology, fossils; geology, paleontology; Systematics: ; Stratigraphy: Permian; Geography: Thailand N^Permian limestones are exposed in Nan area at several localities: they are less widespread than what was thought in the past. They belong mainly to Middle Permian; at an important hill, the occurrence of the Midian has been strongly evidenced and an unexpected fauna including *Lepidolina* has been found. The lower Part of Lower Permian (Asselian - Sakmarian) is entirely unknown in Nan area. The upper part of Lower Permian (Artinskian - Kungurian) has been evidenced at a single locality. Late Permian shale (Wuchiapingian) is exposed locally north of Nan. The presence of Upper Permian limestone is possible. Fossils are locally in abundance, they show mainly Cathaysian affinities. * Nan region is a remote and mountainous area of northern Thailand where an impressive number of new roads has been built during the last few years. These new constructions have allowed an actually new geological research because of many road-cuts reaching the bedrock. Permian exposures consist of shale and limestone. * The studied localities are limestone hills north of Nan as well as south of Nan. At a locality, limestone is restricted to a small lens in shale. [original abstract]^1";
- 3435 s[3432] = "FONTAINE H., IBRAHIM I.bin, VACHARD D. (2002).- Important discovery of late Early Permian limestone in southern Terengganu, Peninsular Malaysia.- Bulletin of the Geological Society Malaysia 45

- [Proceedings of Geosea'98]: 453-446.- FC&P 32-1, p. 17, ID=7138^Topic(s): geology; geology; Systematics: ; Stratigraphy: Permian; Geography: Malaysia peninsular^A limestone which has been uncovered during the extension of an oil palm plantation appears to be an important deposit. It is rich in relatively well preserved fossils although it out crops only 500m from a granite. The fossils are diverse and consist of common Tubiphytes, a few algae, calcispherids, smaller foraminifera, abundant fusulinaceans (including Levenella, Pamirina, Brevaxina, Chalaroschwagerina, Leeina, Toriyamaia, Laosella), calcareous sponges, a few bryozoans, brachiopods, bivalves, rare gastropods, ostracods and crinoids. They indicate a Late Cisuralian age (Yahtashian-Bolorian) and appear to belong to three biozones. The rocks of the area were previously considered to be Early Carboniferous in age. [initial part of extensive summary]^1";
- 3436 s[3433] = "GUPTA V.J., BROOKFIELD M.E. (1986).- Preliminary observations on a possible complete Permian-Triassic boundary section at Pahlgam, Kashmir, India.- Newsletter of Stratigraphy 17, 1: 29-35. FRAUD!?.- FC&P 18-1, p. 37, ID=2245^Topic(s): fossil data [!]; Anthozoa, geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian / Triassic; Geography: India, Kashmir^^1";
- 3437 s[3434] = "ADACHI S., IGO H., AMPORNMAHA A., SASHIDA K., NAKORNSRI N. (1993).- Triassic coral buildups observed in the Chaiburi Formation, near Phatthalung, Peninsular Thailand.- Ann. Rep., Inst. Geosci., Univ. Tsukuba 19: 27-31.- FC&P 24-1, p. 82, ID=4514^Topic(s): coral reefs, geology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: Thailand^Light colored carbonate rocks extensively crop out in the southern part of Peninsular Thailand. Their distribution further extends to the south and crosses the national border of Thailand and Malaysia. These rocks are mostly limestones intercalated with dolomite beds in the lower part and constitute many isolated hills surrounded by steep cliffs with spectacular pinnacles at their tops or with flat tops of which elevation is 50 to 300m above sea level. Thailand geologists assigned these limestones to the Permian Ratburi Limestone, but Igo et al. (1988) reported the occurrence of lower Middle Triassic conodonts in one of the limestone hills, Khao Chiak, about 5km west of the Phatthalung city area. More recently, Sashida & Igo (1992) added new data of geochronology based on radiolarian biostratigraphy. Recently, one of the authors, Ampornmaha (1993, MS) has studied extensively the geology of the Phatthalung area and newly designated the Chaiburi Formation for these limestones. She further subdivided this carbonate formation into the Phukhaothong Dolomite Member, Chiak Limestone Member, and Phanomwang Limestone Member in ascending order. This formation attains a total thickness of more than 400m. According to her biostratigraphic reconnaissance, this formation ranges from Dienerian to early Carnian in age, but the lower part of this formation probably grades into the Upper Permian. She also studied microfacies of these carbonate rocks and clarified their depositional environments. The microfacies of the Chaiburi corresponds with Facies 3 and 4 of Standard Facies Belts proposed by Wilson (1975). During our field survey in 1990 and 1991, we found coral buildups in the basal part of the Phanomwang Limestone Member exposed in a quarry of Phanom wang about 9km north of Phatthalung. Triassic coral buildups have not been fully known in calcareous facies of southeastern Asia. Fontaine & Gafoer (1989) reported the presence of reefal limestone in the Sibaganding Limestone exposed near Lake Toba, northern Sumatra, but they did not document any details of this limestone. We describe the coral buildups observed in the Phanomwang and discuss their geologic significance in this paper.^1";
- 3438 s[3435] = "BHARGAVA O.N., BASSI U.K. (1985).- Upper Triassic Knoll Reefs: Middle Norian, Spiti-Kinnaur, Himachal Himalaya, India.- Facies 12: 219-242.- FC&P 14-1, p. 65, ID=1078^Topic(s):

- reefs; reefs; Systematics: ; Stratigraphy: Triassic Nor; Geography: India, Himalaya^Coral reefs of Middle Norian age are reported from Rangring, the Pin-Spiti confluence, Kiomo, Latarse (all Spiti), and Pamachen, Hangrang Pass and Tapuk (Kinnaur). All these reefs are rather small (up to 30 m thick) and form a low-angle contact with the underlying beds. The Rangring and Pin-Spiti Reefs were studied with regard to microfacies, biocommunities and facies interpretation. The Rangring Reef is characterized by wacke/Floatstones with whole fossils, Pack/wackestones, and Boundstones. Main reef builders are calcisponges (*Colospongia catenulata* OTT), corals (*Montlivaltia*, *Stylophyllopsis*, *Thamnasteria rectilamellosa*) tabulozoans and hydrozoans (*Spongioaorpha ramosa*) and *Pycnoporidium ? eomesozoicum*. This reef structure probably represents a reef formed on the lower part of a slope.^1";
- 3439 s[3436] = "MARTINI R., ZANINETTI L., LATHUILIERE B., CIRILLI S., CORNEE J.-J., VILLENEUVE M. (2004).- Upper Triassic carbonate deposits of Seram (Indonesia): palaeogeographic and geodynamic implications.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 206, 1-2: 75-102.- FC&P 34, p. 65, ID=1295^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Triassic U; Geography: Indonesia, Seram^[among *Scleractinia*, *Retiophylia* sp., *Astraeomorpha crassisepta* (Reuss), *Pamiroseris meriani* (Stoppani) and *Oedalmia norica* (Frech) are figured, the chaetetid *Blastochaetetes intabulata* (Wanner) is also figured and proposed as a senior synonym of *B. karashensis*]^1";
- 3440 s[3437] = "MARTINI R., VACHARD D., ZANINETTI L., CIRELLI S., CORNEE J.J., LATHUILIERE B., VILLENEUVE M. (1997).- Sedimentology, stratigraphy and micropaleontology of the Upper Triassic series in Eastern Sulawesi (Indonesia).- *Palaeogeography, Palaeoclimatology, Palaeoecology* 128, 1-4: 157-174.- FC&P 26-2, p. 5, ID=3666^Topic(s): sedimentology, stratigraphy, microfossils; sedimentology; Systematics: ; Stratigraphy: Triassic U; Geography: Indonesia, Sulawesi^An Upper Triassic (Upper Norian-Rhaetian) carbonate complex, composed of open marine to reefal deposits, has been investigated for the first time in Eastern Sulawesi. The age is based on the occurrence of benthic foraminifera, and also of the Upper Sevatian to Rhaetian conodont *Misikella posthernsteini* Kozur and Mock. Palynological assemblages contain Upper Triassic-Lower Jurassic palynomorphs. The scleractinian coral *Retiophylia seranica* and the chaetetid sponge *Blastochaetetes intabulata*, together with Solenoporacean algae, are the main framebuilders of the reefal facies. * The entire carbonate series, composed of conodont bearing limestones, reefal deposits, and intertidal/supratidal cryptalgal laminites, shows a general regressive trend from a marginal to an inner platform environment. The relationship between microfaunal distribution and sequence analysis is discussed. * The Upper Triassic foraminifers and palynomorphs of Eastern Sulawesi show affinities to microfaunas of the Australian-Indonesian southern Tethyan domain, and the general organisation of the platform should be investigated through further studies from Banda Sea dredgings. [original abstract]^1";
- 3441 s[3438] = "FONTAINE H., LEE K.W., BAUDIN F., BEAUVAIS L. (1993).- A Triassic limestone discovered by drilling at Singapore.- *CCOP Newsletter* 18, 3: 9-19.- FC&P 23-1.1, p. 8, ID=4050^Topic(s): geology; geology; Systematics: ; Stratigraphy: Triassic; Geography: Singapore^^1";
- 3442 s[3439] = "BEAUVAIS L., FONTAINE H., POUMOT C., VACHARD D. (1979).- Donnees nouvelles sur le Mesozoique de l'ouest de Philippines.- *C. R. somm. S. G. F.* 3, 21: 117-121.- FC&P 9-1, p. 17, ID=5771^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: Philippines^^1";
- 3443 s[3440] = "BEAUVAIS L. (1986).- Faunal Biogeography: Jurassic Corals of Thailand.- *I.G.C.P. 171, Report 3*: 47-48.- FC&P 15-1.2, p.

- 14, ID=0899^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Thailand^^1";
- 3444 s[3441] = "FONTAINE H., BEAUVAIS L. (1986).- Distribution of the Jurassic corals in South-East Asia.- Proceed. 1 st Conf. Geol. Indochina 1:137-145.- FC&P 16-1, p. 14, ID=1927^Topic(s): distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Asia SE^^1";
- 3445 s[3442] = "BEAUVAIS L. (1988).- Jurassic Corals and coral-bearing limestones of Thailand and Burma.- CCOP Technical Bulletin 20 [Fontaine H. & Suteethorn V. (eds): Late Palaeozoic and Mesozoic Fossils of West Thailand and their Environments]: 152-203.- FC&P 16-1, p. 14, ID=1929^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Thailand, Myanmar^The Jurassic of Thailand has provided corals belonging to the three main parts of the Jurassic; Lower, Middle and Upper Jurassic. Nevertheless, these species which have been found in Thailand display generally a long stratigraphic range and cannot give any accurate stage indication without the help of associated fauna and flora. As in Sumatra, the Scleractinia do not form true reefal buildups in Thailand; they may be considered as an adapted fauna, dependent of the very specific food offered by the abundance of microorganisms occurring in the muddy environments in which they lived scattered (Beauvais et al. 1985). The true reef builders are, in fact, microorganisms (bacteria and microalgae) producing a biobuilt micrite. Even in Ban Phu Kloe Khi (Burma) where metric colonies of Scleractinia in life position have been found, we cannot speak of "reef limestone" in the classic sense of the term, the limestone being there undisputably of microbial origin also. [original introduction] 22 genera and 5 new species are described.^1";
- 3446 s[3443] = "BEAUVAIS L. (1988).- Revision of the corals from the Kamawkala limestone (Burma-Thai frontier) described in 1930 by J. w. Gregory.- CCOP Technical Bulletin 20 [Fontaine H. & Suteethorn V. (eds): Late Palaeozoic and Mesozoic Fossils of West Thailand and their Environments]: 204-210.- FC&P 16-1, p. 14, ID=1930^Topic(s): revision; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Myanmar, Thailand^Described are: Thalamocoenia sp., Stereocoenia ? cf. araneola (Michelin), Stylosmilium fromenteli Koby, Stylina sp. Originally classified as Triassic in age, the fauna points more to the Jurassic.^1";
- 3447 s[3444] = "BEAUVAIS L. (1984).- New data on the Upper Jurassic of Sumatra.- Report of the IGCP 171"Circum Pacific Jurassic Research Group" 2: 110-112; Hamilton, January 1984.- FC&P 13-2, p. 14, ID=6358^Topic(s): geology; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Sumatra^^1";
- 3448 s[3445] = "BEAUVAIS L., FONTAINE H. (1993).- Montlivaltia numismalis (d'Orbigny) a Middle Jurassic coral newly found in west Thailand.- Proceedings of the International Symposium on Biostratigraphy of Mainland Southeast Asia: Facies & Paleontology 1993: 63-69.- FC&P 23-1.1, p. 73, ID=4159^Topic(s): taxonomy; Scleractinia, Montlivaltia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Thailand^A scleractinian species which is very well known in the Bathonian of Europe was discovered in western Thailand where it confirms the occurrence of Middle Jurassic sediments. Along with an evident stratigraphical and paleogeographical interest, this coral is easy to identify and may turn out to be a good marker for field geologists.^1";
- 3449 s[3446] = "BEAUVAIS L. (1989).- Upper Jurassic Madreporaria and Calcisponges of Sumatra.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary fossils of Sumatra and their

- environment]: 243-298.- FC&P 19-1.1, p. 28, ID=2593^Topic(s): ; Scleractinia, Porifera; Systematics: Cnidaria Porifera; Scleractinia; Stratigraphy: Jurassic U; Geography: Indonesia, Sumatra^1";
- 3450 s[3447] = "BEAUVAIS L. (1985).- Donnees nouvelles sur les calcaires "recifaux" du Jurassique superieur de Sumatra.- Memoires de la Societe Geologique de France, N.S. 21-27.- FC&P 15-1.2, p. 14, ID=0894^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Indonesia, Sumatra^1";
- 3451 s[3448] = "FONTAINE H. (1983).- Marine Jurassic in Southeast Asia.- CCOP Technical Bulletin 16 [The Jurassic in Southeast Asia]: 1-30.- FC&P 13-2, p. 17, ID=6365^Topic(s): geology; geology; Systematics: ; Stratigraphy: Jurassic; Geography: Asia SE^1";
- 3452 s[3449] = "BEAUVIS L., BLANC P., BERNET-ROLLANDE M.C., MAURIN A.F. (1988).- Sedimentology of Upper Jurassic deposits in the Tembesi River area, Central Sumatra.- Geol. Soc. Malaysia Bull. 22 (GEOSEA V proceedings, vol. 2): 45-64.- FC&P 16-1, p. 14, ID=6754^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Jurassic U; Geography: Sumatra^In the Tembesi River area, the Upper Jurassic crops out along two parallel NW-SE oriented lines. It consists of black, massive or bedded limestones intrrbedded with either black, more or less laminated shales or with more or less shaley sandstones. * The limestones include numerous Madreporaria which indicate an Upper Jurassic age. * Examination of the limestone microfacies leads to them being interpreted as mud-mounds of microbial origin (bioclasts encrusted with micrite and various algal structures, occurrence of filaments in the sparite, rhombohedrons of dolomite, bituminous stylolites, fenestrae etc.). * The study of the clay minerals contained both in the marls, the shales, the sandstones and in the mud-mounds themselves, indicates a close shore deposit with sporadic influx of terrigenous sediment coming periodically from the continent. [original abstract]^1";
- 3453 s[3450] = "BEAUVAIS L., FONTAINE H. (1990).- Corals from the Bau Limestone Formation, Jurassic of Sarawak, Malaysia.- Ten Years of CCOP Research on the Pre-Tertiary of East Asia [Fontaine H. (ed.)]: 209-239, 2 figs., 5 pls.- FC&P 19-1.1, p. 73, ID=2715^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic / Cretaceous; Geography: Malaysia, Sarawak^15 species (two are unnamed) belonging to 15 genera are described from Upper Jurassic (Kimmeridgian - Tithonian) and probably lowermost Cretaceous (up to Valanginian) limestones.^1";
- 3454 s[3451] = "YANCEY T.E., ALIF S.A. (1977).- Upper Mesozoic strata near Padang, West Sumatra.- Geol. Soc. Malaysia Bull. 8: 61-74.- FC&P 9-1, p. 53, ID=5842^Topic(s): carbonates; carbonates, stroms; Systematics: ; Stratigraphy: Jurassic U, Cretaceous L; Geography: Sumatra^[the Indarung Formation contains late Jurassic and early Cretaceous carbonates with common stroms, including Actostroma]^1";
- 3455 s[3452] = "WILSON M.E.J., ROSEN B.R. (1998).- Implications of paucity of corals in the Paleogene of SE Asia: plate tectonics or Centre of Origin? .- In: Hall R. & Holloway J.D. (eds.). Biogeography and Geological Evolution of SE Asia., pp. 165-195, Backhuys Publishers, Leiden.- FC&P 27-2, p. 49, ID=3905^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleogene; Geography: Asia SE^Two contrasting major patterns can be discerned: a Paleogene one in which diversity, endemicity and origination rates of corals in SE Asia were low, and a post-Paleogene one which is effectively the opposite. The change coincides with tectonic events, especially the collision of Australia with SE Asia. During the paleogene, the marine region between the continental margins of SE Asia and Australia was about 3000 km wide and, compared with the

post-Neogene, there were few shallow water areas suitable for z-corals. A much more extensive, but now largely inaccessible area of shallow water carbonates existed in the mid-Pacific (on the Darwin Rise/Superswell) especially during the Eocene. However, the z-coral faunas of both regions appear to have been low diversity outposts of the very much richer faunas of Europe, eastern Tethys and the western Indian Ocean margins. The modern high diversity pattern in SE Asia and the Indo-west Pacific center began to emerge around the earliest Neogene with an apparent regional radiation of corals. However, detailed studies are revealing that relicts, and migrations of taxa into the region were both as qualitatively important as originations within the region. Local originations derived, at least in part, from these antecedent elements. The geographical complexity of the region since the neogene favoured all three processes. Although increased habitat heterogeneity and potential allopatric speciation amongst fragmented shallow water areas, would have been enhanced in the last 10 Ma by the effects of glacio-eustasy and increased climatic fluctuation. Our fossil patterns show that a Centre of Origin model (Table 1) is completely inapplicable to Paleogene corals of the SE Asian region, since there was only a small non-endemic fauna here. In fact, it is misleading to think of it as a 'centre' of any kind during this time. This contrasts with the neogene onwards, which superficially accords with a Centre of Origin model, though the combined patterns from a range of different studies show that a more appropriate model requires a combination of all three of the possibilities in Table 1. A longer-term perspective suggests that the above contrast in Paleogene and post-Paleogene patterns represents a cyclical sequence which has occurred at least twice before with strong coral developments in the late Triassic and late Jurassic in SE Asia, coincident with times when rifted Gondwanan blocks docked against the Asian continent in the tropics. Thus plate tectonic processes rather than intrinsic evolutionary processes (like Centres of Origin, competitive displacement, etc.) have been a major control on regional diversity patterns of z-corals, and presumably also numerous other shallow marine organisms.¹¹;

- 3456 s[3453] = "PICKETT J.W., JELL J.S., CONAGHAN P.J., POWELL C.Mc A. (1975).- Jurassic invertebrates from the Himalayan Central Gneiss.- *Alcheringa* 01, 1: 71-85.- FC&P 5-1, p. 14, ID=5326Topic(s): metamorphosed; paleontology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: Himalaya, Central Gneiss^The fauna of poorly preserved scleractinians and cephalopods indicates that the Central Gneiss represents a Tertiary tectonic episode, and is discordant to prior sedimentary trends. Scleractinian genera, represented are by *Thamnasteria* and *Montlivaltia*.¹¹;
- 3457 s[3454] = "BUCHSEL P. (1991).- Die Morphologie des Kuestenraumes von Ost-Cebu (Zentralphilippinen): Ergebnis pleistozaeener Meeresspiegelschwankungen oder tektonischer Bewegungen? .- *Mitteilungen des Geologisch-Palaeontologischen Institutes der Universitaet Hamburg* 71: 243-251. [in German, with English abstract].- FC&P 24-2, p. 76, ID=4552Topic(s): reefs, eustacy, tectonics; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Philippines^Tectonical movements during the Pleistocene formed the morphology of numerous islands of the central Philippine Visayan archipelago. Tectonically uplifted coral reefs were believed to be a striking feature of the coastal area of Cebu, an island located in the Central Visayans. Previous work on the coastal area of Cebu mostly dealt with uplifted coral reef terraces and their geological age. Radiometric age data obtained during these investigations show that the age generally increases with increasing elevation of an uplifted coral reef. Sea-level oscillations during the Pleistocene could have caused the formation of a flight of coral terraces whilst Cebu was tectonically uplifted. Coastal morphology of

- Eastern Cebu and tectonic data also allow an interpretation of terrace-like structures as a system of tectonic horsts and grabens.¹¹ ;
- 3458 s[3455] = "SCOFFIN T.P., TUDHOPE A.W., BROWN B.E. (1989).- Corals as environmental indicators, with preliminary results from South Thailand.- Terra Res. 1, 6: 559-563.- FC&P 19-1.1, p. 39, ID=2614Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Thailand^This paper reviews recent work on massive corals as indicators of environmental change and presents some preliminary results of studies on the growth of a major reef-building massive coral (Porites lutea Edwards & Haime) in the Phuket province of south Thailand.¹¹ ;
- 3459 s[3456] = "LATYPOV Yu.Ya., DAUTOVA T.N. (1991).- Korally skleraktinii Vyetnama. II. Akroporidy. [Scleractinian corals from Vietnam. 2: Acroporids; in Russian].- Nauka, Moskva; 133 pp.- FC&P 22-2, p. 89, ID=3526Topic(s): taxonomy; Scleractinia, Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Vietnam^The edition is the second part of the systematic description of the recent corals from Vietnam. In this part the corals of the family Acroporidae with the genera Montipora, Acropora, Astreopora and Isopora are described and illustrated. Two new species of the genus Acropora are established.¹¹ ;
- 3460 s[3457] = "LATYPOV Yu.Ya., DAUTOVA T.N. (1998).- Korally skleraktinii Vyetnama. V. Agariciidy, Kariofilliidy, Merulinidy, Mussidy, Okulinidy, Pektiniidy, Siderastreidy. [scleractinian corals of Vietnam; V; Agariciidae, Caryophylliidae, Merulinidae, Mussidae, Oculinidae, Pectiniidae, Siderastreae; in Russian].- Moskva, Nauka; 163 pp. ISBN 5-7442-1083-0.- FC&P 27-1, p. 8, ID=6882Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Vietnam^The monograph (5th volume) is a description of reef-building scleractinian corals that form both living reef communities and organogenic framework of reefs in Indo-Pacific tropic zone. The history of their systematics, problems and peculiarities of taxonomy are considered. A morphology of skeleton and terminology are examined. Special investigations on taxonomy features of some genera and species were made. The description of corals consist of diagnosis, list of synonymic names, data on location in Vietnam and world distribution. Figures and photos of corals and details of their structure are given.¹¹ ;
- 3461 s[3458] = "LATYPOV Yu.Ya., DAUTOVA T.N. (1995).- Korally skleraktinii Vyetnama. III. Faviidy, Fungiidy. [scleractinian corals of Vietnam; III; Faviidae, Fungiidae; in Russian].- Nauka, Moskva; 144 pp.- FC&P 25-2, p. 53, ID=3147Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Vietnam^The third part of the monograph describes the corals of the suborders Faviida and Fungiida. Ninetysix species of the genera Caulastrea, Barabattoia, Favia, Favites, Goniastrea, Australogyra, Platygyra, Leptoria, Oulophyllia, Montastrea, Diploastrea, Plesiastrea, Leptastrea, Cyphastrea, Echinopora, Moseleya, Oulastrea, Trachyphyllia, Cycloseris, Diaseris, Fungia, Heliofungia, Polyphyllia, Sandalitha, Herpolitha, Halomitra, Lithophyllon and Podobacia are described, among them one new species.¹¹ ;
- 3462 s[3459] = "LATYPOV Yu.Ya., DAUTOVA T.N. (1996).- Korally skleraktinii Vyetnama. IV. Poritidy, Dendrofilliidy. [scleractinian corals of Vietnam; IV; Poritidae, Dendrophylliidae; in Russian].- Nauka, Moskva; 112 pp. ISBN 5-02-001692-6.- FC&P 26-2, p. 72, ID=3754Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; scleractinia; Stratigraphy: Recent; Geography: Vietnam^In the fourth part of monography are described the very wide-spread reef-building Scleractinians, belonging to family Poritidae, which form both living reef community and organogenic framework of reefs of the tropic zone of the world Ocean. Dendrophylliidae are with very large corallities and no less wide-spread

between colonial Scleractinian are described too. A morphology of the described corals, difficulties and principles of their systematics and role in reef-building of Vietnam are in detail examined. In the first time specific signs of the morphology and structure of septal apparatus are revealed. On the basis of these data of specific diagnosis are provided. Figures and photos of appears and details inner structure this corals are resulted.¹";

- 3463 s[3460] = "LATYPOV Yu.Ya. (1990).- Korally skleraktinii Vyetnama. I. Tamnasteriidy, Astrotseniidy, Potsilloporidy, Dendrofilliidy. [Scleractinian corals of Vietnam; I; Thamnasteriidae, Astrocoeniidae, Pocilloporidae, Dendrophylliidae; in Russian].- Nauka, Moskva; 80 pp. ISBN 5-02-004726-0.- FC&P 23-1.1, p. 76, ID=4168Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: VietnamThe edition is the first part of the systematic description of the Recent corals from Vietnam (South China Sea). In this part 31 species of the above given families are systematically described and depicted. One new species of the genus Dendrophyllia is described. (see Latypov & Dautova for the following volumes)^1";
- 3464 s[3461] = "SCHUDACK M.E., REITNER J. (1996).- Holocene Ostracoda from the Satonda Crater Lake (Indonesia).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 29, ID=3577Topic(s): ; Ostracoda; Systematics: Arthropoda; Stratigraphy: Holocene; Geography: Indonesia, SatondaThe vertical distribution of Ostracoda from two digs from the beach of the Satonda Crater Lake reflects the Holocene history of its water chemistry. In the lowermost parts, monospecific associations dominate in fresh to brackish waters, whereas there is a higher species diversity and evenness of several marine species, typical for warm and shallow waters, in the middle parts of the sections. In the upper parts of the digs and in the alkaline waters of today's crater lake, the same cypridid species as in the lowermost horizons dominates, indicating the reestablishment of a more stressful environment compared to the marine layers in between.^1";
- 3465 s[3462] = "VOOGD N.J.de, SOEST R.W.M.van, HOEKSEMA B.W. (1999).- Cross-shelf distribution of southwest Sulawesi reef sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 147-154.- FC&P 28-2, p. 8, ID=6945Topic(s): ecological distribution; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Indonesia, Sulawesi^1";
- 3466 s[3463] = "ARP G., REITNER J., WORHEIDE G., LANDMANN G. (1996).- New Data on Microbial Communities and Related Sponge Fauna from the Alkaline Satonda Crater Lake (Sumbawa, Indonesia).- Goettinger Arbeiten zur Geologie und Palaontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 22, ID=3561Topic(s): ; microbiota, Porifera; Systematics: Porifera Monera; Stratigraphy: Recent; Geography: Indonesia, SatondaThe small crater lake of the Island Satonda is characterized by highly alkaline conditions as a whole probably due to an intense sulfate reduction in the deep anoxic water body. Some portions of the highly alkaline water is penetrating through the uppermost pycnocline and increases the alkalinity in the upper oxic water body (alkalinity pump). The upper water body is beside its slightly increased alkalinity (4-5 meq/l) characterized by a decreased salinity (32 ‰). This special hydrochemical situation let to a very specific and endemic development of the biota. Cyanobacteria and heterotrophic microbes exhibit large diversities in contrast to just one sponge taxon (Suberites/Polmastia n.sp.). Common are cyanobacteria of the taxa Pleurocapsa, Phormidium, Calothrix, Spirulina, Microcoleus

- and Microcystacea.¹";
- 3467 s[3464] = "KEMPE S., KAZMIERCZAK J., REIMER A., LANDMANN G., REITNER J. (1996).- Microbialites and Hydrochemistry of the Crater Lake of Satonda - a Status Report.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 25, ID=3569Topic(s): carbonates microbial; microbialites; Systematics: ; Stratigraphy: Recent; Geography: Indonesia, SatondaThe Satonda crater lake is up to now the only known "marine" lake with an increased alkalinity compared to seawater. Therefore, the lake contains a decreased amount of Ca²⁺. Its pH values about 8.5-8.6. The lake was originally filled with freshwater, which is evident from peat deposits (3,150 14C-yrs BP). Shortly after the lake was rapidly filled with seawater and a marine fauna had established. Large input of organic matter has caused an intense oxygen consumption and, as a result, the bottom water of the lake became anaerobic. Thus, an intense sulfate reduction occurred producing high amounts of bicarbonate ions. The lake became stratified into three water bodies with various salinities separated by two pycnoclines. The surface water body is oxygenated and exhibits brackish conditions. The algae/microbialite reefs exhibit a vertical development which started with a serpulid framework, followed by loose crusts of the calcified red alga Peyssonnelia and thalli of the green alga Cladophoropsis calcified by cyanobacteria (microstromatolites). The top calcified layer is formed by a network of Lithoporella, Peyssonnelia and microbialites. On the top layer the living reef community is located.1"
- 3468 s[3465] = "TUDHOPE A.W., SCOFFIN T.P. (1994).- Growth and structure of fringing reefs in a muddy environment, South Thailand.- J. sediment. Res. A 64, 4: 752-764.- FC&P 24-1, p. 92, ID=4529Topic(s): reef complexes, reef growth & structure; reef complexes, muddy environment; Systematics: ; Stratigraphy: Recent; Geography: Thailand SMost fringing reefs of the SE coast of Phuket, Thailand, have wide (up to 300m) intertidal reef flats and narrow (2-5m) reef fronts that abut the muddy forereef only a few meters deep. These reefs prograde by splitting, toppling, and regeneration of reef-front massive corals, notably Porites lutea. Splitting of massive corals is greatly aided by the boring action of Upogebia sp. shrimps and by planes of weakness developed within the colony skeleton by nestling bivalves. The large size of toppled blocks ensures that some of the uppermost polyps are viable above the soupy forereef sediment surface. Cores indicate that the reefs are essentially tabular features consisting of mainly massive reef-front corals grown on muddy foundations that have shallowing-upwards sediment characteristics. 14C ages and leveling data of fossil former reef-front corals exposed on the reef flat suggest that reef growth started in the mid-Holocene when sea level was at least 0.8m higher than now. Since then, the rate of lateral reef progradation has averaged 40 mm/yr. The preservation potential of these reefs is low because of the combination of a lack of organic or inorganic binding of the corals into a rigid frame, and the unconsolidated nature of the underlying sediments.1"
- 3469 s[3466] = "HILLMER G. (1991).- Philippine artificial reefs: anatomy of a failure.- Mitt. Geol.-Palaeont. Inst. Univ. Hamburg 71: 31-43.- FC&P 24-2, p. 100, ID=4609Topic(s): reefs artificial; reefs, artificial; Systematics: ; Stratigraphy: Recent; Geography: Asia SEThe use of artificial reefs or artificial habitats is gaining ground in Southeast Asia. They are considered to be a tool to improve living aquatic resources in coastal areas where coral reefs are unsuitable for attracting fish or other commercially important marine organisms. More than ten artificial reef systems have already been developed in the Philippines and other

- coastal areas. Module of scrap rubber tire, different concrete units and pyramid bamboo constructions are common. Our studies on Cebu Island on encrusting organisms, e.g. bryozoans on the above mentioned artificial reef types, have shown that most of these noncryptic designs are not favourable for reef organisms. Instead, the so-called Geo-Artificial-Reefs are proposed. This natural material consists of blocks of the very common Plio-Pleistocene "Carcar Limestone" in the Central Visayas Region. These rocks can be easily quarried and dumped as clusters in areas where reefs have been destroyed.^1";
- 3470 s[3467] = "DEBRENNE F., GANGLOFF R.A., ZHURAVLEV A.Yu. (1990).- Archaeocyatha from the Krol-Tal succession (Lesser Himalaya): an invalid record.- Geol. Mag. 127, 4: 361-362 [correspondence and notes].- FC&P 20-1.1, p. 81, ID=2884^Topic(s): fraud data !; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: Himalaya^^1";
- 3471 s[3468] = "FLUGEL H.W. (1995).- Aphyphyllum n.sp. (Rugosa) aus der Gircha-Formation (?) des pakistanischen Karakorum.- Neues Jahrbuch f. Geologie u. Palaeontologie, Monatshefte, 1995, 3: 166-172. [in German, with English abstract].- FC&P 24-2, p. 82, ID=4566^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Pakistan^Description of a new species of Aphyphyllum Soshkina. The specimen is probably an Older Paleozoic debris boulder within the Permian Gircha Formation of the Karakorum Mts. of Northern Pakistan. The diameters of the corallites are 13-20mm and greater than the diameters of the known species of Aphyphyllum. The uncertainties in age and original position allow only an open nomenclature.^1";
- 3472 s[3469] = "NGUYEN DUC KHOA (1984).- Rugose fauna from the Tanlan region.- Journ. Sci. Earth 6, 3: 92-95.- FC&P 14-2, p. 24, ID=6710^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ???; Geography: Vietnam, Tanlan^^1";
- 3473 s[3470] = "HAMADA T. (1975).-'Cladochonus" (tabulate coral) from the Red Bed of Malaya.- Geol. palaeontol. Southeast Asia 15: 23-37; Tokyo University; proceedings of annual meeting, palaeontol. Soc. Japan, Sendai 1973.- FC&P 4-2, p. 57, ID=5267^Topic(s): ; Tabulata, Cladochonus; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: Malaysia^^1";
- 3474 s[3471] = "FONTAINE H., SALLYPONGSE S., SUTEETHORN V., TIAN P., VACHARD D. (2005).- Sedimentary rocks of the Loei Region, Northeast Thailand.- Sedimentary rocks of the Loei Region, Northeast Thailand: 165 pp., 15 figs, 1 tab, 30 pls; Bangkok. ISBN 9789749674512.- FC&P 34, p. 94, ID=1354^Topic(s): research history; geology; Systematics: ; Stratigraphy: ; Geography: Thailand NE^In the 1950s, the Department of Mineral Resources was very active in the geologic reconnaissance of the diverse mineral deposits of Thailand (Brown et al., 1951), but it was also interested to extend the investigation to other geologic problems. For instance, it was eager to find good sections of sedimentary rocks, to study their fossils, and then, to distinguish biozones easy to correlate with the rocks of other countries (Sethaput, 1956). An important programme started in Loei Province and was carried out by M. Veeraburus, D. Bunnak and A. Hongnusothi, with the cooperation of Japanese paleontologists (T. Kobayashi, H. Igo, T. Hamada, J. Iwai, J. Yanagida). K. Pitakpaivan (1966) studied fusulines from calcareous shale of Wang Saphung area as well as from other localities of Thailand; he became the first Thai paleontologist. Near Wang Saphung, Middle-Upper Carboniferous and Permian fossils were collected in fair quantity. They were diverse and consisted of trilobites, foraminifera, conodonts, brachiopods, and ammonoids. They were described in many publications; see the references of this publication. Permian plant imprints were discovered in Loei area. In 1980 in Loei region, information on rocks older than Middle Carboniferous was very poor. Fossils, supposed to be Devonian in age,

had been mentioned as early as 1925, but at a single locality, without good identification and description. New research was needed; it was undertaken under an agreement between the Department of Mineral Resources and CCOP. New results were obtained during the first fieldwork carried out with the cooperation of Mr. N. Nakornsri and Mrs. B. Sektheera; they were published in CCOP Newsletter in 1981. Devonian and Lower Carboniferous fossils had been discovered at a few localities. Outside of the Wang Saphung area, other parts of the Loei region appeared as also very rich in fossils and very interesting, but they remained poorly known. Some geologists became enthusiastic for new investigations, especially Dr. V. Suteethorn and Mr. W. Tantiweanit. New field work led to many new discoveries of fossiliferous localities. Later on, Mr. S. Salyapongse was happy to be involved in this research and was eager to extend it. Dr. D. Vachard of the University of Lille (France) has been very helpful in the identification of the Carboniferous and Permian microfossils. Dr. B. Mistiaen and Dr. D. Brice of the University of the University Federation of Lille are presently studying Devonian samples collected from the Loei region and consisting of stromatoporoids, Tabulata and some brachiopods. The study of this publication corresponds to the programme proposed in 1956 by Mr. V. Sethaput.¹;

- 3475 s[3472] = "BEAUVAIS L., BERNET-ROLLANDE M.C., MAURIN A.F. (1989).- Microfacies analysis of the Upper Jurassic limestones of Sumatra.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary fossils of Sumatra and their environment]: 299-310.- FC&P 19-1.1, p. 28, ID=2594Topic(s): carbonates microfacies; Systematics: ; Stratigraphy: ; Geography: Sumatra¹";
- 3476 s[3473] = "BEAUVAIS L., BERNET-ROLLANDE M.C., FONTAINE H. (1988).- Microfacies of the west Thai Permian.- CCOP Technical Bulletin 20 [Fontaine H. & Suteethorn V. (eds): Late Palaeozoic and Mesozoic Fossils of west Thailand and their Environments]: 128-134.- FC&P 19-1.1, p. 76, ID=2722Topic(s): carbonates; Systematics: ; Stratigraphy: ; Geography: Thailand¹";
- 3477 s[3474] = "TALENT J.A., BROCK G.A., ENGELBRETSSEN M.J., KATO M., MORANTE R., TALENT R.C., (1989).- Himalayan Palaeontologic Database Polluted by Recycling and Other Anomalies.- Journal geol. Soc. India 34: 575-586.- FC&P 20-1.1, p. 51, ID=2816Topic(s): fraud data; paleontology; Systematics: ; Stratigraphy: ; Geography: Himalaya¹Additional examples are given of assorted disinformation injected into the Devonian, Carboniferous, Triassic and Cainozoic literature on palaeontology of the Himalayas. These include biogeographically and temporally incredible conodont-brachiopod associations, phantom localities, and re-use ('recycling') of specimens. The'recycling' includes assemblages of Carboniferous corals and Triassic and Carboniferous conodonts used as documentation for reports from specific regions of the Himalayas being used subsequently as'documentation' of reports from other regions, an illustration of a Welsh Carboniferous coral specimen being used as basis for a'report' from Kashmir, and a Silurian coral specimen reported from two regions with different names. Attention is also drawn to curious practices regarding coauthorship.¹";
- 3478 s[3475] = "TALENT J.A., BROCK G.A., ENGELBRETSSEN M.J., MORANTE R., TALENT R.C., KATO M., (1990).- Indian palaeontology under a cloud; discussion.- Geological Society of India Journal 35, 6: 649-664.- FC&P 21-1.1, p. 48, ID=3244Topic(s): fraud data; paleontology; Systematics: ; Stratigraphy: ; Geography: Himalaya¹";
- 3479 s[3476] = "FONTAINE H., SALYAPONGSE S. (1997).- Biostratigraphy of East Thailand.- [journal?] The International Conference on Stratigraphy and Tectonic Evolution of Southeast Asia and the South Pacific Bangkok, 19-24 August, Thailand.- FC&P 27-1, p. 48,

- ID=3803^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: ; Stratigraphy: ; Geography: Thailand E^Prior to 1980, a single palaeontological paper concerned eastern Thailand and only one locality (Pitakpaivan et al. 1969). On the contrary, several palaeontological studies were carried out during the 1980s and 22 fossiliferous localities were discovered (Pitakpaivan & Lagavat 1980; Sugiyama & Toriyama 1981; Fontaine & Vachard 1981; Fontaine 1982; Bunopas et al. 1983; Buffetaut & Ingavat 1983; Vachard & Fontaine 1988). Then, palaeontological research was brought again to a standstill for a few years. It has resumed very recently (Chaimanee et al. 1993; Sashida et al. 1993 and 1997; Fontaine et al. 1996 and 1997). During 1996 and the beginning of 1997, intensive research has been carried out in the field by S. Salyapongse and H. Fontaine, more than forty new fossiliferous localities have been discovered; they are currently studied. A list of all the localities known so far is given in the following with short remarks on the fossil assemblages. Then, our present knowledge will be summarized in a conclusion.^1";
- 3480 s[3477] = "FONTAINE H. (1987).- Brief report on field trips to Trang, Krabi, and Phang-Nga Provinces in the south of Thailand.- CCOP Newsletter 12, 1. [reprinted 1990 in Fontaine H.: Ten years of CCOP research on the pre-Tertiary of East Asia. CCOP Technical Secretariat, Bangkok: 367].- FC&P 23-2.1, p. 44, ID=4251^Topic(s): geology; Systematics: ; Stratigraphy: ; Geography: Thailand^^1";
- 3481 s[3478] = "FONTAINE H., KHOO H.P. (1990).- A review of palaeontology and biostratigraphy of the Kelantan State.- Ten years of CCOP research on the pre-Tertiary of East Asia [H. Fontaine (ed.); CCOP Technical Secretariat, Bangkok]: 111-142.- FC&P 23-2.1, p. 44, ID=4257^Topic(s): geology, biostratigraphy; fossils; Systematics: ; Stratigraphy: ; Geography: Malaysia, Kelantan^^1";
- 3482 s[3479] = "HUNG N.-H., MISTIAEN B. (1997).- Vacuostroma, un genre nouveau de stromatopore dendroide du Devonien du Vietnam et du Boulonnais (France).- Geobios 30, 2: 193-204.- FC&P 26-2, p. 77, ID=3767^Topic(s): ; stroms, Vacuostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Vietnam, France^A new genus of dendroid stromatoporoid, Vacuostroma, is proposed. The genus is present in the Devonian of Vietnam, with two species, V. thanhlangense and V. sp. A. It is also present in the Devonian of Boulonnais (North of France) with another species, V. michelini. The genus Vacuostroma is typically characterized by coenosteal elements with vacuolate microstructure. The characteristics of other dendroid stromatoporoid genera are compared with those of the new genus.^1";
- 3483 s[3480] = "LA TOUCHE T.H.D., SASTRY M.V.A., SINHA N.K. (1969).- Bibliography of Indian geology IV. Palaeontological index (revised and enlarged) II. Coelenterata.- Publ. Civ. lines: 115 pp., 1 pl.; Delhi.- FC&P 4-1, p. 15, ID=4993^Topic(s): list of fossils; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: India^^1";
- 3484 s[3481] = "KATO M. (1990).- Pre-Cretaceous rocks in Hokkaido.- Publication of IGCP Project 224 [Ichikawa K., Mizutani S., Hara I., Hada S. & Yao A. (eds): Pre-Cretaceous terranes of Japan]: 281-284; Osaka.- FC&P 21-1.1, p. 46, ID=3226^Topic(s): geology; geology; Systematics: ; Stratigraphy: Cretaceous-pre; Geography: Japan, Hokkaido^^1";
- 3485 s[3482] = "ENDO T., NAKAYAMA T., KAWASHIMA S. (1972).- Discovery of Dendrophyllia cribosa (de Haan) in a core from a boring at Tokyo [en japonais].- J. geol. Soc. Jap. 78, 5: 273-274.- FC&P 4-1, p. 43, ID=5165^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: fossil; Geography: Japan^^1";

- 3486 s[3483] = "KATO M. (1976).- Coelenterates.- Trans. Proc. palaeont. Soc. Japan, NS 100 [T. Matsumoto et al. (eds): A concise history of palaeontology in Japan]: 26-29.- FC&P 6-1, p. 19, ID=5498^Topic(s): Coelenterata; Systematics: Cnidaria; Stratigraphy: fossil; Geography: Japan^^1";
- 3487 s[3484] = "HAMADA T. (1975).- Coral reefs of Japan - with special reference to the oldest and the youngest.- Marine Sciences Monthly 7, 9 [Proceedings of the "Ancient Reef Complex" Symposium]: . ???.- FC&P 5-1, p. 16, ID=5332^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: fossil & living; Geography: Japan^^1";
- 3488 s[3485] = "KATO M., MINATO M. (1977).- Note on the occurrence of Amsdenoides (Rugosa) from the Japanese Silurian.- Hokkaido University, Faculty of Science Journal .: 535-539.- FC&P 6-2, p. 15, ID=0116^Topic(s): new records; Rugosa, Amsdenoides; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Japan^First record of this genus in Japan^1";
- 3489 s[3486] = "KIDO E., SUGIYAMA T. (2005).- Silurian rugose corals from the Gionyama Formation, Gokasecho, Miyazaki Prefecture, Southwest Japan.- Fukuoka University Science Reports 35, 1: 11-29.- FC&P 33-2, p. 17, ID=1094^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Japan SW^The Gionyama Formation, a unit of Silurian and Devonian rocks, is exposed in the Gokase-cho, Miyazaki Prefecture, and assigned to the Kurosegawa Terrane in Southwest Japan. Two localities from the G2 Member of the Gionyama Formation contain an abundant rugose corals fauna consisting of 17 species in 12 genera. These are: Tryplasma sp. A, T. sp. B, T. sp. C, Cystiphyllum sp., Holmophyllum sp. A, H. sp. B, Labechiellata regularis, Rhizophyllum sp. A, R. sp. B, Neobrachyelasma sp. aff. N. balchascicum, Pseudamplexus sp., Amsdenoidessp., Amplexoides sp., Strombodes sp., Nanshanophyllum sp. aff., N. typicum, N. sp. aff. N. mirandum and Ptychophyllum sp. The following genera are reported for the first time from this member: Cystiphyllum, Holmophyllum, Rhizophyllum, Neobrachyelasma, Pseudamplexus, Amsdenoides, Amplexoides, Strombodes, Nanshanophyllum and Ptychophyllum. In addition, Neobrachyelasma, Strombodes and Ptychophyllum are previously unknown from the Silurian of Japan. Of these genera in the G2 Member of the Gionyama Formation, eight commonly occur in the Upper Llandovery sequence in the Ningqiang - Guangyuan depression in the northern part of South China. In China, Nanshanophyllum indicates a middle to late Telychian age. Therefore the coral fauna from the G2 Member can be inferred to indicate a Late Llandovery age. Also, this is the second report of the co-occurrence of Neobrachyelasma and Nanshanophyllum, which previously was known only from the Ningqiang - Guangyuan depression. Neobrachyelasma is also known from Kazakhstan and the Altay area, and Nanshanophyllum has been reported from the Hunan Province in South China, Gansu Province in Qidam, Australia and Canada. Thus, the similarities of the coral faunas between the Gionyama Formation and these areas should be considered in any paleobiogeographic reconstruction of the Kurosegawa Terrane.^1";
- 3490 s[3487] = "KATO M. (1982).- Mazaphyllum (Rugosa) from the Silurian of Japan.- Trans. Proc. Palaeont. Soc. Japan N.S. 127: 386-392.- FC&P 11-2, p. 20, ID=1806^Topic(s): ; Rugosa, Mazaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Japan^^1";
- 3491 s[3488] = "MURATA M. (1977).- Phaulactis (Lykophyllum) onukii, a new Silurian species of Rugosa from the Kitakami Massif, Northeast Honshu, Japan.- Kuamoto Jour. Sci., Geol. 10, 2: 27-35.- FC&P 7-1, p. 11, ID=5563^Topic(s): new taxa; Rugosa, Phaulactis; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Japan, Honshu^^1";
- 3492 s[3489] = "KIDO E. (2009).- Silurian Holmophyllidae (Rugosa) from the Gionyama Formation of the Kurosegawa Terrane, Southwest Japan.-

- Palaeontological Research 13, 3: 293-306.- FC&P 36, p. 60, ID=6447Topic(s): ; Rugosa Holmophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: JapanThree rugose species of the family Holmophyllidae wang, 1947 are described for the first time from the Gionyama Formation of the Kurosegawa Terrane, Southwest Japan. They are Holmophyllum sp., Holmophyllum? sp., and Labechiellata reguloris (Sugiyama, 1939). These species are found in the Middle Member of the Gionyama Formation, which is Late Llandovery to Early Ludlow (Silurian) in age. Holmophyllum and Labechiellata are typical cosmopolitan genera. The compound holmophyllids such as Labechiellata may indicate tropical environments and suggest that 'Proto-Japan' was, like other areas that yield these corals, located in subtropical to tropical latitudes during the Silurian. [original abstract]^1";
- 3493 s[3490] = "KIDO E. (2009).- Nanshanophyllum and Shensiphyllum (Silurian Rugosa) from the Kurosegawa Terrane, Southwest Japan, and their paleobiogeographic implications.- Journal of Paleontology 83, 2: 280-292.- FC&P 36, p. 60, ID=6448Topic(s): biogeography; Rugosa Nanshanophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: JapanThree rugose species in two genera - Nanshanophyllum hamadai n.sp., N. gokasense n.sp., and Shensiphyllum sp. - are described for the first time from the Kurosegawa Terrane, Southwest Japan. These species occur in the Middle Member of the Gionyama Formation, which is Late Llandovery to Early Ludlow (Silurian) in age. The two genera, Nanshanophyllum and Shensiphyllum, formerly were known only from South China and Qaidam. The occurrence of these two genera in Japan may indicate a paleogeographic connection between 'Proto-Japan' and the South China Block during the Silurian. [original abstract]^1";
- 3494 s[3491] = "KIDO E. (2010).- Silurian rugose corals from the Kurosegawa Terrane, Southwest Japan, and the first occurrence of Neobrachyelasma.- Journal of Paleontology 84, 3: 466-476.- FC&P 36, p. 60, ID=6449Topic(s): new records; Rugosa Neobrachyelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: JapanFour species of rugose corals (one new) are described from the Silurian of the Kurosegawa Terrane, Southwest Japan. They are Neobrachyelasma japonica n.sp., Pseudamplexus sp., Amsdenoides sp., and Amplexoides sp. aff. A. chaoi (Grabau, 1925). These species occur in the Middle Member of the Gionyama Formation, which is Late Llandovery to Early Ludlow in age. Neobrachyelasma is reported for the first time from Japan. This genus occurs in the Lower Llandovery to Upper Silurian of Japan, South China, Kazakhstan, and the Altai and might be distributed only in South China and Japan during the Late Llandovery. Its occurrence in Japan may support a paleogeographic proximity of'Proto-Japan' and the South China Block during the Silurian. [original abstract]^1";
- 3495 s[3492] = "MINATO M., CHOI D.R., OKABE Y. (1973).- New locality of Silurian fossils in Kitakami Mountains.- Journ. geol. Soc. Japan 79, 1, p. 47. [in Japanese].- FC&P 4-1, p. 36, ID=5122Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Japan[coral fauna (Favositidae) from the Silurian of Honshu]^1";
- 3496 s[3493] = "KAWAMURA M. (1980).- Silurian Halysitids from the Shimoarisu district, Iwate Prefecture, Northeast Japan.- Hokkaido University, Faculty of Science Journal ser. 4, 19, 3: 273-303.- FC&P 9-1, p. 45, ID=0280Topic(s): taxonomy; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Japan NWSeven halysitids, newly found and described from the Silurian Okuhinotsuchi Formation, developed in the Shimoarisu district, Setamai region of Iwate Prefecture. Out of these, Halysites arisuensis is new to scientific knowledge. Based on halysitids, the Okuhinotsuchi Formation as a whole may be of Late Llandovery to Wenlockian in age. In general, the halysitids described

- are faunistically very much related to those of southwest Japan and Australia. Apart from *H. arisuensis* n.sp., the following species are described: *Falsicatenipora shikokuensis* Noda & Hamada 1958, *Halysites labyrinthicus* (Goldfuss 1829), *Halysites* cf. *cratus* Etheridge 1904, *Halysites* sp. A and *H. sp. B*.¹";
- 3497 s[3494] = "NAKAI H. (1981).- Silurian corals from the Yokokurayama Formation in the Mt. Yokokura Region, Kochi Prefecture, Southwest Japan. Part I. Halysitidae.- Transactions Proceedings palaeontological Society Japan 123: 139-158.- FC&P 13-1, p. 44, ID=0492^Topic(s): ; Tabulata, Halysitidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Japan SW^Eight species of halysitid corals, namely *Schedohalysites kitakamiensis* (Sugiyama), *Falsocatenipora shikokuensis* Noda & Hamada, *Halysites catenularius* (Linnaeus), *H. suessmilchi* Etheridge, *H. kuraokensis* (Hamada) and three indetermiabile species, are described and figured from the Silurian deposits of Mt. Yokokura region in Kochi Prefecture, Southwest Japan. Among them, *Halysites* spp. A and B may represent new forms although they are imperfect in preservation. *Halysites catenularius* (Linnaeus) and *H. kuraokensis* (Hamada) are recorded from Mt. Yokokura region for the first time. The Silurian geology in the Mt. Yokokura region is also briefly described.¹";
- 3498 s[3495] = "KATO M., MINATO M., NIIKAWA I., KAWAMURA M., NAKAI H., HAGA S. (1980).- Silurian and Devonian corals of Japan.- Acta Palaeontologica Polonica 25, 3-4: 557-566.- FC&P 10-1, p. 45, ID=1808^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Devonian; Geography: Japan^[a review of the coral assemblages and their faunal sequences for the Silurian and Devonian of four major regions of Japan]¹";
- 3499 s[3496] = "NAKAI H., TAJIKA J., KAWAMURA M., NAGATA H., KAWAMURA T. (1980).- Newly found Siluro-Devonian fossil localities in the Yokamachi-Komatsu-pass district of southern Kitakami Mountains, Northeast Japan. [in Japanese].- Jour. Geol. Soc. Japan 86, 5: 356-358.- FC&P 10-1, p. 32, ID=5946^Topic(s): ; fossils corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian / Devonian; Geography: Japan, Kitakami Mts^^1";
- 3500 s[3497] = "MINATO M. (1975).- Japanese Palaeozoic Corals.- Journ. Geol. Soc. Japan 81, 2: 105-126.- FC&P 4-2, p. 59, ID=5282^Topic(s): research history, biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian - Permian; Geography: Japan^History of the research on Japanese Palaeozoic corals is briefly stated. Stratigraphical and geographical distribution of corals in the Japanese Palaeozoic deposits is briefly described. A total of 281 species is listed up from various horizons ranging from the Late Silurian to the Upper Permian. worldwide correlation and palaeobiogeographical situation of the coral faunas and problems related to the palaeoclimatology are discussed. * Certain amount of horizontal movement of the present day Japan probably occurred during the Palaeozoic, it is also discussed in combination with palaeomagnetic study and coral fauna. * In spite of the fact that Japan has always been located in the eastern end of the Tethys Sea, certain minor elements are found indicating a relationship with the boreal sea, the Durhaminae province of Carboniferous time for example, and Eastern Australia in various ages.¹";
- 3501 s[3498] = "MURATA M. (1977).- A short note on Conularia from the Lower Devonian formation in the Hida Massif, Central Japan.- Kuamoto Jour. Sci., Geol. 10, 2: 37-40.- FC&P 7-1, p. 11, ID=5564^Topic(s): ; Conulata Conularia; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Devonian L; Geography: Japan central^^1";
- 3502 s[3499] = "anonymous (1973).- Présence de Rhizophyllum (Rugosa) de la Formation dévonienne de Fukuji, Japon central. [en japonais] .- J. geol. Soc. Jap. 79, 6: 423-424.- FC&P 4-1, p. 41,

- ID=5157^Topic(s): ; Rugosa, Rhizophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Japan^1";
- 3503 s[3500] = "HAMADA T. (1971).- Discovery of Calceola from the Fukuji Series, Gifu Prefecture, Japan.- Sci. Pap. Coll. Gen. Educ., Univ. Tokyo 21, 1: 79-91.- FC&P 1-2, p. 14, ID=4643^Topic(s): new records; Rugosa, Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Japan^A small operculum of Calceola sp. is described and illustrated as the first occurrence in Japan from the Devonian Fukuji Series. The known occurrences of Calceola species in the world were summarized stratigraphically and geographically to elucidate the Japanese calceolid occurrence.^1";
- 3504 s[3501] = "MINATO M., MINOURA N. (1977).- A new Tabulate coral from the Lower Devonian of Japan.- Hokkaido University, Faculty of Science Journal, ser. 4, 17, 4: 555-573.- FC&P 7-1, p. 22, ID=0178^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L; Geography: Japan^[crinoid and not a tabulate - see Minato et al. 1982] A new tabulate coral named Ohnopora hayasakai is described. It somewhat resembles Syringolites but may genetically be distinguished from the latter in having two straight hollow tubes in each corallite which are connected with smaller tubules in the central part of the tabulae. The corallites are contiguous, with common walls; polygonal, more or less rectangular in cross sections. Mural pores are present.^1";
- 3505 s[3502] = "TSUKADA K. (2005).- Tabulate corals from the Devonian Fukuji Formation, Hida Gaien belt, central Japan. Part 1.- Bulletin Nagoya University Museum 21: 57-125.http://ir.nu1.nagoya-u.ac.jp/jspui/handle/2237/6333.- FC&P 34, p. 48, ID=1261^Topic(s): taxonomy, stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Japan^The Fukuji area, in the Hida Gaien belt (HGB), is one of the most significant areas for Paleozoic stratigraphy in Japan. The Devonian Fukuji Formation of this area yield abundant, well-preserved coral fossils, however, the biostratigraphy and paleobiogeographical significance of this fauna still remain unclear and precise details of the Devonian situation of the HGB have yet to be revealed. In order to understand the Paleozoic history and geological framework of the HGB better, the stratigraphy and faunal assemblages of this formation have been reexamined. Limestone and muddy limestone samples amounting to some 420kg from seven horizons (Locs. 1 to 7) along the Ichinotani Valley, Fukuji area, Gifu Prefecture, central Japan have been studied here. The tabulate coral fauna from the Loc. 1 (N36°13.17'' E137°31.37'') comprises the following 17 species: Favosites goldfussi, F. flexuosus, F. sp. A, Squameopora hidensis, S. zhanwaensis fukujiensis subsp.nov., S. cf. zhanwaensis, Sapporipora kamitakaraensis sp.nov., Sa. karatanioum sp.nov., Heliolites wenxianicus, H. cf. gemina, H. ichinotaniensis sp.nov., H. ? sp., Helioplasma takayamaensis sp.nov., Pseudoplasmodopora okuhidaensis sp.nov., P. cf. arguta, Striatopora sp., Gertholites ? sp. This paper describes these tabulate corals from the Loc. 1. [original abstract]^1";
- 3506 s[3503] = "MURATA M., MORI K. (1973).- Discovery of Schedohalysites in Ono Formation.- Journ. geol. Soc. Japan 79, 2: 125-126. [in Japanese].- FC&P 4-1, p. 36, ID=5123^Topic(s): new records; Tabulata, Schedohalysites; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Japan, Kitakami Mts^[coral fauna from the Devonian of Kitakami Mountains, Honshu]^1";
- 3507 s[3504] = "NIKO S. (2005).- Devonian pachyporoidean tabulate corals from the Fukuji Formation, Gifu Prefecture.- Bulletin of National Science Museum Tokyo, Ser. C, 31: 13-29.- FC&P 34, p. 46, ID=1256^Topic(s): ; Tabulata, Pachyporidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Japan^Five tabulate coral species of the superfamily Pachyporoidea

are described from the Lower Devonian (Emsian?) of the Fukuji Formation, Gifu Prefecture, Central Japan. They include pachyporids consisting of *Hillaepora* sp. cf. *H. altaica* Dubatolov in Dubatolov and Spasskiy, 1964, *Isurugiopora obesa* gen. et sp.nov., *Striatopora takayamaensis* sp.nov. and *Thamnopora hayasakai* sp.nov., and a parastriatorporid of *Parastriatorpora innae* Dubatolov, 1963. Among the previously known pachyporid genera, a new genus *Isurugiopora* is most similar to *Gertholites*, differing mainly in its exceptionally inflated median dark line. *Dendropora dubrovensis* Dubatolov, 1959 from the Givetian of the Kuznetsk Basin, southwestern Siberia is assigned to *Isurugiopora*. The conspecific and closely related species are reported from the Kuznetsk Basin and Altai of southwestern Siberia. The tabulate coral faunas from Salair and the Kuznetsk Basin of southwestern Siberia, Inner Mongolia, the Urals, Tarim, and Belgium also have comparable species with the Fukuji fauna. From a paleobiogeographic point of view, this fauna shows most strong affinities with those in southwestern Siberia. [original abstract]^1";

- 3508 s[3505] = "IGO H., ADACHI S. (1980).- Two new interesting corals from the Ichinotani Formation (Upper Paleozoic corals from Fukuji, southeastern part of the Hida Massif, Part 4).- Professor Saburo Kanno Memorial Volume: pp 309-316, pls 56-38.- FC&P 10-1, p. 31, ID=5938^Topic(s): new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic U; Geography: Japan^^1";
- 3509 s[3506] = "MINATO M., HUNAHASHI M., WATANABE J., KATO M. (1979).- Variscan geohistory of northern Japan: the Abean orogeny.- Tokai University Press; 427 pp (?) Faculty of Science Journal, Hokkaido University .- FC&P 9-1, p. 19, ID=0324^Topic(s): geohistory; geology; Systematics: ; Stratigraphy: Variscan orogeny; Geography: Japan^[the book of 427 pages is illustrated by 92 plates of fossils, of which 30 plates are devoted to Palaeozoic corals from the Kitakami and Abukuma mountains, and will serve as a fossil atlas as well]^1";
- 3510 s[3507] = "YAMAGIWA N. (1977).- Two Carboniferous corals discovered from Mitsuzawa, southeastern part of the Kwanto massif.- Palaeont. Soc. Japan Trans. Proc. NS 104: 442-447.- FC&P 6-1, p. 27, ID=0070^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan^Describes and illustrates one new species.^1";
- 3511 s[3508] = "MINATO M., OGATA T. (1977).- A Tournaisian coral from the Membi-Peak, Kitakami Mountains, Japan.- Hokkaido University, Faculty of Science Journal, ser. 4, 17, 3: 527-534.- FC&P 6-2, p. 16, ID=0131^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Tour; Geography: Japan, Kitakami Mts^Describes and illustrates one new species^1";
- 3512 s[3509] = "HAIKAWA T., OTA M. (1978).- A Lower Carboniferous coral reef found in the Nagatophyllum satoi zone of the Akiyoshi Limestone Group, Southwest Japan.- Bulletin Akiyoshi-Dai Museum of Natural History 13: 1-14 .- FC&P 8-1, p. 53, ID=0224^Topic(s): reefs, coral reefs; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Japan, Akiyoshi 1st^^1";
- 3513 s[3510] = "KATO M. (1979).- Japanese Carboniferous coral faunas.- Eighth International Congress of Carboniferous Stratigraphy and Geology, Comptes Rendu 2: 6-16.- FC&P 9-2, p. 41, ID=0317^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan^^1";
- 3514 s[3511] = "KATO M. (1984).- Study of the Carboniferous Hikoroichi Formation.- Report for the 1983 Res. Grant Japanese Government of Education: 1-26.- FC&P 14-2, p. 33, ID=0948^Topic(s): ; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy:

- Carboniferous; Geography: Japan^Among other fossils several tabulate and rugose corals are mentioned and some are figured, but not described. The Hikoroichi Formation - divided in four subformations - belongs with the lowermost part (H1) to the Tournaisian, whereas the subformations H2 - H4 are ascribed to the Visean.^1";
- 3515 s[3512] = "NIIKAWA I. (1984).- Coral fauna of the uppermost Dinantian Onimaru Formation, Honshu, Japan.- Palaeontographica Americana 54: 448-452 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 49, ID=0998^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise; Geography: Japan, Honshu^^1";
- 3516 s[3513] = "KATO M., HASHIMOTO K., EZAKI Y. (1987).- Carboniferous corals of Tateishi, Fukushima Prefecture, Japan.- Kashimacho Educ. Comm. 1987, 4: 1-10 [in Japanese].- FC&P 17-1, p. 23, ID=2128^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan^Figured are species of Dibunophyllum, Carcinophyllum, Lonsdaleia, Arachnolasma, Adamanophyllum, Chienchangia?, Amplexocarinia?, Clisiophyllum?, Actinocyathus, Lithostrotion, Siphonodendron, Palaeosmia, Chaetetes, Sinopora.^1";
- 3517 s[3514] = "HAIKAWA T. (1986).- Lower Carboniferous of the Okuba area in the Akiyoshi limestone plateau, southwest Japan.- Bulletin Akiyoshi-Dai Museum of Natural History 21: 1-35.- FC&P 18-1, p. 37, ID=2246^Topic(s): ; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Japan^^1";
- 3518 s[3515] = "SUGIYAMA T., MATSUURA H., ISHIBASHI K. (1990).- Some Carboniferous corals and basalts from the Hasumi Formation along the middle course of the Gonokawa river, central Chugoku District, southwest Japan.- Bulletin of Geological Survey of Japan 41, 12: 665-677.- FC&P 20-2, p. 59, ID=2940^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan SW^^1";
- 3519 s[3516] = "GOTO H., YAMAGIWA N. (1975).- Some Carboniferous corals from Hyogo Prefecture, southwest Japan.- Osaka Kyoiku Univ. Mem. 24, 3 1: 87-93.- FC&P 5-2, p. 9, ID=5426^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan SW^Describes and illustrates 4 species, none new.^1";
- 3520 s[3517] = "ROWETT C.L., MINATO M. (1968).- Corals from the Omi limestone, Central Honshu, Japan.- Jour. Fac. Sci. Hokkaido Univ., ser. 4, 14, 1: 7-35.- FC&P 9-1, p. 19, ID=5780^Topic(s): ; corals taxonomy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan, Honshu^^1";
- 3521 s[3518] = "IGO H., KOBAYASHI F. (1980).- Carboniferous corals from the Itsukaichi district, Tokyo, Japan.- Science Reports of the Institute of Geosciences, Univ. of Tsukuba, Section B, 1: 149-162.- FC&P 10-2, p. 61, ID=5939^Topic(s): ; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Japan^Three interesting corals were discriminated from the Mitsuzawa Limestone, near Itsukaichi, west of Tokyo. These corals are Lithostrotion (Siphonodendron) mitsuzawensis Yamagiwa, Diphyphyllum delicatum nishitamensis Igo & Kobayashi n. subsp., and Heterophyllia (?) tokyoensis Igo & Kobayashi n.sp. * Peripheral increase is very rare in the genus Lithostrotion, but commonly observed in Lithostrotion (Siphonodendron) mitsuzawensis. Although the indentification of generic position was reserved, the occurrence of the genus Heterophyllia from this limestone is also worthy of note to consider the paleobiogeography of corals in Carboniferous. [original summary]^1";
- 3522 s[3519] = "NAGAI K. (1985).- Reef-forming Algal-Chaetetid Boundstone

found in the Akiyoshi Limestone Group, Southwest Japan.- Bulletin Akiyoshi-Dai Museum of Natural History 20: 1-17.- FC&P 15-1.2, p. 42, ID=0770Topic(s): reefs; reefs; Systematics: algae Porifera; Chaetetida; Stratigraphy: Carboniferous; Geography: Japan^This paper deals with the detailed reconstruction of a reef framework newly found in the upper part of the Millerella yowarensis Zone of the Akiyoshi Limestone Group. The reef framework, developed on a calc-arenitic sedimentary mound, consists mainly of chaetetids, calcareous algae and rugose corals with minor amount of encrusting foraminifers, bryozoans and annelid worms. Chaetetes, the most dominant group of organisms in this framework, played an important role as a framebuilder and a sediment trapper. However, hard mass is indispensable for the growth of Chaetetes. In relation with this problem, calcareous algae played as a sediment binder at an early stage of the framework-growth. And then the soft bottom became consolidated, providing the best condition for the growth of Chaetetes. After the growth of Chaetetes rigid framework for the organic reef was formed. (Original summary)^1";

3523 s[3520] = "WEST R.R., NAGAI K., SUGIYAMA T. (2001).- Chaetetid substrates in the Akiyoshi organic reef complex, Akiyoshi-sai, Japan.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 134-143.- FC&P 30-1, p. 20, ID=1427Topic(s): settlement; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous; Geography: Japan, Akiyoshi 1st^Strata and organisms underlying (substrate) and overlying (cover) chaetetids on polished vertical slabs from the Pseudostaffella antiqua and Millerella yowarensis zones of the Akiyoshi Limestone Group are here recorded. A total of six slabs have been examined. Two slabs were of encrusting chaetetid algal framestone, and two of algal bindstone; one of each lithology was from each biostratigraphic zone. The remaining two slabs, both from the back reef slope, were of algal chaetetid boundstone from the P. antiqua Zone. Slabs of encrusting chaetetid algal framestone were collected from the reef crest and those of algal bindstone from the reef flat. The facies and environment from which we have the most data over the greatest area, are the algal chaetetid boundstones from the back reef slope. Algal bindstone from the reef flat was next and the encrusting chaetetid algal framestone from the reef crest was least represented. Using reference grid, five by five centimeters, transects at one centimeter intervals were made parallel to the inferred direction of chaetetid growth, i.e. as near as possible to the direction paralleling the long dimension of the chaetetid tubules. Where transects crossed a chaetetid mass, the substrate of that chaetetid and what covering the chaetetid mass was recorded. The greatest diversity in substrate and cover occurred in the back reef slope environment. In all polished surfaces examined, algal/microbial mats are the dominant chaetetid substrate, and also covering strata, irrespective of reef environment or limestone facie. These results suggest that from upper Serpukhovian into middle Bashkirian time (the interval reflected by the two foraminiferal zones noted above), algal/microbial mats overgrew chaetetid sponges, but the mats also provided a suitable substrate for subsequent chaetetid sponge colonization and growth. Although competitive interactions are possible, it is more reasonable to suggest that algal/microbial overgrowth occurred as part of all the sponge tissue died as a result of disease or injury. Additionally, algal/microbial mats, as binding agent of unconsolidated sediment, produced a stable surface for chaetetid colonization. ^1";

3524 s[3521] = "SUGIYAMA T. (1984).- Heterocorallia from the Akiyoshi Limestone, Southwest Japan. Part I: systematic paleontology.- Bulletin Akiyoshi-Dai Museum of Natural History 19: 27-67.- FC&P 13-2, p. 35, ID=0539Topic(s): taxonomy, new taxa; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: Japan, Akiyoshi

- 1st^This paper is the systematic paleontological description of a large collection of Heterocorallia from the Lower Carboniferous, Akiyoshi Limestone. Seven species distributed among four genera are described in detail: Heterophyllia cf. H. ornata M'Coy, H. cf. H. oblonga Yu et al., Hexaphyllia yabei sp.nov., H. inflata sp.nov., Pentaphyllia regulare Yu et al., Radiciphyllia akiyoshiensis gen. et sp.nov., R. toriyamai gen. et sp.nov. * The genera of Heterocorallia are divided into two groups based on the microstructure of the peripheral edges of septa. Serial transverse sections from a single corallite of Radiciphyllia akiyoshiensis gen. et sp.nov. clearly support the system of septal development proposed by Poty (1978a, b; 1981).^1";
- 3525 s[3522] = "WAKITA K., FURUTANI H., OKAMURA Y. (1981).- Discovery of Early Carboniferous heterocorals in the north of Gujo-Hachiman, Gifu Prefecture.- Journ. Geol. Soc. Japan 87, 9: 601-604 [in Japanese].- FC&P 11-2, p. 20, ID=1811^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: Japan^Late Visean Hexaphyllia and Pentaphyllia were found in a limestone float, in central Japan.^1";
- 3526 s[3523] = "SUGIYAMA T. (1991).- Paleontological and biostratigraphical studies on Heterocorallia from the Akiyoshi Limestone, southwest Japan.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Comptes Rendus 2: 344-354.- FC&P 22-2, p. 87, ID=3243^Topic(s): stratigraphy, ecology; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous L; Geography: Japan, Akiyoshi 1st^In the Shishide-dai area, the Lower Carboniferous part of the Akiyoshi Limestone which contains a prolific fauna of Heterocorallia is most widely exposed, and subdivided into six foraminiferal biostratigraphic zones, the CL1 to CL6 Zones in ascending order. A detailed correlation of the lower part of this limestone is given by the foraminiferal assemblage. Among the heterocorallian limestones, the CL3 to CL5 Zones are corelative with the upper Visean (V3b and V3c), and the CL6 Zone with the lower Namurian (E1) in western Europe. Based on the morphological characteristics, the heterocorallian genera from the Akiyoshi Limestone are divided into two groups. One of the groups, which contains Hexaphyllia, Heterophyllia, and Pentaphyllia, is presumed to have had a living habit of attaching, to other organisms or hard objects by cementing tips of the hollow spines. The other group, containing Radiciphyllia, has had a sessile habit on the substratum by cementing talon-like attachments.^1";
- 3527 s[3524] = "MINATO M., MINOURA N. (1976).- Adamanophyllum from Japan.- Hokkaido University, Faculty of Science Journal, ser. 4, 17, 2: 365-372.- FC&P 6-1, p. 26, ID=0062^Topic(s): ; Rugosa, Adamanophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Serp; Geography: Japan^Describes and illustrates one new species.^1";
- 3528 s[3525] = "KATO M., NIIKAWA I. (1977).- Kueichouphyllum from central Japan.- Journal of the Association for Geological Collaboration in Japan 31, 6: 243-249.- FC&P 9-2, p. 41, ID=0319^Topic(s): ; Rugosa, Kueichouphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan^^1";
- 3529 s[3526] = "NIIKAWA I. (1979).- Carcinophyllum from the Ichinotani Formation In Fukuji, central Japan.- Jour. Fac. Sci. Hokkaido Univ. ser. 4, 19, 1-2: 235-240.- FC&P 9-2, p. 41, ID=0325^Topic(s): ; Rugosa, Carcinophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan, Fukuji^^1";
- 3530 s[3527] = "NAKAI H. (1980).- New Occurrence of Lower Carboniferous in Shikoku with description of a new aulate Rugosa.- Journal of the Association for Geological Collaboration in Japan 34, 3: 138-143.- FC&P 13-1, p. 33, ID=0444^Topic(s): new records;

- Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Japan, Shikoku^Lower Carboniferous rugose corals are first found from the eastern foot of Mt. Yokokura, Kochi Prefecture, Japan. The fossil-bearing strata are named Buntoki Formation. A newly found aulate rugose coral, *Aulostrotion yokokuraense* gen. et sp.nov., is described and the structure is discussed in general.^1";
- 3531 s[3528] = "IGO H., OKAYASU A., ADACHI S. (2003).- Carboniferous rugose corals from Nagakubo, Ogano Town, Chichibu in Saitama Prefecture, Japan (part I).- Scientific Reports, Institute Geosciences, University of Tsukuba, Sec. B., 24: 1-15.- FC&P 32-2, p. 60, ID=1390^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan^The Jurassic Mamba Formation exposed in the Nagakubo area of the Chichibu district, Saitama Prefecture included many fossiliferous limestone clasts. Abundant fossils in the clasts are rugose corals of which two new interesting species *Yuanophyllum chichibuense* and *Acrocyathus bamberi* are described in this paper. These corals indicate a Bashkirian (early Middle Carboniferous) age. Previously known species of *Yuanophyllum* have been reported mainly from the Viséan to Serpukhovian (upper Lower Carboniferous) of China, hence *Y. chichibuense* is considered being a relict of this genus. Another new species *Acrocyathus bamberi* is also one of the survivors of this genus that is common in the upper Lower Carboniferous. ^1";
- 3532 s[3529] = "YOSHIDA Y., OKIMURA Y., KATO M. (1987).- Early Carboniferous Corals from the Omi Limestone, Central Japan.- Trans. Proc. Palaeont. Soc Japan, N. S. 148: 228-245.- FC&P 17-2, p. 30, ID=2188^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Japan central^Corals are abundant in the lowest part of the Omi Limestone, Central Japan. An assemblage of corals obtained from the lowest part in the Fukugakuchi area comprises more than 13 forms, from which the following five species including three new species are herein described and illustrated: *Cyathaxonia* cfr. *C. cornu* Michelin, *Clisiophyllum kurohimense*, sp.nov., *Akiyosiphyllum stylophorum* Yabe et Sugiyama, *Carcinophyllum hasegawai*, sp.nov. and *Hiroshimaphyllum simplex*, sp.nov. This coralline fauna is correlatable with that one of the *Nagatophyllum satoi* Zone of the Akiyoshi Limestone, Southwest Japan, and indicates Late Visean age.^1";
- 3533 s[3530] = "NIIKAWA I. (1997).- A new tabulophyllid coral from the Dinantian Onimaru Formation, Northeast Japan.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 85-92.- FC&P 26-2, p. 10, ID=3674^Topic(s): new taxa; Rugosa, Tabulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Japan, Kitakami Mts^Corals collected from the Uppermost Dinantian Onimaru Formation in the southern Kitakami Mountains, Japan, have been identified as a new species of *Tabulophyllum*, thus extending the geological range of that genus. ^1";
- 3534 s[3531] = "IGO H., KAMIKAWA Y. (1998).- Carboniferous rugose corals from the Nanmoku area, northeastern part of the Kanto Mountains, Gunma Prefecture, Japan.- Science Reports of the Institute of Geoscience University of Tsukuba, Section B (Geological Sciences) 19: 29-42.- FC&P 27-2, p. 52, ID=3911^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan^Interesting Carboniferous rugose corals are discovered in a limestone block embedded in the Jurassic accretionary complex exposed in the Nanmoku area northwestern part of the Kanto Mountains, Gunma Prefecture. The limestone is light gray to gray and massive, and its microfacies suggests that the block represents a part of reefal facies. Identified rugose corals from this limestone are *Cystophorastraea sinensis* Wu & Zhao, *Petalaxis sondoi*, sp.nov., and *Amygdalophylloides wuwangshii*, sp.nov. Moreover,

- Beedeina and some other fusulinaceans, smaller foraminifers, Chaetetes, calcareous algae, and other organisms constitute main framework of this coral limestone and its geological age is assigned to a Moscovian of the Middle Carboniferous. [original abstract]^1";
- 3535 s[3532] = "YOSHIDA Y., OKIMURA Y. (1992).- *Amygdalophylloides* (*Rugosa*) from the Carboniferous of the Omi Limestone, Central Japan.- *Trans. Proc. Palaeont. Soc. Japan*, N.S. 166: 1116-1143.- FC&P 23-1.1, p. 66, ID=4145^Topic(s): ; *Rugosa*, *Amygdalophylloides*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan central^The Omi Limestone Group belonging to the Akiyoshi Terrane yields abundantly rugose coralline fossils of the genus *Amygdalophylloides* from its lower part. The assemblage of *Amygdalophylloides* obtained from the Fukugakuchi area where the lower sequence of the Omi Limestone Group is typically developed, comprises more than 10 forms, from which the following eight species, including five new species and two unidentified species, are herein described and illustrated: *Amygdalophylloides densus*, sp.nov., *A. denticulatus*, sp.nov., *A. uzurensis* (Yamagiwa and Ota), *A. omiensis*, sp.nov., *A. longi-septatus*, sp.nov., *A. parvus*, sp.nov., *A. sp. A.* and *A. sp. B.* This coralline assemblage is of Namurian A to Namurian B, Serpukhovian to early early Bashkirian age, except for the occurrence of *Amygdalophylloides* sp. A referred to the late Viséan age.^1";
- 3536 s[3533] = "IGO H., ADACHI S. (1994).- A new *Heterocaninia* (Coelenterata, *Rugosa*) from the Carboniferous Ichinotani Formation (Upper Paleozoic corals from Fukuji, southeastern part of the Hida Massif, Part 6).- *Sci. Rep. Inst. Geosci., Univ. Tsukuba, Sec. B*, 15: 71-80.- FC&P 24-1, p. 62, ID=4476^Topic(s): new taxa; *Rugosa*, *Heterocaninia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Visé; Geography: Japan^The lower part of the Ichinotani Formation exposed in the Fukuji district, Hida Massif, central Japan yields abundant upper Viséan rugose corals, which are similar to those reported from the Datangian of South China. Recently, we have obtained a well-preserved specimen of *Heterocaninia*. This genus resembles a well-known genus *Kueichouphyllum* but the occurrence is more limited and restricted to only South and Northwest China and the Ichinotani Formation of Japan. *Heterocaninia makotokatoi*, sp.nov. is proposed herein.^1";
- 3537 s[3534] = "NIIKAWA I. (1981).- Rugose Corals from Fukuji, Central Japan. Part 1. Carboniferous.- *Jour. General Education Dept., Niigata Univ.* 11: 131-154.- FC&P 11-2, p. 20, ID=6147^Topic(s): ; *Rugosa*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan^Twelve species of rugose corals from the Carboniferous Ichinotani formation of Fukuji, Central Japan, are described. *Carinthiaphyllum igoi* is a new species from the Moscovian. The other species are: *Haploplasma* cf. *regularis* (Gorsky), *Heterocaninia concentrica* Yu, *Koninckophyllum interruptum* Thomson et Nicholson, *Arachnolasma cylindricum* Yu, *Yuanophyllum* sp. A, Y. sp. B, *Lithostrotion portlocki* (Bronn), *Lytvophyllum* aff. *tschernowi* (Soshkina), *Palaeosmia murchisoni* Milne-Edwards & Haime, *Amygdalophylloides* sp., *Koninckocarina sugiyamai* Igo.^1";
- 3538 s[3535] = "HAIKAWA T., OTA M. (1983).- Restudy of *Nagatophyllum satoi* Ozawa and *Carcinophyllum enorme* (Ozawa) from the Akiyoshi Limestone group, Southwestern Japan.- *Bulletin Akiyoshi-Dai Museum of Natural History* 18: 35-52.- FC&P 12-2, p. 28, ID=6206^Topic(s): revision; *Rugosa*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Visé; Geography: Japan^Two rugose corals *Nagatophyllum satoi* Ozawa and *Carcinophyllum enorme* (Ozawa), both of which are from the *Nagatophyllum satoi* Zone of the Akiyoshi limestone Group are redescribed in the present paper; they occur in the Middle Viséan. * *Nagatophyllum satoi* Ozawa is a compound rugosan with the dendroid form. It is characterized by the following points: 1) a large-sized corallite, 2) a large number of septa in two

orders, which have the trabecular microstructure, 3) conical tabulae, 4) a wide dissepimentarium with the regular dissepimental rows, and 5) a tendency of change in axial structure of several types throughout corallite ontogeny. * Carcinophyllum enorme (Ozawa) is also a compound rugosan with the dendroid form. It is characterized by the following characters: 1) a medium-sized corallite, 2) a large number of septa in two orders, which have stout trabecular microstructure, 3) septa dilated in both peripheral and inside ends, 4) dense tabulae of nearly horizontal direction, 5) extremely thick stereozone with large lonsdaleoid dissepiments, and 6) carcinophylloid axial structure. * Nagatophyllum satoi and Carcinophyllum enorme generally form composite colonies. [original summary]^1";

- 3539 s[3536] = "IGO H., ADACHI S. (2001).- Carboniferous corals from the Ichinotani Formation, Fukuji, Hisa Massif, central Japan.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 311-319.- FC&P 30-1, p. 11, ID=7056^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan^The Ichionotani Formation exposed in the Fukuji area of central Japan, yields abundant corals from various levels. The formation is subdivided into lower, middle, and upper members, and its geologic age is well controlled by fusulinacean biostratigraphy and is of Late Early to Late Carboniferous age. The basal part of the Lower member (late Visean to Serpukhovian) contains a prolific coral fauna, including Heterocanina, Kueichouphyllum, Arachnolasma, Yuanophyllum, Koninckophyllum, Lithostrotion, Siphonodendron, Dibunophyllum and others. Neokoninckophyllum, Lonsdaleia, and Axophyllum are also above those, still part of the lower member but dated just above the Mid-Carboniferous boundary, yield Cladochonus and Cyathaxonia. The middle member (early to middle Moscovian) yields Amplexocarinia, Dorlodotia, Kionophyllum, and other taxa below, in the lower part, and Ivanovia (s.l.), Fomichevella, Pseudozaphrentoides, and Dibunophylloides above, characteristic of the upper. The lower part of the upper member (late Moscovian) yields abundant Dibunophylloides and Fomichevella, both of which occurred earlier, in the middle member. The middle and upper parts of the upper member (Kasimovian to Gzhelien) include two distinct coral faunas: Carinthiaphyllum and Koninckocarinia, associated with a dendroid type of Chaetetes (B) in the middle; and notably abundant Bothrophyllum in the upper part. The uppermost part of the member yields Sestrophyllum. Coral faunas in the Ichinotani (except the Onimaru-type fauna of the lower member) have not been found in other Carboniferous sections in Japan. [original abstract]^1";
- 3540 s[3537] = "IGO H., OKAYASU A., ADACHI S. (2003).- Carboniferous rugose corals from the Arakigawa Formation in the Hida Gaiken Belt, Gifu Prefecture, central Japan.- Ann. Rep. Inst. Geosci. Univ. Tsukuba 29: 51-56.- FC&P 33-1, p. 24, ID=7174^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Japan^^1";
- 3541 s[3538] = "IGO H., IGO H. (2004).- A new Lower Carboniferous rugose coral, Nemistium from Mitsuzawa, Hinode Town of Nishitama County, west of Tokyo.- Sci. Rep. Inst. Geosci., Univ. Tsukuba, Sec. B, Geol. Sci. 25: 1-8.- FC&P 33-1, p. 24, ID=7175^Topic(s): new taxa; Rugosa Nemistium; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: Japan^^1";
- 3542 s[3539] = "MORI K., TAZAWA J. (1980).- Discovery and significance of Visean rugose corals and brachiopods from the type locality of the Lower Carboniferous Hikoroichi Formation. [in Japanese].- Geological Society of Japan Journal 86, 2: 143-146.- FC&P 11-1, p. 53, ID=1787^Topic(s): ; Rugosa, Brachiopoda; Systematics: Cnidaria Brachiopoda; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Japan^^1";
- 3543 s[3540] = "KATO M., MINATO M. (1975).- The Rugose Coral family

Pseudopavonidae.- Journ. Fac. Sci. Hokkaido Univ. ser. IV, 17, 1: 89-127.- FC&P 4-2, p. 58, ID=5275^Topic(s): ; Rugosa, Pseudopavonidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Japan^A hitherto little known group of Rugose Corals, Pseudopavonidae is reviewed and redistributed. The family now embraces Amygdalophyllidium, Hiroshimaphyllum, Ozakiphyllum, Pseudopavona, Omiphyllum, Taisyakuphyllum and Ibukiphyllum. The corals have been known solely from the Japanese Upper Carboniferous (s. l.). The origin of the family is yet uncertain.^1";

3544 s[3541] = "KATO M., MINATO M. (1975).- Pseudopavonidae.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 189-191.- FC&P 5-1, p. 29, ID=5354^Topic(s): ; Rugosa, Pseudopavonidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Japan^[synopsis of morphology and generic composition of the family; proposed are one new species, 4 new genera, and one new subfamily]^1";

3545 s[3542] = "NIKO S. (2006).- Multithecopora hiratai, a new species of Tournaisian (Early Carboniferous) tabulate coral from the Akiyoshi Limestone Group, Yamaguchi Prefecture.- Bulletin Akiyoshi-Dai Museum of Natural History 41: 1-4.- FC&P 34, p. 47, ID=1258^Topic(s): ; Tabulata, Multithecopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: Japan^^1";

3546 s[3543] = "SUGIYAMA T., NAGAI K. (1990).- Growth Forms of Auloporidid Corals in the Akiyoshi Limestone Group, Southwest Japan. Paleoecological Studies of Reef-building Organisms in the Akiyoshi Organic Reef Complex I.- Bulletin Akiyoshi-Dai Museum of Natural History 25: 7-25.- FC&P 19-2.1, p. 34, ID=2753^Topic(s): ecology; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous M; Geography: Japan, Akiyoshi 1st^This paper deals with two growth forms of auloporidid corals collected from the Middle Carboniferous limestones in the Minamidai area of the Akiyoshi Limestone Plateau, Southwest Japan. Numerous auloporidid corals are found in many types of boundstones distributed in the reef core facies of the Akiyoshi organic reef complex in this area. The auloporidid corals usually adhere to the main reef builders or rarely to the hard substrate. The present corals are apparently divided into two forms, form A and B. The form A grows up to be a shrub-like dendroid corallum. The form B, on the other hand, reveals an encrusting corallum. These two forms, however, have the same characteristics in their corallites, such as the size of corallite, the microstructure and thickness of wall, the shape of tabulae (horizontal to convex and complete), the presence of short spinose ridges, and the absence of mural pores and connecting tubes. Furthermore, these two forms have a similarity in their young growth form, in which the corallites closely contact with each other and encrust on the surface of other organic skeletons. It is obvious from the above that these two forms represent two morphological varieties in the growth form and belong to one and the same species. Two forms of auloporidid corals are respectively found in the different types of boundstones built up under the different environments. The form A discriminated by shrub-like dendroid corallum occurs in the framestone and the bafflestone, which are mainly constructed by rugose corals. The form B characterized by encrusting corallum occurs in the framestone and the bindstone, which consist of encrusting reef-builders, such as calcareous algae and chaetetids. Accordingly, it might be stated that the two variant growth forms are recognized as the ecophenotypes in the same species of auloporidid corals. Two growth forms of the present corals show some resemblances to those of the several genera among the different families of the Order Auloporida. The convex and complete tabulae of the Minamidai species are different from those of the other genera among the Carboniferous auloporidid corals. As the result of this

- study, it can be stated that the variant growth form must be taken into consideration to classify the auloporidid corals.¹";
- 3547 s[3544] = "IGO H., ADACHI S. (2000).- Description of some Carboniferous corals from the Ichinotani Formation, Fukuji, Hida Massif, central Japan - Upper Paleozoic corals from Fukuji. Southeastern part of the Hida Massif, Part 7.- Scientific Reports, Institute Geosciences, University of Tsukuba, Sec. B., 21: 41-69.- FC&P 29-1, p. 56, ID=1442^Topic(s): taxonomy, new taxa; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Carboniferous; Geography: Japan^The Ichinotani Formation, exposed in the Fukuji area, Hida Massif, central Japan, was studied by many specialists and assigned to one of the most continuous late Early to late Carboniferous sections in the Japanese Islands. This formation yields abundant corals along with prolific faunas including fusulinaceans and other smaller foraminifers. Recently, the authors have summarized the stratigraphic occurrence of corals in this formation and listed many coral species including several new species. These new and some other interesting species are newly described or scrutinized herein: Cyathaxonia weyeri Igo and Adachi, n.sp., Actinophrentis? sp., Fomitchevella japonica Igo and Adachi, n.sp., Bothrophyllum domheri (Fomichev), B. sp., n.sp.?, Koninckophyllum? nipponalpinum (Igo and Adachi), Arachnolasma ichinotaniense Igo and Adachi, n.sp., Yuanophyllum pauciseptatum Igo and Adachi, n.sp., Dibunophylloides mizuyagadaniensis (Kamei), Sestrophyllum fedorowskii Igo and Adachi, n.sp., Ivanovia (Ivanovia) podolskiensis Dobrolybova, and Ivanovia (Protoivanovia) eguchii Igo. [original summary]^1";
- 3548 s[3545] = "MINATO M., KATO M. (1974).- Upper Carboniferous corals from the Nagaiwa series, southern Kitakami Mountains, NE Japan.- Journ. Fac. Sci. Hokkaido University, Ser. 4, Geol. and Miner. 16. 2-3: 43-119.- FC&P 4-1, p. 36, ID=5121^Topic(s): geology, taxonomy; Tabulata, Rugosa; Systematics: Cnidaria; Tabulata Rugosa; Stratigraphy: Carboniferous U; Geography: Japan, Kitakami Mts^[after a short geological introduction, the authors give a systematic description of Tabulata and Rugosa]^1";
- 3549 s[3546] = "KAWAMURA T., KAWAMURA M., KATO M. (1985).- The Lower Carboniferous Odaira and Onioaru Formations in the Setamai-Yukisawa district, southern Kitakami Mountains, northeast Japan.- Journal of Geological Society of Japan 91, 12: 851-866 [in Japanese, with English abstract].- FC&P 15-1.2, p. 30, ID=0809^Topic(s): biostratigraphy; stratigraphy; Systematics: ; Stratigraphy: Carboniferous L; Geography: Japan^Stratigraphy, paleontology and sedimentary petrology of the transitional part of the Odaira and Onimaru Formations which represent the upper sequence of the Lower Carboniferous of the Setamai Subbelt are re-examined in the Setamai-Yukisawa district in detail. The upper part of the Odaira Formation consists of slate, sandstone and limestone. Besides, the uppermost part of the formation is mainly composed of limestone and grades upward conformably to the Onimaru Formation mainly represented by black fossiliferous limestone. Corals obtained from the upper and uppermost parts of the Odaira Formation include Kueichouphyllum and Yuanophyllum in its upper horizon, Pseudouralinia and Siphonophyllia in lower horizon. The former two genera are common to the coral fauna of the Onimaru Formation which is Upper Visean in age. So, biostratigraphic gap is not recognizable between the two formations. [part of original summary]^1";
- 3550 s[3547] = "MINATO M., KATO M. (1984).- Carboniferous Paleogeography and geotectonics of Japan.- 9th International Congress on Carboniferous Stratigraphy and Geology; Washington - Champaign - Urbana 1979, 3: 256-262. [paper] - FC&P 14-2, p. 34, ID=0914^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Carboniferous; Geography: Japan^Tournaisian faunas of Japan possess certain elements closely related to stratigraphically equivalent faunas of Australia, the USSR, the United States, and

northern China. Upper Visean coral faunas show strong resemblance to corals of the same age from southern China and are of the Kueichouphyllutn province of HILL (1948). Corals of the Japanese Silesian include both Tethyan and Boreal elements as well as many endemic forms, but fusulinids appear to be similar to those of the Boreal fauna of the Urals, Moscow basin, northern China, and Korea. Volcanic rocks are dominant in the Japanese Tournaisian. There are also Lower and Middle Carboniferous granites, the former dated by Rb-Sr as 339-332 m.y.B.P. Angular unconformities are present at the base of Tournaisian and upper Visean deposits, and a paraconformity is present between the upper Visean and Silesian deposits. From paleomagnetic studies, the Japanese Islands are inferred to have shifted from north to south during the time span ranging from Early Carboniferous until Early Permian, and thereafter have moved generally northward. (Original summary)¹;

- 3551 s[3548] = "TAZAWA J., ITABASHI F., MORI K. (1981).- Lower Carboniferous System in the Nisawa District, southern Kitakami Mountains, Japan.- Tohoku University, Institute of Geology and Paleontology Contribution 83: 21-37.- FC&P 11-1, p. 54, ID=1794Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: Japan, Kitakami Mts¹";
- 3552 s[3549] = "SUGIYAMA T., NAGAI K. (1994).- Reef facies and paleoecology of reef-building corals in the lower part of the Akiyoshi Limestone Group (Carboniferous), Southwest Japan.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 231-240.- FC&P 23-1.1, p. 20, ID=4079Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Carboniferous; Geography: Japan, Akiyoshi 1st^{The Akiyoshi Limestone Group (Lower Carboniferous to upper Middle Permian) is a huge exotic limestone mass containing abundant reef-building shallow marine fossils and resting on a basement composed of basaltic lava and volcanoclastic rock. Tectonic, sedimentologic, and paleoecologic characteristics of the limestone sequence indicate that it represents an organic reef complex developed on top of an oceanic seamount. Rugose corals are among the important reef-builders and are mainly distributed on the outer side of the reef complex. They present various growth forms in response to habitat differences in a well defined reef facies zonation¹}";
- 3553 s[3550] = "KATO M., KAWAMURA M., KAWAMURA T., TAZAWA J.I., NIIKAWA I., NAKAMURA T., (1991).- Present knowledge on the Carboniferous of the Kitakami Mountains.- 11th International Congress on Carboniferous Stratigraphy and Geology, Comptes Rendus 2: 64-73.- FC&P 23-2.1, p. 45, ID=4268Topic(s): geology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: Japan, Kitakami Mts¹";
- 3554 s[3551] = "NAGAI K. (1978).- Litho- and Bio-facies of Reef Limestone in the Ryugoho Area of the Akiyoshi Limestone Plateau.- Bulletin Akiyoshi-Dai Museum of Natural History 13: 15-34.- FC&P 7-2, p. 25, ID=5664Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Carboniferous ?; Geography: Japan, Akiyoshi¹";
- 3555 s[3552] = "NAGAI K. (1979).- On the reefal limestone in the lower members of the Akiyoshi limestone Group. [in Japanese].- The Earth Monthly (Chikyu) 1, 9: 661-667.- FC&P 10-1, p. 32, ID=5945Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Carboniferous; Geography: Japan, Akiyoshi¹";
- 3556 s[3553] = "HASHIMOTO K. (1979).- Bio- and Litho-facies of the Akiyoshi Limestone Group in the Southern Area of the Akiyoshi Plateau. [in Japanese].- Bulletin Akiyoshi-Dai Museum of Natural History 14: 1-26.- FC&P 10-1, p. 33, ID=5952Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy:

- 3557 s[3554] = "SUGIYAMA T., FUJISE H., TAGUCHI S., NAGAI K. (2003).- Occurrence and origin of euhedral crystals of quartz in the Akiyoshi organic reef Limestones.- Bulletin Akiyoshi-Dai Museum of Natural History 38: .- FC&P 33-1, p. 100, ID=1373^Topic(s): diagenesis, late mineralization; reefs, Akiyoshi 1st; Systematics: ; Stratigraphy: Carboniferous, Cretaceous; Geography: Japan^Abundant euhedral of quartz were found in the reef limestone from seven localities in the Akiyoshi Limestone area. Quartz crystals occurred in an grainstone has an average length of 0.261 mm and width of 0.121 mm, and the average ratio between length and width is 2.149, which means the quartz crystallized in elongate shape under ahydrothermal environment. The quartz crystals have different size distributions and inside structures among their host limestone textures. Large crystals grew up in trabecula tissue of reef building organisms, such as rugose corals and chaetetids, and small ones in micritic matrix of coated grains. It might depend on density of fine clucks and solubility to the hydrothermal liquid in each host limestone texture. Quartz usually has solid calcite inclusions as inside layers. These solid inclusions are come from remains of host calcite tissues which unsolved during crystallization in hydrothermal liquid. Mineralogical identification of inside layers of quartz was done by the laser Raman microprobe. Homogenization temperatures of primary fluid inclusions in quartz veins (from 150-220 °C.) and a calcite vein (169,5 °C) talked that the origin of these euhedral crystals of quartz came from a hydrothermal activity which possibly occurred in Late Cretaceous after the intrusion of quartz porphyry in the Akiyoshi Limestone area.^1";
- 3558 s[3555] = "KATO M., HAIKAWA T., EZAKI Y., KAMADA Y. (1992).- Upper Carboniferous and Lower Permian corals from the Akiyoshi-dai.- Newsletter of C/P Boundary Research Group 2: 6-8 [in Japanese].- FC&P 23-2.1, p. 45, ID=4267^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U / Permian L; Geography: Japan, Akiyoshi-Dai^1";
- 3559 s[3556] = "YAMAGIWA N., GOTO H. (1978).- On the Late Palaeozoic corals from the Hyogo Prefecture. [in Japanese].- Hyogo-Chigaku [Paleontology of Hyogo] 25-26: 11-20.- FC&P 7-2, p. 25, ID=5662^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Japan^1";
- 3560 s[3557] = "SUGIYAMA T., HAIKAWA T. (1993).- Checklist of late Paleozoic corals and Chaetetids described and / or illustrated from Akiyoshi Limestone area, southwest Japan.- Bulletin Akiyoshi-Dai Museum of Natural History 28: 59-78.- FC&P 22-2, p. 82, ID=3511^Topic(s): list of taxa; paleontology; Systematics: Cnidaria Porifera; Anthozoa Chaetetida; Stratigraphy: Carboniferous, Permian; Geography: Japan, Akiyoshi 1st^More than 82 species included in 56 genera of Rugosa, Tabulata, Dividocorallia, and chaeteids described and illustrated from Akiyoshi Limestone Group and some derived limestone blocks located near the Akiyoshi Limestone area are compiled in this checklist. The checklist is based on a computer database composed of 287 occurrence data sheets derived from publications that have coral and chaetetid descriptions and illustrations. Generic range are given in terms of Tethyan standard stages for the Carboniferous and Permian. The list contains some duplicate reports based on the same material. Many of corals are figured without any description, and some of them have no precise biostratigraphic information. Further study is needed to determine precise ranges of the taxa.^1";
- 3561 s[3558] = "YANAGIDA J., OTA M., SANO H. (1992).- Akiyoshi Limestone Group: Permo-Carboniferous organic reef complex.- 29th International Geological Congress, Guidebook for Field Trip C29: 1-35.- FC&P

- 23-2.1
- , p. 48, ID=4382^Topic(s): reef complexes, excursion guide; reef complexes, Akiyoshi 1st; Systematics: ; Stratigraphy: Carboniferous Permian; Geography: Japan^^1";
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- 3562 s [3559] = "KATO M. (1972).- Permian Corals of Miharanoro (an Upper Palaeozoic fauna from Miharanoro, Hiroshima Prefecture, Japan, 4th note).- Jour. Fac. Sci. Hokkaido Univ. Ser. IV, Geol. and Miner. 15, 3-4: 501-512.- FC&P 2-2, p. 17, ID=4803^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian L; Geography: Japan^Two species are discriminated and treated in the article: Amandophyllum sp. and Yokoyamaella yokoyamai (Ozawa). Both corals are denoting the Lower Permian age. All the specimens described are stored at the Department of Geology and Mineralogy, Faculty of Science, Hokkaido University.^1";
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- 3563 s [3560] = "GOTO H., KOBAYASHI S., YAMAGIWA N. (1976).- A Permian coral species discovered at Shimomikawa, Nanko-cho, Hyogo Prefecture. [in Japanese, with English abstract].- Chigaku Kenkyu 27, 10-12: 361-364.- FC&P 7-1, p. 10, ID=5561^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Japan^^1";
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- 3564 s [3561] = "SAKAGUCHI S., YAMAGIWA N. (1973).- Upper Permian coralline and foraminiferal fauna from Mt. Ibuki, southwestern Japan.- Bulletin of the National Science Museum (Japan), 1973, 16, 2: 387-396.- FC&P 4-1, p. 37, ID=5132^Topic(s): biostratigraphy; paleontology, stratigraphy; Systematics: Cnidaria Foraminifera; Anthozoa; Stratigraphy: Permian U; Geography: Japan SW^[description of waagenophyllum pulchrum Hamada; problems with age of the coral and foraminiferal fauna]^1";
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- 3565 s [3562] = "MINATO M., KATO M. (1980).- Polythecalis und Lonsdaleiastraea aus dem Perm des Kitakami-Gebirges, nordoestlich Honshu, Japan.- Munster. Forsch. Geol. Palaont. 52 [Kl. Oekentorp (ed.): A. von Schoupe jubilee commemorative volume]: 1-11.- FC&P 9-2, p. 14, ID=1786^Topic(s): ; Rugosa, Polythecalis; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Japan, Honshu^Polythecalis kitakamiensis n.sp. and Lonsdaleiastraea schoupei n.sp. have been found in different horizons from the Permian of the Kitakami Mountains: Pseudofusulina-zone and Cancellina-Polydiexodina-zone respectively. The two new species are described.^1";
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- 3566 s [3563] = "YAMAGIWA N., KATSU T. (1991).- A new species of Durhamina (Rugosa) from the "Fujiwaradake Limestone"; Suzuka Mountains, central Japan.- Bulletin of National Science Museum (Tokyo), ser. C, 17, 4: 153-159.- FC&P 23-2.1, p. 48, ID=4381^Topic(s): new taxa; Rugosa, Durhamina; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian?; Geography: Japan^^1";
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- 3567 s [3564] = "YAMAGIWA N., SUZUKI Y. (1976).- A new species of the genus Iranophyllum from the Permian Shirasaki Limestone at Yura-machi, Wakayama Prefecture.- Bulletin of National Science Museum (Tokyo), ser. C, 02, 1: 27-30.- FC&P 5-2, p. 9, ID=5437^Topic(s): new taxa; Rugosa, Iranophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Japan^^1";
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- 3568 s [3565] = "IGO H., KOIZUMI H., KANIWA T. (2000).- A Permian rugose coral, Yatsengia kuzuensis, from the Kiryu in the Ashio Mountains, Gunma Prefecture, Japan.- Bulletin of National Science Museum (Tokyo), ser. C, 26, 1-2: 79-86.- FC&P 30-1, p. 11, ID=7053^Topic(s): ; Rugosa Yatsengia; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Japan^A Permian rugose coral, Yatsengia kuzuensis (Yabe) was collected from limestone and calcaereous sandstone beds exposed in Umeda, north of Kiryu City in the Ashio Mountains, Gunma Prefecture. This species was originally described as the type species of the genus Pseudoyatsengia Yabe, 1951 from the Kuzu Limestone, which is exposed in the Aisawa Quarry, about 30 km east of the present locality. The coral is described here because Pseudoyatsengia is considered to be a synonym

- of *Yatsengia* Huang, 1932, and the occurrence of rugose corals in the Ashio Mountains is rather rare. [original abstract]^1";
- 3569 s[3566] = "IGO H., ADACHI S. (2001).- Permian rugose corals from Kamisenba, Kuzu Town, Tochigi Prefecture in Japan.- Bulletin of National Science Museum (Tokyo), ser. C, 26, 1-2: 33-43.- FC&P 30-1, p. 11, ID=7054^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Japan^Permian limestones designated as the Nabeyama Formation are exposed in the Kuzu area, Tochigi Prefecture. The limestones are particularly abundant in fusulinaceans but uncommon in rugose corals. The limestone pebbles in the conglomerate that unconformably overlies the Nabeyama Formation commonly yield rugose corals. *Yatsengia suzukii* sp.nov., and *waagenophyllum* (*waagenophyllum*) *akasakense* (Yabe) from the limestone pebbles are here described. These corals were recycled from the Nabeyama Formation. [original abstract]^1";
- 3570 s[3567] = "IGO H., ADACHI S., IGO H. (2001).- Permian rugose corals from the Gzenyama Formation, Hinohara Village, Nishitama County, Tokyo.- Science Reports of the Institute of Geoscience University of Tsukuba, Section B (Geological Sciences) 15: 125-133.- FC&P 30-1, p. 11, ID=7055^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: Japan^Upper Middle Permian rugose corals are newly collected from limestone clasts in chaotic rocks of the Gozenyama Formation exposed along the Akigawa River, Hinohara Village, Nishitama County. The corals are identified as *waagenophyllum* (*waagenophyllum*) *pulchrum* Hamada and *Praewentzelella nishiatmaensis* Igo, Adachi and Igo, n.sp. The geologic age of these corals is assigned to the Midian (Yabeina Zone) of the late Middle Permian. [original abstract]^1";
- 3571 s[3568] = "HAIKAWA T., ISHIBASHI T. (1981).- *waagenophyllum* (*waagenophyllum*) *okinawense*, a new Permian coral from Okinawa-jima, Ryuku Islands.- Memoirs of Faculty of Science, Kyushu University, Ser. D., Geology 24, 3: 179-188.- FC&P 10-2, p. 61, ID=2247^Topic(s): new taxa; Rugosa, *waagenophyllidae*; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Japan, Okinawa^Here, a Permian coral, *waagenophyllum* (*waagenophyllum*) *okinawense* sp.nov., is described from the Permian Yonamine Formation of the Motobu Peninsula, Okinawa-jima, Ryukyu Islands. The present species occurs along with *Verbeekina vevbeeki* (Geinitz) and *Neoschwagerina craticulifera* (Schwager) in a limestone lens of the formation. [original summary]^1";
- 3572 s[3569] = "MORI K. (1980).- Revision of the Permian "stromatoporoids" reported from Japan.- Paleontological Society of Japan, Transactions and Proceedings, N.S. 117: 237-241.- FC&P 9-2, p. 51, ID=0372^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Permian; Geography: Japan^There is no positive evidence for the occurrence of Paleozoic-type stromatoporoids in the Permian, either in Japan or elsewhere.^1";
- 3573 s[3570] = "NIKO S. (2005).- Wuchiapingian (Late Permian) tabulate corals from the Maizuru Group in the Yakuno Area, Kyoko Prefecture.- Bulletin of National Science Museum Tokyo, Ser. C, 31: 31-38.- FC&P 34, p. 47, ID=1257^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian Wuch; Geography: Japan^^1";
- 3574 s[3571] = "ISOZAKI Y. (2006).- Guadalupian (Middle Permian) giant bivalve *Alatoconchidae* from a mid-Panthalassan paleo-atoll complex in Kyushu, Japan; a unique community associated with Tethyan fusulines and corals.- Proceedings of the Japanese Academy of Sciences; Series B: Physical and Biological Sciences 82, 1: 25-32.06A0174920.- FC&P 35, p. 98, ID=2422^Topic(s): reefs, shallow marine benthos; reefs; Systematics: ; Stratigraphy: Permian Guad; Geography: Japan^^1";
- 3575 s[3572] = "MINATO M., KATO M., NAKAMURA K., HASEGAWA Y., CHOI D.R.,

- TAZAWA J. (1978).- Biostratigraphy and correlation of the Permian of Japan.- Jour. Fac. Sci. Hokkaido Univ. ser 4, 8, 1-2: 11-47.-
 FC&P 7-2, p. 25, ID=5657^Topic(s): biostratigraphy;
 fossils stratigraphy; Systematics: ; Stratigraphy:
 Permian; Geography: Japan^^1";
- 3576 s[3573] = "OKUDA H., YAMAGIWA N. (1978).- Triassic corals from Mt Daifugen, Nara Prefecture, Southwest Japan.- Trans. Proc. Palaeont. Soc. Japan, NS 110: 297-305.- FC&P 7-2, p. 25, ID=5661^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: Japan SW^^1";
- 3577 s[3574] = "YAMAGIWA N., TSUDA H. (1980).- A New Coral Species from a Pebble in the Basal Limestone Conglomerate of the Triassic Adoyama Formation at Karasawa in the Kuzu Area, Tochigi Prefecture, Japan.- Bulletin of National Science Museum (Tokyo), ser. C, 06, 3: 97-100.- FC&P 10-1, p. 33, ID=5950^Topic(s): new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic?; Geography: Japan^^1";
- 3578 s[3575] = "MURATA M. (1978).- Triassic fossils from the Kitakami massif, Northeast Japan. Part 2, A revision on the taxonomic position of Conulariopsis Sugiyama 1942.- Kuamoto Journal of Science, Geol. 11, 1: 5-12.- FC&P 7-2, p. 25, ID=5659^Topic(s): ; Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Triassic; Geography: Japan NE^^1";
- 3579 s[3576] = "OKUDA H., EZAKI Y., YAO A. (2005).- Geological complexes of Sabosan area and limestones containing Triassic scleractinian corals in Kochi Prefecture, southwest Japan.- Chikyū Kagaku [Earth Science] 59: 371-382.- FC&P 34, p. 68, ID=1298^Topic(s): geology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: Japan SW^^1";
- 3580 s[3577] = "ONOUE T., STANLEY G.D.jr (2008).- Sedimentary facies from Upper Triassic reefal limestone of the Sambosan accretionary complex in Japan: mid-ocean patch reef development in the Panthalassa Ocean.- Facies 54, 4: 529-547.- FC&P 36, p. 119, ID=6561^Topic(s): reef carbonates, sedimentology; reef limestone; Systematics: ; Stratigraphy: Triassic Nor; Geography: Japan^Microfacies of the Early to Middle Norian reefal limestone of the Sambosan Accretionary Complex (SAC) at Kamase locality, southwest Japan, are classified into seven major facies types in stratigraphic order: peloidal grainstone-packstone, unfossiliferous lime-mudstone, tubular problematica-rich wackestone, sponge-coral floatstone, sponge bafflestone, coral rudstone, and peloidal-bioclastic packstone-grainstone. The SAC records patch reef development on a mid-oceanic seamount in the Panthalassa Ocean. Because most examples of Triassic reefs come from the former Tethys, counterparts such as those from the SAC are pivotal in resolving paleogeographic issues as well as clarifying the depositional patterns between the eastern Tethys and adjacent western Pacific (Panthalassa). We also reveal that the primary stratigraphy of the reefal limestone was disrupted by submarine landslides of the seamount in an open-ocean realm during the late Middle to Late Jurassic time. [original abstract]^1";
- 3581 s[3578] = "LOSER H., SUGIYAMA T., MORI K. (2002).- Catalogue of the Mesozoic corals of Japan.- Bulletin of the Tohoku University Museum 2: 1-46.- FC&P 32-2, p. 58, ID=1090^Topic(s): catalogue; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: Japan^The catalogue gives a systematic overview on the Mesozoic corals reported from the territory of Japan. The data were taken from the literature and have been improved by data on the type material at the Tohoku University Museum (Sendai) and additional information on the stratigraphy of various localities. It is subdivided into two parts. The taxonomic part encompasses an alphabetical list of all taxa with their types, type locality and type level, the citations in the literature and the occurrence of the corals. The second part is a list of localities from

- which the corals are reported, with data on the localities; geographical position, their stratigraphy and lithostratigraphy, additional literature, notes and the list of corals indicated there. [original abstract]^1";
- 3582 s[3579] = "LOSER H., MORI K. (2002).- The Jurassic corals from Japan in the Tohoku University Museum collection.- Bulletin of the Tohoku University Museum 2: 77-110.- FC&P 33-2, p. 34, ID=1167^Topic(s): collection of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Japan^The Jurassic corals described by Eguchi, Mori, Murata, Sugiyama and Yabe between 1933 and 1963 held at the Tohoku University Museum (Sendai, Japan) have been revised. The material comes from 44 localities and represents 87 coral species. The revision encompasses the proof of the generic assignment and a profound comparison to Jurassic corals described from localities outside Japan. The high number of endemic species was found to be justified. Only the generic composition of the faunas are comparable to other (mostly European) faunas.^1";
- 3583 s[3580] = "YAMAGIWA N., NARUHASHI K., TSUJII Y., FUJITA T., VADA T. (1979).- Corals from the Upper Jurassic Imaura Group in the eastern part of the Shima Peninsula.- Journal of Geography (Chigaku Zasshi) 88, 1: 29-39.- FC&P 10-1, p. 33, ID=5948^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Japan, Shima^^1";
- 3584 s[3581] = "YAMAGIWA N., YAMANO A., HISADA K.-I. (1993).- Hexacorals from the Kawai formation at Minamisawa in the Itsukaichi area, southeastern part of the Kanto Mountains.- Memorial volume dedicated to Professor Hideo Ishikawa's retirement: 39-43; Osaka. [in Japanese].- FC&P 23-1.1, p. 78, ID=4176^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Oxf Kimm; Geography: Japan, Kanto Mts^Upper Jurassic (Oxfordian-Kimmeridgian) scleractinian corals from the southeastern part of the Kanto Mountains are listed and depicted.^1";
- 3585 s[3582] = "YAMAGIWA N., MIYATA K., SANNO Y. (1978).- Placocoenia ? yatsushiroensis n.sp. from the Upper Jurassic Sakamoto Formation, Central Kyushu, Japan.- Mem. Osaka Kyoiku University, III, 26, 3: 183-186.- FC&P 7-2, p. 25, ID=5663^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Japan, Kyushu^^1";
- 3586 s[3583] = "YAMAGIWA N., ISHIKAWA N., SASAKI K., MIZOGUCHI K., MURAKAMI N. (1981).- Coelenterates from the Upper Jurassic Sakamoto and Ebirase Formations, Kumamoto Prefecture, in the Chichibu Terrain, Southwest Japan.- Mem. Osaka Kyoiku Univ., Ser. 3, Vol. 30, Nos. 1-2, pp. 57-70.- FC&P 11-2, p. 20, ID=1813^Topic(s): ; Cnidaria; Systematics: Cnidaria; Stratigraphy: Jurassic U; Geography: Japan SW^^1";
- 3587 s[3584] = "KASHIWAGI K., YAMAGIWA N., EZAKI Y., YAO A., SAKAORI Y. et al. (2002).- Late Jurassic cnidarian and poriferan fossils from the Torinosu-type limestones in the Kurosegawa Terrane, western Kii Peninsula, Southwest Japan and their geological significance.- Fossils 72: 5-16.- FC&P 33-2, p. 30, ID=1154^Topic(s): ; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: Jurassic U; Geography: Japan SW^Cnidarian and poriferan fossils were reported from the Torinosu-type limestones in the middlemember of the Ikenoue Formation, Kurosegawa Terrane, western Kii Peninsula, Southwest Japan. They include 16 species belonging to 13 genera (nine Scleractinia, one Spongiomorpha, one Sclerospongia, and two Stromatoporoidea). The recorded cnidarian and poriferan fauna shows Late Jurassic in age, and the age estimation is consistent with the radiolarian chronostratigraphic data of the fine-grained clastic rocks enclosing the Torinosu-type limestones. Field observations suggest that the Torinosu-type limestone bodies were originally formed as laterally discontinuous carbonate mounds in shallow

marine environment, and they were broken in part into blocks and transported downwards. Torinosu-type limestones associated with fine-grained clastic rocks are widely distributed in the Tithonian to Berriasian strata of both the Kurosegawa and Southern Chichibuterranes in the western Kii Peninsula. It has been discussed that shallow marine carbonate environment was formed as a result of uplift of the fore-arc basin caused by collision of seamounts. Furthermore, thrust movement of the Kurosegawa nappe over the Southern Chichibu Terrane accumulated thick olistostrome on the fore-arc basin during the middle Oxfordian to Kimmeridgian, resulting in the formation of shallow marine environment.¹¹;

- 3588 s[3585] = "SHIRAISHI F., KANO A. (2004).- Composition and spatial distribution of microencrusters and microbial crusts in upper Jurassic-lowermost Cretaceous reef limestone (Torinosu Limestone, Southwest Japan).- *Facies* 50, 2: 217-227.- **FC#038;P 34**, p. 91, ID=1339^Topic(s): reefs encrusters, microencrusters; reefs encrusters; Systematics: Monera; Stratigraphy: Jurassic / Cretaceous; Geography: Japan^Tethyan microencrusters and microbial crusts, most of them previously unknown in Japanese Mesozoic biotas, are present in the uppermost Jurassic-lowermost Cretaceous Torinosu Limestone distributed in southwestern Japan. They construct reefal facies together with reef-forming metazoans. *Bacinella irregularis* and *Lithocodium aggregatum* are quantitatively most important, while subordinate constituents include *Thaumatoporella parvovesiculifera*, *Koskinobullina socialis*, *Iberopora bodeuri*, *Girvanella* sp. and *Tubiphytes morronensis*. They are especially common in the shallow-water reefal facies, but appear micritic in outcrops. Microencrusters and microbial crusts can only be recognized in thin sections, and they grow around the reef building metazoans and form bindstone. Each microencruster exhibits some specific spatial distribution associated with its paleoecology. Similarities with the taxonomic composition of the upper Jurassic Tethyan microencruster association imply that the community extended geographically at least to the Tethyan gateway where the Japanese Island Arc was located. [original abstract]¹¹;
- 3589 s[3586] = "STANLEY G.D.jr, KANIE Y. (1985).- The first Mesozoic chondrophorine (medusoid hydrozoan) from Lower Cretaceous of Japan.- *Palaeontology* 28, 1: 101-109.- **FC#038;P 17-1**, p. 17, ID=2112^Topic(s): ; Hydrozoa, Chondrophorina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous L; Geography: Japan^^1";
- 3590 s[3587] = "YAMAGIWA N., NARUHASHI K., SASADA S. (1980).- Some Early Cretaceous Coelenterates from the Yonozu Group, Oita Prefecture, in the Shimanto Terrain, Southwest Japan.- *Bulletin of National Science Museum (Tokyo)*, ser. C, 06, 4: 119-124.- **FC#038;P 10-1**, p. 33, ID=5949^Topic(s): ; Coelenterata; Systematics: Cnidaria; Stratigraphy: Cretaceous L; Geography: Japan SW^^1";
- 3591 s[3588] = "EGUCHI M. (1974).- Miocene Corals from Mizunamishi, Gifu Prefecture, Japan. [in Japanese] .- *Bulletin Mizunami Fossil Museum* 1: 227-251.- **FC#038;P 4-2**, p. 52, ID=5237^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Miocene; Geography: Japan^[list of corals]¹¹;
- 3592 s[3589] = "HAMADA T. (1969).- Ahermatypic corals from the Pleistocene Ninomiya Formation in Kanagawa Prefecture, Central Japan.- *Sci. Pap. Coll. Gen. Educ., Univ. Tokyo* 19, 2: 251-262.- **FC#038;P 1-2**, p. 22, ID=4683^Topic(s): ahermatypic; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Japan central^The Pleistocene Ninomiya Formation yields the ahermatypic corals such as *Oulangia stokesiana miltoni* Yabe & Eguchi, *Fotocyathus (Paradeltoocyathus) orientalis* (Duncan), *Flabellum* cf. *distinctum* M.-E. & H., *Dendrophyllia cribrata* M.-E. & H., *Flabellum transversale* Moseley. Among them, *Dendrophyllia* is excellently preserved in arborescent shape. Occurrence of the Recent

- Dendrophyllia species in the Japanese waters is reviewed in this occasion.¹¹";
- 3593 s[3590] = "MORI R. (1978).- On some Miocene scleractinian corals from the Chichibu basin, Saitama Prefecture, Japan. [in Japanese].- Bulletin Tokyo Kaseki Daigaku 18: 15-20.- FC&P 7-2, p. 25, ID=5658Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Japan^^1";
- 3594 s[3591] = "MATSUOKA K., MASUDA Y., KITABAYASHI E. (2004).- Fossil Freshwater sponges from the Middle Pleistocene Tsumori Formation in Mashiki-machi, Kumamoto Prefecture, Japan.- Scientific Reports of the Toyohashi Museum of Natural History 14, pp 1-7.- FC&P 33-2, p. 42, ID=1194Topic(s): freshwater; Porifera; Systematics: Porifera; Stratigraphy: Pleistocene; Geography: Japan^Fossils of spongillid sponges, Eunapius fragilis and Ephydatia muelleri occur in the MiddlePleistocene Tsumori Formation in Mashiki-machi, Kumamoto Prefecture, Japan. This is the 2nd record of Eunapius fragilis and Ephydatia muelleri from the Pleistocene in Japan. The Tsumori Formation consists of a lacustrine sediment which contains fossils of diatoms, plant fragments, sponges, molluscs, insects, and fish. The fossil sponges occur in the lower part of the Tsumori Formation that is subdivided into the lower and upper parts with lithological characters. The fossils are found on the surface of plant fragments and in massive mudstone. Those occurrences suggest that the sponges were rapidly deposited after death of the sponge. If the habitat of the sponges have not changed over time, the fossil sponges from the lower part of the Tsumori Formation is inferred to have been formed in shallow lake with waters of high mineral and organic contents.¹¹";
- 3595 s[3592] = "MATSUOKA K., MASUDA Y., KITABAYASHI E. (2006).- A fossil freshwater sponge (Porifera; Spongillidae) from the Pliocene Hitoyoshi Formation in the Hitoyoshi Basin, Kumamoto Prefecture, Japan.- Science report of the Toyohashi Museum of Natural History 16: 31-37.- FC&P 35, p. 42, ID=2320Topic(s): freshwater; Porifera, Spongillidae; Systematics: Porifera; Stratigraphy: Pliocene; Geography: Japan^Fossils of spongillid sponge, Eunapius sinensis (Anmandale) were discovered from the upper part of the Pliocene Hitoyoshi Formation of the Hitoyoshi Basin, Muamoto Prefecture, Kyushu, Japan. They constitute the second occurrence record of Eunapis sinensis as fossil. The Hitoyoshi Formation consists of lacustrine deposits, which contain diatoms, water plant, insects, cyprinid fishes, and molluscs besides the sponge. Gemmules of fossil sponges occur as rounded spots, which encrust the surfaces of molluscan shells and massive mudstones. The spicular components consist of megascleres and gemmoscleres, and the latter are more abundant. This mode of occurrence of fossil sponges suggests only gemmules were left after death on the surface of molluscan shells and mud.¹¹";
- 3596 s[3593] = "TAKEUCHI Y., IRYU Y., SATO T., CHIYONOBU S., YAMADA T., ODAWARA K., ABE E. (2006).- Pleistocene reef development and stratigraphy on Ie-jima, the Ryukyu Islands, southwestern Japan.- Proceedings of the 10th International Coral Reef Symposium (Okinawa), 536-546.http://www.reefbase.org/resource_center/publication/pub_26765.aspx.- FC&P 34, p. 92, ID=1347Topic(s): reefs, history, stratigraphy; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Japan, Ryukyu Isls^Sedimentological investigations were conducted on Pleistocene reef-complex deposits of the Ryukyu Group, recovered in 30 drill cores from Ie-jima, off Motobu Peninsula, the Ryukyu Islands, southwestern Japan. Four depositional units are identified by lithologic changes and numbered sequentially from the base upwards. Unit 1, the lowest unit, commonly begins with marine conglomerate or coral limestone, both of which grade upward into detrital limestone containing abundant larger foraminiferal tests (Operculina spp. and Amphistegina spp.). Units 2 and 3 are composed of

shallow-water coral limestone overlain by deep-water detrital and rhodolith limestones. Unit 4, unconformably overlying Unit 3 at elevations exceeding 50m, consists of coral limestone grading upward into detrital limestone rich in coral rubble. These units clearly display a deepening-upward stratigraphic succession. Calcareous nannofossil biostratigraphy indicates that Unit 1 mostly correlates with the Early Pleistocene between 0.85 Ma and 1.65 Ma and that Units 2 to 4 range in age from 0.41 Ma to 0.85 Ma. Thick deposits of carbonates and siliciclastics (Unit 1) formed in response to tectonic subsidence of this area before 0.85 Ma. Subsequently, reefal and shelf carbonates (Units 2 to 4) accumulated in response to glacioeustatic sea-level changes. The change is likely to be related to the Mid-Pleistocene Transition (MPT). The MPT at the Ryukyus is marked by increased amplitude of sea-level changes and a subsequent enhanced mode of coral-reef deposition. [original abstract]^1";

3597 s[3594] = "IRYU Y., YAMADA T., MATSUDA S., ODAWARA K. (2006).- Pliocene to Quaternary carbonate sequence on Okinawa-jima.- Proceedings of the 10th International Coral Reef Symposium (Okinawa), 2022-2036.- FC&P 34, p. 97, ID=1360^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Neogene; Geography: Japan, Okinawa^^1";

3598 s[3595] = "JIJU K., ORITA S. (1998).- Developmental history of a coral reef complex controlled by the sea-level change and terrigenous influx - the Pleistocene Ryukyu Group of Nakijin Village, Okinawa Prefecture.- Jour. Sci. Hiroshima Univ., Ser. C 11, 1: 1-10.- FC&P 27-2, p. 75, ID=3943^Topic(s): reefs, history; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Japan, Okinawa^^1";

3599 s[3596] = "MINOURA K. (1979).- Sedimentological study of the Ryukyu Group.- Sci. Rep. Tohoku Univ. Ser. 2, 49, 1: 1-69.- FC&P 10-1, p. 33, ID=5951^Topic(s): sedimentology, reefs; sedimentology, reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Japan^^1";

3600 s[3597] = "EGUCHI M., MORI R. (1973).- A study of Fossil Corals from Tateyama city and its Environs and Recent Coral Fauna of Chiba Prefecture, Central Japan.- Bulletin Tokyo College of Domestic Science 13: 41-52. [in Japanese, with English summary].- FC&P 2-1, p. 19, ID=4731^Topic(s): taxonomy, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene Recent; Geography: Japan^Numa coral bed of Tateyama city is famous for Japanese Geologists, because of its well studied fossil corals and known as only one Pleistocene reef formation in Honsyu. Since July 1969 we have often chances to study the localities and obtained several fossil and recent specimens of corals. Some 100 species of corals were known to occur there, judging from the growth form, especially abundant Echinophyllia, Pectinia and other thin explanate delicate forms it belongs evidently [to] calm inland bay facies. Among them following two species of southern form were discovered as first fossil occurrence. Palauphyllia hataii is a Lobophyllid coral and its distribution is now restricted in the tropical or subtropical sea (Loc. Palau Islands, Pracer Islands and Ogasawara Islands). Koseleya sp. is similar to Moseleya latistellata of the Great Barrier Reef, but much smaller in size and much larger than M. minor Ma (nom. nud.). Echinophyllia, Acropora, Caulastrea are illustrated here as fossil. Several ahermatypic corals thriving the continental shelf of Chiba pref. were listed here for the future study of fossil corals of the younger cenozoic formations of Kwanto district, and others.^1";

3601 s[3598] = "IKEDA E., IRYU Y., SUGIHARA K., OHBA H., YAMADA T. (2006).- Bathymetry, biota, and sediments on Hirota reef, Tane-ga-shima - the northernmost coral reef in the Ryukyu Islands.- Island Arc 15, 4: 407-419.- FC&P 34, p. 83, ID=1321^Topic(s): reefs, sedimentology, ecology; reefs ecology; Systematics: Cnidaria;

Anthozoa; **Stratigraphy:** Recent; **Geography:** Japan, Ryukyu Isls^Investigations were conducted on bathymetry, reef biota and sediments on the Hirota Reef, Tane-ga-shima, North Ryukyus, near the northern limit for coral-reef formation. A bathymetric profile from shore to the reef edge was depicted along an approximately 420-m transect on the Hirota Coast of this island. A total of 20 quadrats (1m x 1m) were analyzed along the profile at 10- or 20-m intervals to clarify distribution of macrobenthos inhabiting the reef. The Hirota Reef is divided into four geomorphologic zones according to their depth, gradient, surface roughness, substrate and characteristic macrobenthos. They are, from shore to offshore, shallow lagoon, seaward reef flat, reef edge and reef slope. The shallow lagoon comprises a shoreward depression (~160m wide on the transect) with a sand/gravel bottom that inclines gently toward offshore, and a seaward patch zone (~70m wide). The patches (<2m high) are covered with fleshy algae, coralline algae and hermatypic corals. The seaward reef flat (~190m wide) is a flat plane that is constructed by biogenic carbonates and is covered with turf algae, with hermatypic corals scattered. Although the seaward reef flat of the Hirota Reef cannot be differentiated into different geomorphologic zones, similar seaward reef flat areas in the Central and South Ryukyus can be clearly subdivided into inner reef flat, reef crest and outer reef flat. This difference may be attributed to a lower reef growth rate and/or the later reef formation of the Hirota Reef in Holocene time than the southern examples. The coral fauna on the Hirota Reef is delineated by low diversity and characterized by taxa typical of high-latitude, non-reefal communities. The algal flora consists of tropical to subtropical species associated with warm-temperate species. These faunal and floral characteristics may be related largely to lower water temperature in Tane-ga-shima than those in typical coral-reef regions. [original abstract]^1";

- 3602 s[3599] = "YAMAZATO K. (1972).- Bathymetric distribution of Corals in the Ryukyu Islands.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 121-133.- FC&P 2-2, p. 12, ID=4765^Topic(s):bathymetry; corals; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Recent; **Geography:** Japan, Ryukyu Isls^^1";
- 3603 s[3600] = "HAMADA T. (1977).- The Holocene corals of raised reefs of Japan.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 389-395.- FC&P 7-2, p. 25, ID=5655^Topic(s):hermatypic; reef corals; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Holocene; **Geography:** Japan^^1";
- 3604 s[3601] = "YEEMIN T., NOJIMA S., KIKUCHI T. (1990).- Sexual Reproduction of the scleractinian Coral, Montastrea valenciennesi, from a high-latitude Coral Community, southwest Japan.- Publications of the Amakusa Marine Biological Laboratory 10, 2: 102-121.- FC&P 22-1, p. 43, ID=3412^Topic(s):sexual reproduction; Scleractinia, Montastrea; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Recent; **Geography:** Japan, Ryukyu Isls^Sexual reproduction, timing of spawning, reproductive output, mating pattern and larval development of Montastrea valenciennesi in a community from Japan had been examined over two years. The paper is a comprehensive explanation of sexual reproduction in a high-latitude scleractinian coral of Northwest Pacific.^1";
- 3605 s[3602] = "EGUCHI M., MIYAWAKI T. (1975).- Systematic study of the scleractinian corals of Kushimoto and its vicinity.- Bulletin of Marine Park Research Stations 1, 1: 47-62.- FC&P 4-2, p. 45, ID=5209^Topic(s): Scleractinia; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Recent; **Geography:** Japan^[some 50 genera and 58 species are known to occur in the waters off Kushimoto; the fauna and the distribution are described]^1";

- 3606 s[3603] = "MORI K. (1977).- A calcitic sclerosponge from the Ishigaki-shima coast, Ryukyu Islands, Japan.- Bulletin Tohoku Univ. Sci. Dept., ser. 2 (geol.), 47, 1: 1-5.- FC&P 6-2, p. 18, ID=5546^Topic(s): ; Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Recent; Geography: Japan, Ryukyu Isls^[Tabulospongia japonica is described; it is composed of high-magnesian calcite and has siliceous spicules; Mori does not believe that the astrorhizal canals of stromatoporoids can be related to the exhalant canals of sponges]^1";
- 3607 s[3604] = "MATSUOKA K. (1991).- Freshwater sponge of Mitsu-ike pond, Oiwa-cho, Toyohashi City, Japan.- Sci. Rep. Toyohashi Mus. Nat. Hist. 1: 51-53. [in Japanese].- FC&P 21-1.1, p. 61, ID=3280^Topic(s): freshwater; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Japan^^1";
- 3608 s[3605] = "MATSUOKA K. (1992).- Freshwater sponges in Ushikawa-cho, Toyohashi City, Japan.- Sci. Rep. Toyohashi Mus. Nat. Hist. 2: 33-35. [in Japanese].- FC&P 21-1.1, p. 61, ID=3281^Topic(s): freshwater; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Japan^^1";
- 3609 s[3606] = "MATSUOKA K. (1994).- Freshwater sponge in Toyohashi City, Aichi Prefecture, Japan (Part 2).- Sci. Rep. Toyohashi Mus. Nat Hist. 4: 43-45. [in Japanese].- FC&P 23-1.1, p. 83, ID=4189^Topic(s): freshwater; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Japan^^1";
- 3610 s[3607] = "MASUDA Y. (1997).- A Scanning Electron Microscopy Study on Spicules, Gemmule Coats, and Micropyles of Japanese Freshwater Sponges.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6900^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Japan freshwater^^1";
- 3611 s[3608] = "IRYU Y., MATSUDA H., MACHIYAMA H., PILLER W.E., QUINN T.M., MUTTI M. (2006).- Introductory perspective on the COREF project.- Island Arc 15, 4: 393-406.- FC&P 34, p. 83, ID=1322^Topic(s): reefs, ecology, geohistory; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Japan, Ryukyu Islands^Coral reefs are tropic to subtropic, coastal ecosystems comprising very diverse organisms. Late Quaternary reef deposits are fossil archives of environmental, tectonic and eustatic variations that can be used to reconstruct the paleoclimatic and paleoceanographic history of the tropic surface oceans. Reefs located at the latitudinal limits of coral-reef ecosystems (i.e. those at coral-reef fronts) are particularly sensitive to environmental changes - especially those associated with glacial-interglacial changes in climate and sealevel. We propose a land and ocean scientific drilling campaign in the Ryukyu Islands (the Ryukyus) in the northwestern Pacific Ocean to investigate the dynamic response of the corals and coral-reef ecosystems in this region to Late Quaternary climate and sealevel change. Such a drilling campaign, which we call the COREF (coral-reef front) Project, will allow the following three major questions to be evaluated: (i) what are the nature, magnitude and driving mechanisms of coral-reef front migration in the Ryukyus? (ii) what is the ecosystem response of coral reefs in the Ryukyus to Quaternary climate changes? (iii) what is the role of coral reefs in the global carbon cycle? Subsidiary objectives include: (i) the timing of coral-reef initiation in the Ryukyus and its causes; (ii) the position of the Kuroshio current during glacial periods and its effects on coral-reef formation; and (iii) early carbonate diagenetic responses as a function of compounded variations in climate, eustacy and depositional mineralogies (subtropic aragonitic to warm-temperate calcitic). The geographic, climatic and oceanographic settings of the Ryukyu Islands provide an ideal natural laboratory to address each of these research questions. [original abstract]^1";

- 3612 s[3609] = "SASAKI K., OMURA A., MIWA A., TSUJI Y., MATSUDA H., NAKAMORI T., IRYU Y., YAMADA T., SATO Y., NAKAGAWA H. (2006).- 230Th/234U and 14C dating of a lowstand coral reef beneath the insular shelf off Irabu Island, Ryukyus, southwestern Japan.- Island Arc 15, 4: 455-467.- FC&P 34, p. 91, ID=1338^Topic(s): reefs, geochronometry; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Japan, Ryukyu Isls^High-resolution seismic reflection profiles delineated the distribution of mound-shaped reflections, which were interpreted as reefs, beneath the insular shelf western off Irabu Island, Ryukyus, southwestern Japan. A sediment core through one of the mounded structures was recovered from the sea floor at a depth of -118.2m by offshore drilling and was dated by radiometric methods. The lithology and coral fauna of the core indicate that the mounded structure was composed of coral-algal boundstone suggesting a small-scaled coral reef. High-precision a-spectrometric 230Th/234U dating coupled with calibrated accelerator mass spectrometric 14C ages of corals obtained reliable ages of this reef ranging from 22.18 ± 0.63 to 30.47 ± 0.98 ka. This proves that such a submerged reef was formed during the lowstand stage of marine oxygen isotope stages 3-2. The existence of low-Mg calcite in the aragonitic coral skeleton of 22.18 ± 0.63 ka provides evidence that the reef had once been exposed by lowering of the relative sealevel to at least -126m during the last glacial maximum in the study area. There is no room for doubt that a coral reef grew during the last glacial period on the shelf off Irabu Island of Ryukyus in the subtropical region of western Pacific. [original abstract]^1";
- 3613 s[3610] = "SUGIHARA K., MASUNAGA N., FUJITA K. (2006).- Latitudinal changes in larger benthic foraminiferal assemblages in shallow-water reef sediments along the Ryukyu Islands, Japan.- Island Arc 15, 4: 437-454.- FC&P 34, p. 92, ID=1345^Topic(s): reefs, fore-reef facies; reefs; Systematics: ; Stratigraphy: Recent; Geography: Japan, Ryukyu Isls^The variations in foraminiferal abundance in reef sediments from three latitudinally different islands exhibit two contrasting trends along reef flats: a shoreward decrease on Ishigaki and Tane-ga-shima Islands and a shoreward increase on Kudaka Island. A total of 25, 24 and 13 foraminiferal taxa were identified in Ishigaki, Kudaka and Tane-ga-shima Islands, respectively. Baculogypsina sphaerulata, Neorotalia calcar and Amphistegina spp. were dominant (i.e. >3% of foraminiferal assemblages) in the three islands. Calcarina gaudichaudii and Calcarina hispida were common on Ishigaki and Kudaka Islands but were absent on Tane-ga-shima Island. Larger foraminiferal assemblages from three different reef-flat environments on Ishigaki Island can be distinguished, whereas those from the three environments on Kudaka and Tane-ga-shima Islands are similar in composition. These latitudinal changes in larger foraminiferal assemblages in reef sediments may possibly be caused by variations in the topography of reef flats, distributions and standing crops of living foraminifers on reef flats, and the northern limit of some calcarinid species in the northern Ryukyus. [end-fragment of extensive abstract]^1";
- 3614 s[3611] = "SUGIHARA K., NAKAMORI T., IRYU Y., SASAKI K., BLANCHON P. (2003).- Holocene sea-level change and tectonic uplift deduced from raised reef terrace, Kikai-jima, Ryukyu Islands, Japan.- Sedimentary Geology 159, 1-2: 5-25.- FC&P 34, p. 92, ID=1346^Topic(s): reefs, eustacy, tectonic uplift; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Japan, Ryukyu Isls^Kikai-jima (Kikai Island) is surrounded by four Holocene raised coral reef terraces, which are thought to be an offlapping sequence of reef deposits caused by combined effects of seismic uplift and Holocene sea-level change. Many studies in this region have investigated Holocene sea-level changes and reef growth, but there are relatively few in which reliable sea-level indicators are given. We have found that Pocillopora verrucosa, one of the most

abundant coral species on the upper-reef slopes of fringing reefs in the Ryukyus, has its peak abundance at a depth of 1.5m. Therefore, this species is considered ideal for the analysis of relative sea-level change and can be used as a dipstick for the Holocene reef deposits in this area. Based on the distribution of *P verrucosa* on the four Holocene raised terraces, we calculate relative paleo-mean sea levels to be 10.8-11.1 and 8.5-8.9 m for Terrace I, 5.0-5.3 m for Terrace II, 4.0-4.3 m for Terrace III and 1.9-2.5 m for Terrace IV. These results, combined with hitherto known and newly measured radiometric dates (103 total), clearly show that the four terraces formed in response to repeated seismic uplifts at 6.3, 4.1, 3.1 and 1.4 ka, and that sea level was higher than present between 7.0 and 6.3 ka. [original abstract]^1";

- 3615 s[3612] = "YAMANO H., KAYANNE H., YONEKURA N. (2001).- Anatomy of a modern coral reef flat : A recorder of storms and uplift in the late Holocene.- *Journal of Sedimentary Research* 71, 2: 295-304.- FC&P 30-1, p. 31, ID=1555^Topic(s): reefs, storms, eustacy; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Japan^Cores from the Kabira Reef, Ishigaki Island, southwest Japan, reveal the internal structure and temporal changes in sedimentary process of a complete coral reef flat. The reef crest caught up with sea level at about 4000 yr BP. Since then, it expanded oceanward and the reef pavement has grown landward. The backreef structure is composed of bioclats derived from the reef framework. Of all the bioclats, corals and coralline algae are most abundant. Coral fragments coarser than - 3,0 Ø have dominated the backreef sediments since 2000 yr BP. Benthic foraminiferal tests first occurred at about 4000 yr BP, and their abundance increased significantly starting around 2000 yr BP. Shallowing of the reef crest is also indicated by the presence of the shallow-water benthic Foraminifera *Baculogypsina sphaerulata* tests after 2000 yr BP. The date 2000 yr BP is coincident with tectonic uplift at Kabira Reef (Kawana 1989). We consider this uplift to have caused a relative sea-level fall that aided the deposition of coral fragments transported from the reef pavement by storms. The relative sea-level fall also caused subaerial exposure of the reef crest during low tides and the transition of reef-building organisms from corals to shallow-water species of benthic Foraminifera, resulting in a change noticeable in the constituents of backreef sediments. The results of this study suggest that the coral reef flat, and especially the backreef, can be a faithful recorder of relative sea-level changes.^1";
- 3616 s[3613] = "KONISHI K., OSHIRO I., TANAKA T. (1979).- Holocene raised coral reef on Senkaku Islands: an active remnant arc.- *Proc. Japan. Acad. Ser. B*, 55, 7: 335-340.- FC&P 10-1, p. 33, ID=5953^Topic(s): reefs; raised reefs; Systematics: ; Stratigraphy: Holocene; Geography: Japan, Senkaku Isls^^1";
- 3617 s[3614] = "KATO M., NIIKAWA I., KAWAMURA T., EZAKI Y., SATO T. (1989).- Corals in Fossils from Onimaru.- *Ohfunato City Museum*: 13-24.- FC&P 21-1.1, p. 46, ID=3227^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Japan, Onimaru^^1";
- 3618 s[3615] = "NISHIMIYA K., YAMAGIWA N. (1973).- Coral fossils from the Kosode Formation, Yamanashi Prefecture.- *Trans. Proc. Palaeontol. Soc. Jap.* 89: 15-23.- FC&P 3-1, p. 27, ID=4886^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Japan^^1";
- 3619 s[3616] = "EGUCHI M., MORI R. (1976).- On the fossil coral faunule in the Megami Formation of Sagara-cho, Shizuoka Prefecture.- *Bulletin Tokyo College of Domestic Science* 16: 13-23.- FC&P 7-2, p. 25, ID=5654^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Japan^^1";
- 3620 s[3617] = "O'HARA S., SUGAYA M., FUKUDA Y., TANAKA T. (1976).- Fossils from the "Sakurai Formation". I Molluscs, benthonic

- foraminifers, crabs, ahermatypic corals and brachiopods. [in Japanese].- Jour. Coll. Arts & Sci., Chiba Univ., B-9: 77-108.- FC&P 7-2, p. 25, ID=5660^Topic(s): ; fossils corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Japan?^^1";
- 3621 s[3618] = "HASHIMOTO K. (1977).- On some corals from Yumioirezawa, Soma district. [in Japanese].- Bulletin Taira chigaku Dokokai 13: 7-12.- FC&P 7-2, p. 25, ID=5665^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ???; Geography: Japan?^^1";
- 3622 s[3619] = "SADA K., OKIMURA Y. (1978).- Hexaphyllia from the Atetsu Limestone in western Japan.- Faculty of Integrated Arts and Sciences, Horshima University Memoirs, ser. IV, 3: 91-96.- FC&P 19-1.1, p. 43, ID=2568^Topic(s): ; Heterocorallia, Hexaphyllia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: Japan w^^1";
- 3623 s[3620] = "YAMAGIWA N., YAMANO A. (1990).- A new species of Ipciphyllum from the Akasko Limestone, central Japan.- Bulletin of National Science Museum (Tokyo), ser. C, 16, 3: 119-125.- FC&P 20-2, p. 60, ID=2947^Topic(s): new taxa; Rugosa, Ipciphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: Japan central^^1";
- 3624 s[3621] = "FURUTANI H. (1981).- Ibukiphyllum (Rugosa) from the north of Tarui, Gifu Prefecture, central Japan.- Bulletin of the Mizunami Fossil Museum 8: 139-145.- FC&P 11-2, p. 28, ID=6155^Topic(s): ; Rugosa, Ibukiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ???; Geography: Japan central^^1";
- 3625 s[3622] = "NIIKAWA I. (2001).- The genus Echigophyllum from the Omi Limestone, central Japan.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 70-076.- FC&P 30-1, p. 19, ID=7063^Topic(s): ; Rugosa Echigophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ???; Geography: Japan^The species Echigophyllum giganteum Yabe and Hayasaka is here redescribed from the Omi Limestone, Niigata Prefecture, central Japan. The systematic position of the genus Echigophyllum within the Clisiophyllinae is discussed. It is concluded that Echigophyllum should be restored as an independent genus, having been regarded previously as junior synonym of the genus Amygdalophyllum Dun and Benson by Hayasaka (1939). [original abstract]^1";
- 3626 s[3623] = "YAMAGIWA N., HABUCHI Y., MIYATA K. (1976).- Some interesting fossils from the Naradani Formation at the Naradani district, Sagawa Basin, Kochi Prefecture, Southwest Japan (I). Order Scleractinia.- Mem. Osaka Kyoiku Univ., ser III, 25, 3: 135-142.- FC&P 7-1, p. 11, ID=5566^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ???; Geography: Japan SW^^1";
- 3627 s[3624] = "MINATO M., KATO M., MINOURA N., YOKOYAMA Y. (1982).- On the systematic position of Ohnopora.- Jour. Geol. Soc. Japan 88, 9: 773-774.- FC&P 11-2, p. 20, ID=1807^Topic(s): systematics; Crinoidea non Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Japan^Ohnopora turned up to be a crinoid similar to Perneroocrinus. what was formerly believed as a tabulate skeleton is actually residual partitions of originally fused arms which were later dissolved; based on the observation on new material.^1";
- 3628 s[3625] = "MIZOGUCHI H. (1997).- The Sponge in the History of Japanese Biology.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6911^Topic(s): biological research; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: Japan^^1";
- 3629 s[3626] = "KANMERA K., UJIE H. (1978).- Bibliography of Palaeontology

- in Japan 1961-1975.- Palaeont. Soc. Japan Special Papers 22; 263 pp.-
 FC&P 10-1, p. 31, ID=5940Topic(s): bibliography;
 paleontology, bibliography; Systematics: ; Stratigraphy:
 ; Geography: Japan^^1";
- 3630 s[3627] = "EGUCHI M. (1973).- On some new or little known corals from
 Japan and Australia.- Publ. Seto Marine Biological Laboratory 20 [Proc.
 of the IInd Intern. Symposium on Cnidaria]: 81-87.- FC&P
 3-1, p. 16, ID=4849Topic(s): ; Scleractinia;
 Systematics: Cnidaria; Scleractinia; Stratigraphy:
 Recent; Geography: Japan, Australia^Description of 4 species
 from Japan: Alveopora japonica Eguchi var. magna n., Euphyllia
 sabiuraensis Eguchi n.sp., Monomyces uchiuraensis Eguchi, Dendrophyllia
 arbuscula var. compressa Eguchi et Sasaki, n. var. and description of 2
 species from Australia: Platytrochus compressus (Tenison Woods),
 Culicia hoffmeisteri Squires.^1";
- 3631 s[3628] = "SANO H., KANMERA K. (1996).- Microbial Controls on
 Panthalassan Carboniferous-Permian Oceanic Buildups, Japan.- Facies 34,
 1: 239-256.- FC&P 25-2, p. 74, ID=3181Topic(s):
 reefs intra-oceanic; reefs, oceanic settings; Systematics:
 Monera; Stratigraphy: Carboniferous, Permian; Geography:
 Japan, Panthalassa^This contribution emphasizes the significant
 rock-building role of microbial encrusting organisms including
 Tubiphytes, filamentous cyanobacteria (mainly Girvanella and
 Ortonella), and Archaeolithoporella in the Carboniferous to Permian
 buildups that formed on seamounts in the Panthalassa ocean. The
 description concentrates on the paleontological characters of these
 microbes and the petrographic properties of the microbial bindstones
 and related cryptomicrobial fabrics. Comparisons of major rock-building
 biotas in the Carboniferous-Permian Panthalassan buildups and Parigean
 reefs are briefly discussed. The Lower Carboniferous (Visean) to upper
 Middle Permian (Murgabian) limestone units and the upper Lower to upper
 Middle Permian (Artinskian to Murgabian) limestone units in southwest
 Japan were examined. All these limestone units are underlain by oceanic
 island-type basalts and are totally free from terrigenous materials.
 The limestones are lying in disrupted accretionary terranes of Japan
 and are regarded as relicts of oceanic buildups upon seamounts in the
 Panthalassan open-ocean realm. [first fragment of extensive summary]^1";
- 3632 s[3629] = "UNSALANER-KIRAGLI C. (1978).- Publications on Turkish fossil
 corals.- FC&P 7, 2: 27.- FC&P 7-2, p. 27,
 ID=5670Topic(s): bibliography; coral bibliography;
 Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil;
 Geography: Turkey^[list of five coral papers published 1941-1958
 by C. Unsalaner-Kiragli]^1";
- 3633 s[3630] = "MELNIKOV B.N., ROZANOV A.Yu., SUSOV M.B., FONIN V.D.
 (1986).- First Archaeocyatha of the Lower Cambrian of Central Iran.-
 Izvest. Akad. Nauk SSSR, ser. Geol. 7: 134-138.- FC&P 16-1,
 p. 78, ID=2027Topic(s): biogeography; Archaeocyatha;
 Systematics: Porifera; Archaeocyatha; Stratigraphy:
 Cambrian L; Geography: Iran^First discovery of an
 archaeocyathan fauna in dolomitic limestones. The sampling is rather
 abundant but poorly preserved and could not be indentified with
 certainty even at generic level. Nevertheless the global composition
 suggests affinities with the realm Altai Sayan, western Mongolia,
 Middle Asia, Sardinia, Spain.^1";
- 3634 s[3631] = "HAMDI B., ROZANOV A.Yu., ZHURAVLEV A.Yu. (1995).- Latest
 Middle Cambrian metazoan reef from northern Iran.- Geological Magazine
 132, 4: 367-373.- FC&P 24-2, p. 99, ID=4607Topic(s):
 reefs; reefs; Systematics: Porifera; Demospongiae;
 Stratigraphy: Cambrian M; Geography: Iran N^Middle and
 Late Cambrian reefs were built mainly by cyanobacterial communities. A
 few reefs with a metazoan as well as an algal component, however, are
 known from this interval. A Middle Cambrian reef formed primarily by
 spicular demosponges is described here from the Mila Formation in the

Elburz Mountains, northern Iran. The reef is enclosed within calcareous grainstones which contain terminal Middle Cambrian (late Mayan) trilobites. The Mila Formation reef was constructed by sponges of the family Anthaspidellidae and bacterial (algal?) sheaths, and is the earliest metazoan reef to be documented from the interval after the demise of archaeocyath sponges. The reefal community is typical of subsequent reefal communities of Early-Middle Ordovician age. The Ordovician examples differ only by the incorporation of additional metazoan elements.^1";

3635 s[3632] = "KANO A., MACHIYAMA H., MATSUMOTO R. (2001).- Facies and depositional environment of Middle to Upper Cambrian sponge mounds of northern Iran.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 125-133.- FC&P 30-1, p. 20, ID=7065^Topic(s): mud mounds; Porifera, reefs; Systematics: Porifera; Stratigraphy: Cambrian M - U; Geography: Iran N^Middle to Upper Cambrian sponge mounds occur in shallow marine carbonates, (the Mila Formation) of the southern Elburz Mountains, northern Iran. The mounds are up to 6m thick, with a 30m diameter, and have low, rigid frameworks formed by a single species of the demosponge genus Rankenella and microbial micrite. The mound bearing unit mainly consists of coarse grained crinoidal grainstone, less than 70m in thickness, and includes brachiopod shell beds and oncoids. Cross stratified and lenticular grainstone units indicate shoaling. During the development of the carbonate shoal, water energy increased and the shoal was cut off from terrigenous influx. Stabilization by brachiopods or early lithification may have provided favorable substrates for sponge colonization. The sponges probably adapted to a clear, strong water flow, which provided an effective nutrient supply, thus inhabiting the environment previously occupied by archaeocyaths. These Iranian mounds represent the oldest reef building by a non archaeocyath sponge community (Hamdi et al., 1995). Middle to Late Cambrian reef building in other localities generally is by microbial thrombolites and stromatolites. Although the Iranian mound community is very simple, it is regarded as an ancestor of Early Ordovician sponge microbial reefs. [original abstract]^1";

3636 s[3633] = "HERAVI M.A., KHAKSAR K. (1999).- An assemblage of corals from Iran (with Atlas). [in Persian].- Geological Survey of Iran; 355 pp.- FC&P 29-1, p. 37, ID=1462^Topic(s): atlas of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: Iran^A catalogue of fossil corals (Rugosa, Tabulata) known from Iran with numerous plates. As only the names of taxa are spelled in latin characters, the main text is of little use for most readers. Available from the Geological Survey of Iran (G.S.I.), P.O. Box 13185, 1494 Teheran, Iran.^1";

3637 s[3634] = "FLUGEL H.W., SALEH H. (1970).- Die palaeozoischen Korallenfaunen Ost-Irans. 1. Rugose Korallen der Niur-Formation (Silur).- Jahrb. Geol. B.-A. 113: 266-304.- FC&P 1-2, p. 13, ID=4641^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Iran E^Auf Grund der Rugosen-Fauna des Type- und des Reference-section der Niur-Formation Ost-Irans sowie einiger anderer Rugosenfunde aus dieser Formation aus den Gebieten Ozbakuh und Shirgesht kann diese Formation in zwei &Faunenzonen&; gegliedert werden. Die tiefere ist durch das Auftreten von Streptelasma, Tenuiphyllum, Paliphyllum etc., die hoehere durch cystiphyllide Rugosa, Spongophylloides etc. charakterisiert. Ihre verteilung geht aus Abb. 5 hervor. Die Rugosengenera erlauben im Verein mit einigen Altershinweisen, die durch andere Tiergruppen (Stromatoporen, Conodonten, Brachiopoden) gewonnen wurden, eine Einstufung der unteren &Zone&; in das Llandovery, der oberen &Zone&; in den Bereich Ludlovium bis Lochkovium. Da es sich fast durchwegs um neue Arten handelt, koennen keine zoogeographischen Aussagen gemacht werden.^1";

- 3638 s[3635] = "HUBMANN B. (1992).- Catenipora Lamarck from the Lower to Middle Silurian of eastern Afghanistan (tabulate corals: Collection A. Durkoop).- Senckenbergiana lethaea 72: 37-48.- FC&P 21-2, p. 38, ID=3323^Topic(s): taxonomy; Tabulata, Catenipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L M; Geography: Afghanistan E^Some representatives of monomorphic halysitid corals are described: Catenipora sindoensis?, C. cf. sindoensis, C. arctica, C. gubachevi, C. copula, C. jarviki, and C. sp. Their occurrence indicates palaeobiogeographic connection between the northern shelf of Gondwana and Laurasia of the Northern Hemisphere during Llandoveryan and Wenlockian times.^1";
- 3639 s[3636] = "BRICE D., LAFUSTE J., LAPPARENT A.F.de, PILLET J., YASSINI I. (1973).- Etude de deux gisements paléozoïques (Silurien et Dévonien) de l'Elbourz oriental (Iran).- Annales de la Societe geologique du Nord 93: 177-218.- FC&P 3-2, p. 36, ID=4941^Topic(s): geology, paleontology; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Iran, Elburz^La première partie est consacrée à la présentation de la série paléozoïque observée dans chacun des deux gisements avec son contenu faunistique et les attributions d'âge. Cette série qui atteint 2000m à Robat-e-Garabil, est perturbée en son milieu et comprend du Silurien à Polypiers et Brachiopodes (Llandovery à Wenlock), des dépôts détritiques et évaporites (Dév. inf.?) du Dévonien moyen (Eif.-Giv.) et supérieur (Fras.) marin richement fossilifère. A Khochaïlagh, des séries marines marno-calcaires très riches en Brachiopodes rappelant celles d'Afghanistan occidental représentent le Dévonien moyen (Eif.-Giv.) et supérieur (Famen.), elles reposent sur des formations volcaniques et détritiques (Dév. inf.). * La seconde partie comprend la description des principaux fossiles de la série, en particulier celle des coraux siluriens (Jean Lafuste). Ceux-ci sont représentés par les genres de Tabulata suivants: Palaeofavosites, Mesofavosites, Plasmopora.^1";
- 3640 s[3637] = "KARAPETOV S.S., LELESHUS V.L., SONIN I.I. (1975).- Stratigrafiya i tabulyaty silura Afganistana. [stratigraphy and tabulate corals of the Silurian of Afghanistan; in Russian] .- Bulletin Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 40, ??: 95-106.- FC&P 5-1, p. 33, ID=5385^Topic(s): stratigraphy; stratigraphy, Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Afghanistan^The paper deals with new data on the stratigraphy of the Silurian in Central Afghanistan and also descriptions of the following tabulate corals: Palaeofavosites schmidti, Favosites gothlandicus, F. favosus, F. afghanicus n.sp., Pachypora lapparenti n.sp. and Catenipora exilis.^1";
- 3641 s[3638] = "HUBMANN B. (1992).- Halysitidae aus dem tiefen Silur E-Irans (Niur-Formation).- Jb. Geol. B.-A. 134, 4: 711-733.- FC&P 21-1.1, p. 50, ID=3255^Topic(s): taxonomy; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: Iran E^Silurian Halysitid Corals from E-Iran (Niur-Formation) Llandoveryan / Wenlockian (Shirgesht, Tabas area) were examined. Eocatenipora nicholsoni, Catenipora obliqua, C. micropora, C. gotlandica, C. cf. louisvillensis, C. cf. jarviki, C. khorasanensis n.sp., C. ssp. and Halysites labyrinthicus are described. The corals indicate palaeobiogeographic relations between Gondwana (and adjacent terranes) and Laurussian plates of the northern hemisphere during Silurian times.^1";
- 3642 s[3639] = "HUBMANN B. (1992).- Silurische Halysitidae (Coelenterata, Tabulata) von Bithynien (Nordwest-Tuerkei) und biofazielle Beziehungen der Gondwanischen Halysitinae und Cateniporinae.- Paläontologische Zeitschrift 66, 3-4: 213-229.- FC&P 22-1, p. 37, ID=3393^Topic(s): taxonomy; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: Turkey, Bithynia^From the Silurian (Wenlockian?) of

the *Halysites*-Limestone (Doğayba-Limestone), NW-Turkey, *Catenipora minuta* Stasinska und *Catenipora crassaeformis* n.sp. are described. *Halysites longicatenus* Weissermel is redefined. Faunal relations of Ordovician-Silurian *Halysitidae* from Gondwana are subject of discussion.¹";

- 3643 s[3640] = "ROHART J.-C. (1999).- Palaeozoic rugose corals from central and eastern Iran (A.F. Lapparent and M. Zahedi collections).- *Annales de la Societe geologique du Nord* 7 (2eme serie): 47-70.- **FC#038;P 30-1**, p. 27, ID=1450**Topic(s):** taxonomy; Anthozoa; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Silurian Devonian Carboniferous; **Geography:** Iran¹From collections made in the seventies, coming from different localities in eastern Iran (Tabas and Kerman regions; de Lapparent collection) and central Iran (Soh region, Zahedi collection), fourteen species are described. From Silurian, one species is attributed to *Araeopoma* (first citation outside the type-area: Gotland) and on to *Axolasma*. Ten are Devonian and have been yielded by the same stratigraphic level which is Lower to Middle Frasnian in age (Brachiopod zone 6 of Brice 1977). They are: two *Disphyllum* species (one is *Disphyllum caespitosum tricyclum* von Schouppé, 1965); two *Hexagonaria* species also found in Afghanistan; One species of *Cystihexagonaria* with, where septal thickening is noticeable, large monacanth of *Hexagonaria*- type; two *Macgeea* species; *Temnophyllum lapparenti* nov. sp.; *Sinodisphyllum* sp. and *Peneckiella* ? cf. *cylindricum* (Yoh, 1937). From Carboniferous, *Sinophyllia cylindrica* and from Permian *Polytehcalis* cf. *denticulatus* are also included. Affinies of the Devonian corals are with those of Afghanistan and Chitral. ¹";
- 3644 s[3641] = "BIRENHEIDE R., KAYA O. (1987).- Stratigraphy and Middle Devonian corals of the Adapazari area, NW Turkey.- *Senckenbergiana lethaea* 68 1/4: 263-303.- **FC#038;P 17-1**, p. 25, ID=2134**Topic(s):** biostratigraphy; Anthozoa; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Devonian M; **Geography:** Turkey NW¹As an introduction to the geology of the Devonian of the area of the town of Adapazari, NW Turkey, the geological position of the Alabalik Member at the base of the Yilanli Formation is outlined by reference to its type section (O. Kaya). At its type locality the Alabalik Member contains a relatively well-preserved fauna of rugose and tabulate corals which are described herein for the first time (R. Birenheide). The majority of the 16 currently recognized species are conspecific with described taxa or comparable with such species, of which the bulk of occurrences have been recorded from the Middle Eifelian of Eurasia and N Africa; therefore the Alabalik Member is very probably of the same age. The following species are new: *Xystriphyllum kayai* n.sp., *Dohmophyllum bulbosum* n.sp., *Favosites dorotheae* n.sp., *Mariusilites osmanicus* n.sp., *Mesolites interruptus* n.sp. and *Heliolites asiae minoris* n.sp.¹";
- 3645 s[3642] = "WEYER D. (1982).- *Schindewolfia weissermel* 1943 (Anthozoa, Rugosa) im Unterdevon von Bithynien.- *Abhandlungen und Berichte für Naturkunde und Vorgeschichte* 12, 5: 17-28.- **FC#038;P 13-2**, p. 38, ID=0542**Topic(s):** Rugosa, *Schindewolfia*; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Ems; **Geography:** Turkey, Bithynia¹Lower Emsian (upper Zlichovian) upper Pendik beds from classical coastal localities near Kartal and Pendik (Marmara Sea southeast of Istanbul) yield some few corals within a famous fauna of mixed Rhenish and Bohemian facies type (including rare goniatites). Rugosa are represented by mainly two species, the hapsiphyllid *Hapsizaphrentis endrissi* (Weissermel 1939) of *Adradosiinae*, and the laccophyllid *Schindewolfia marmara* sp.n., which is close to *Schindewolfia cantabrica* (Kullmann 1965) from Lower Emsian od Cantabrian Mountains in Northern Spain.¹";
- 3646 s[3643] = "ROHART J.-C. (2000).- Frasnian rugose corals from Chah-Riseh (Esfahan Province, central Iran).- *Annales de la Societe geologique du Nord* 8 (2eme serie): 67-71.- **FC#038;P 30-1**, p. 26,

ID=1536^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Iran^Three rugose coral species are described from collections made in the two biostromes of Kuh-e-Kaftar section n°2, at Chariseh, Esfahan province, central Iran: Disphyllum sp. 1, Hexagonaria cf. magna (Fenton & Fenton, 1924), sensu Brice, 1971 and Temnophyllum lapparenti Rohart, 1999. This coral level is an interesting stratigraphic marker since it also occurs in eastern Iran and in Afghanistan with the same coral species and with brachiopods characteristic of the 6th Brachiopods Zone of Brice (1977), as here. In central Iran, Hexagonaria cf. magna was formerly found in the Soh area (Rohart 1999) but without associate fauna. The age is lower to middle Frasnian according to the brachiopods; according to the conodonts, it is inside the interval "middle to late Frasnian (jamieae Zone to rhenana Zone)" (Ghomalian 1998).^1";

3647 s[3644] = "GHODS P. (1982).- Rugose Korallen des Givetium und Frasnium im Elburz-Gebirge (Nord-Iran).- Diss. Univ. Hamburg 171 pp., 11 figs.; Hamburg. [German, English summary].- FC&P 16-1, p. 59, ID=1960^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv Fra; Geography: Iran, Elburz^Givetian and Frasnian corals (Rugosa) of four sections from the Devonian Khoshyeilagh-Formation in North-Iran (Elburz) were palaeontologically studied. 16 genera and 25 species were systematically described. 12 species belong to the Givetian and 10 species to the Frasnian. Three species indicate upper Givetian to lower Frasnian range. By these species definite Givetian was identified and definite Frasnian was confirmed in the Khoshyeilagh-Formation. Eifelian age could not be identified because none of the examined sections delivered any definite Eifelian coral. The Devonian corals manifest an evolution from lower Givetian to upper Frasnian in the Elburz. The sections were correlated according to the biostratigraphic and lithological facts. Ontogenetic studies demonstrate that species within one genus have similar ontogenetic development. Studies of phylogenetic evolution indicate that species within one genus (f. ex. Disphyllum, Heliophyllum) derive from each other or replace one another. Ecological circumstances permit relatively good conditions for the evolution of Devonian corals in the shelf-region. [original summary]Described are the following species: Disphyllum caespitosum, D. cf. geinitzi, D. virgatum, D. lazutkini, D. caespitosum caespitosum, D. hsianghsienense kostetskae, Ceratophyllum dohmi, Characterophyllum nanum, Heliophyllum halli, H. shinnery, H. aiense, Temnophyllum cf. richardsoni, T. cf. difficile, Columnaria sulcata, Donia laxa, Hexagonaria cf. philomena, H. cf. hexagona, Macgeea cf. proteus, M. cf. bathycalyx kasimiri, Stringophyllum cf. inflatum, Thamnophyllum caespitosum, Spongophyllum imperfectum, Aulacophyllum vesiculatum, Tabulophyllum gracile, Scenophyllum sp.^1";

3648 s[3645] = "HUBMANN B. (1992).- Die Korallenfauna aus dem Devon von Feke (Antitaurus, SE-Tuerkei). II. Rugosa.- Geol. Palaeont. Mitt. Innsbruck 18: 151-169.- FC&P 21-2, p. 35, ID=3314^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Turkey, Antitaurus^From the Devonian of Feke area (NE Adana / SE-Turkey) rugose corals are described: Argutastrea lecomptei (Tsien), Argutastrea taurensis n.sp., Hexagonaria sp., Mixogonaria schafferi (Penecke), Pseudopexiphyllum supradevonicum (Penecke) and Mictophyllum sp. The majority of the rugose and tabulate corals which are described herein are conspecific or comparable with taxa of which the bulk of occurrences have been reported from the upper Givetian to lower Frasnian deposits of western Europe (Renohercynicum). The following taxa are new: Pseudopexiphyllum n.gen. with the type species P. supradevonicum (Penecke 1903) and Argutastrea taurensis n.sp. ^1";

3649 s[3646] = "BRICE D. (1971).- Etude monographique des Polypiers Rugueux d'Afghanistan.- Notes et Mémoires sur le Moyen-Orient 11 (Etude

- paléontologique et stratigraphique du Dévonien d'Afghanistan); 364 pp.- **FC**;P 1-2, p. 12, ID=4634**Topic(s):** monograph; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian; **Geography:** Afghanistan^1";
- 3650 **s[3647]** = "BRICE D., LAPPARENT A.F.de, MISTIAEN B. (1974).- Le Dévonien supérieur à l'Est d'Hajigak (Afghanistan).- Annales de la Societe geologique du Nord 94: 67-69.- **FC**;P 4-2, p. 55, ID=5256**Topic(s):** Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Fra; **Geography:** Afghanistan^[présence de Rugueux dans le Frasnien de la rive ouest de la vallée de Kharzar]^1";
- 3651 **s[3648]** = "KULLMANN J. (1973).- Goniatite-coral associations from the Devonian of Istanbul, Turkey.- Ege Univ. Fen. Fak. Kitaplar Ser. 40 [O. Kaya (ed.): Paleozoic of Istanbul]: 97-116.- **FC**;P 6-1, p. 20, ID=0006**Topic(s):** pelagic facies; Rugosa, Cyathaxonia fauna; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian Ems Eif; **Geography:** Turkey^Three goniatite-coral associations are described from the Upper Emsian and Eifelian of Bithynia.^1";
- 3652 **s[3649]** = "BRICE D., MISTIAEN B., ROHART J.-C. (1999).- New data on distribution of brachiopods, rugose corals, and stromatoporoids in the Upper Devonian of central and eastern Iran. Paleobiogeographic implications.- Annales de la Societe geologique du Nord 7 (2eme serie): 21-32.- **FC**;P 30-1, p. 25, ID=1515**Topic(s):** biostratigraphy; stroms, Rugosa; **Systematics:** Cnidaria Porifera; Rugosa Stromatoporoidea; **Stratigraphy:** Devonian U; **Geography:** Iran^The Upper Devonian (Frasnian and Famennian) of Iran is briefly reviewed, as is the geologic setting of specific sections sampled in eastern and central Iran in the 1970s by A. F. de Lapparent. Recent study or revision of the fauna from these sections in relation to the program of IGCP 421 has included Frasnian and Famennian rhynchonellid and spiriferid brachiopods (Brice, 1999b), stromatoporoids (Mistiaen, 1999) and rugose corals (Rohart, 1999). Taxa discriminated and their stratigraphic distribution are tabulated. Ages, affinities and paleobiogeographic distribution of these faunas are discussed.^1";
- 3653 **s[3650]** = "MISTIAEN B. (1985).- Phenomenes recifaux dans le Dévonien d'Afghanistan (Montagnes Centrales): Analyse et systematique des stromatopores.- Societe geologique du Nord.- **FC**;P 15-2, p. 44, ID=0749**Topic(s):** reefs; stroms, reefs; **Systematics:** Porifera; Stromatoporoidea; **Stratigraphy:** Devonian; **Geography:** Afghanistan^Volume 1 is largely stratigraphic but its 6th part includes a summary of the biostratigraphy of the 28 stromatoporoid taxa that occur in these sections. Volume 2 is devoted to the stromatoporoids and discusses their stratigraphic distribution in Afghanistan and the relationship of the fauna to other Frasnian and Givetian faunas. In the systematic section species of the following genera are described and figured: Actinostroma (5), Atelodictyon (4), Bifariostroma (1), Anostylostroma? (1), Pseudostictostroma (1), Clathrodiction (1), Clathrocoilona (2), Stictostroma (3), Stromatoporella (1), Gerronostroma (1), Atopostroma (1), Stromatopora (2), Salairella (1), Taleastroma (3), Habrostroma (2), Hermatostroma (3), Stachyodes (3), Euryamphipora (1), Labechia (1). Only two of the species are new (Atelodictyon dewalense, Hermatostroma afghanense). Most genera are discussed at length and several are placed in synonymy.^1";
- 3654 **s[3651]** = "MISTIAEN B. (1999).- On some Devonian (Frasnian) stromatoporoids from Kerman province, eastern Iran.- Annales de la Societe geologique du Nord 7 (2eme serie): 33-44.- **FC**;P 30-1, p. 33, ID=1521**Topic(s):** stroms; **Systematics:** Porifera; Stromatoporoidea; **Stratigraphy:** Devonian Fra; **Geography:** Iran^The present study is based on material consisting of twenty or so stromatoporoid specimens collected by de Lapparent at the beginning of the seventies in Kerman Province (Bidu

River and Ab-Bid sections) in east-central Iran. Although stromatoporoids have been noted several times in the Devonian of Iran, until now, no systematic studies have been published. However, *Actinostroma stellulatum* Nicholson 1886a was identified from the Tabas area by Flügel (1961) and *Amphipora* sp. was cited from the Kerman area by Wendt et al. (1997). The following stromatoporoid species have been recognized and are here described: *Actinostroma filitextum* Lecompte, 1951, A. sp., *Stictostroma saginatum* (Lecompte, 1951), *S. brylkinii* (Yavorsky, 1955), *Clathrocoelona* cf. *inconstans* Stearn, 1962, C. sp., *Dendrostroma* sp., *Hermatoporella* cf. *pertabulata* (Zukalova, 1971), *Habrostroma dubia* (Lecompte, 1952), H. sp., *Stachyodes costulata* Lecompte, 1952, and *Stachyodes australe* (Wray, 1967). This stromatoporoid fauna clearly shows very close relations with the Frasnian Afghan stromatoporoid fauna recognized by Mistiaen (1985) in the Central Mountains and in the Axial zone, and more generally with the well-known very cosmopolitan Frasnian stromatoporoid fauna of the Old World Realm (Brice et al. 1999).¹;

3655 s[3652] = "MISTIAEN B. (2001).- Devonian stromatoporoids and other reef building organisms from Kal-E Sardar (Shotori Range, Iran).

Biostratigraphic and Palaeobiogeographic implications.- Contributions to Siberian IGCP 410/421 joint meeting: 102-103.- FC&P 31-2, p. 45, ID=1692Topic(s): reefs, stratigraphy, biogeography; stroms, reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: IranCorals: Tabulate corals collected consist of thamnoporids, very few scolioporids and auloporids (but caunopore tubes) and more numerous alveolitids. The last are being studied (Mistiaen & Fernandez-Martinez. in Press; Fernandez-Martinez, in preparation). The stromatoporoid fauna from this outcrop (about 20 samples) is surprisingly diverse, consisting of about 10 species.¹;

3656 s[3653] = "MISTIAEN B., GHOLAMALIAN H. (2000).- Stromatoporoids and some tabulate corals from the Chahriseh area (Esfahan province, Central Iran).- Annales de la Societe geologique du Nord 9 (2eme serie): 81-91.- FC&P 31-2, p. 46, ID=1693Topic(s):

taxonomy; stroms, Tabulata; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: Devonian Fra; Geography: IranStromatoporoids and tabulate corals were collected in the Kuh-e Kaftar section n° 2, Chahriseh area, Central Iran, in two biostromal horizons, middle Frasnian in age (apparently) situated just below the jamieae Conodont Zone). The stromatoporoid fauna of Chahriseh, with *Stictostroma saginatum* (Lecompte, 1951), *Clathrocoelina* cf. *inconstans* Stearn, 1962, *Habrostroma dubia* (Lecompte, 1952), *Stachyodes australe* (Wray, 1967) and probably *Hermatoporella* cf. *pertabulata* (Zukalova, 1971), is very similar to the Frasnian stromatoporoid fauna previously observed in the Kerman area, Eastern Iran, and characteristic of the cosmopolite Frasnian stromatoporoid fauna. The tabulate corals are represented by numerous alveolitids, *Scoliopora* sp. and some Auloporids, with *Thecostegites bouchardi* (Michelin, 1846) a characteristic and interesting Frasnian species.¹;

3657 s[3654] = "HUBMANN B. (1992).- Die Korallenfauna aus dem Devon von Feke (Antitaurus, SE-Tuerkei). I. Tabulata.- Mitt. oesterr. geol. Ges. 84: 355-372.- FC&P 21-2, p. 38, ID=3322Topic(s):

Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Turkey, AntitaurusDevonian corals are described from Feke area (NE Adana / SE-Turkey): Alveolites edwardsi Lecompte, Alveolites fecundus Lecompte, Alveolites intermixtus minor (Iven), Alveolites sp., Thamnopora reticulata (de Blainville) and Thamnopora sp. are described.¹;

3658 s[3655] = "MISTIAEN B., FERNANDEZ-MARTINEZ E. (2000).- Alveolitidos y estromatoporidos del Devonico de Iran: consideraciones paleobiogeograficas.- Publicaciones del Seminario de Paleontología de Zaragoza 5, 2: 557-564.- FC&P 31-1, p. 63, ID=1636Topic(s): ; Tabulata, stroms; Systematics:

Cnidaria Porifera; Tabulata Stromatoporoidea; Stratigraphy: Devonian; Geography: Iran^Alveolitids tabulate corals and stromatoporoids coming from different Devonian outcrops of Iran are analysed. Some preliminary results relative to the stromatoporoids have been previously published and a systematic study on the alveolitids is currently in preparation. Preliminary data on alveolitids are according with the paleogeographical considerations specially stated by stromatoporoid faunas.^1";

- 3659 s[3656] = "MISTIAEN B. (1980).- Niveaux construits a Bryozoaires Fistuliporides dans le Devonien de l'Hazarajat, Afghanistan central.- Bulletin de la Societe geologique de France 7, 22, 1: 103-113.- FC&P 9-2, p. 12, ID=5858^Topic(s): reefs; reefs, Bryozoa; Systematics: Bryozoa; Stratigraphy: Devonian; Geography: Afghanistan^En Afghanistan central des Bryozoaires Fistuliporides sont très abondants à plusieurs niveaux du Dévonien. * Cette note précise le cadre géographique et stratigraphique où ils ont été observés. L'étude est centrée sur trois niveaux particulièrement riches, elle insiste sur les variations constatées dans l'abondance, la morphologie des Bryozoaires, la composition des associations fauniques, la nature des microfaciès. Les remarques paléocéologiques apportent des éléments en vue d'une reconstitution paléogéographique d'une partie de la région au Frasnien supérieur. L'originalité de ces niveaux construits par des Bryozoaires est soulignée.^1";
- 3660 s[3657] = "OEKENTORP K., SCHRODER S. (2001).- Korallen (Rugosa; Tabulata) aus dem Jungpalaozoikum des SW Sultan Dag; Tuerkei.- Contributions to Geology and Palaeontology of Gondwana - in honour of Helmut Wopfner [Weiss R. H. (ed.)]: 369-381, 1 fig., 2 pls.; Cologne.- FC&P 30-1, p. 25, ID=1533^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Devonian, Carboniferous; Geography: Turkey, Sultan Dag^Two coral taxa collected in the Sultan Dag, Turkey, are described: the Upper Devonian Peneckiella minor ssp. and the Upper Carboniferous Michelinia (Protomichelinia) wopfneri n.sp. Taxonomical questions are discussed based on the interpretation of diagenetic microstructures. Praemichelinia Lafuste & Plusquellec 1980 has to be re-evaluated. ^1";
- 3661 s[3658] = "KATO M. (1979).- Some upper Palaeozoic corals from Turkey.- Faculty of Science Journal, Hokkaido University Ser. 4, 19, 1-2: 137-148.- FC&P 8-2, p. 40, ID=0318^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic U; Geography: Turkey^Three Upper Palaeozoic corals from three different horizons are first described from the Sainbeyli region of Turkey. Waagenophyllum (W.) kueichowense Huang horizon is probably the Permian Khachik age. Kueichouphyllum yabei Minato horizon is the Visean and Caninia cornucopiae Michelin horizon may be the Tournaisian in age. Both Waagenophyllum and Kueichouphyllum are the elements of old Tethyan faunal realm in the Permian and in the Carboniferous respectively, thus indicating that in general Turkey was a part of that palaeobiogeographical province during most of the Upper Palaeozoic. [original abstract]^1";
- 3662 s[3659] = "HAHN G., PFLUG H.D. (1980).- Ein neuer Medusenfund aus dem Jungpalaozoikum [???] von Zentral-Iran.- Senckenbergiana lethaea 60 4/6: 449-461.- FC&P 14-1, p. 62, ID=1073^Topic(s): ; Scyphozoa ?; Systematics: Cnidaria; Scyphozoa; Stratigraphy: Paleozoic U; Geography: Iran^A new jellyfish from the Late Precambrian of Central-Iran^A new taxon of fossil medusae, Persimedusites chahgazensis n.g., n.sp., from the Kushk Shale Member of Late Precambrian Esfordi Formation of Chahgaz near Kushk, Province Yazd, Central Iran, is introduced. Its morphology is described and its relationships to other medusoid taxa, both recent and fossil, are discussed. It is concluded that the new taxon probably belongs to the Scyphomedusae Lankester 1881.^1";

- 3663 s[3660] = "MISTIAEN B., GHOLAMALIAN H., GOURVENNEC R., PLUSQUELLEC Y., BIGEY F., BRICE D., FEIST M., FEIST R., GHOBADIPOUR M., KEBRIA-EE M., MILHAU B., NICOLLIN J.-P., ROHART J.-C., VACHARD D., YAZDI M. (2000).- Preliminary data on the Upper Devonian (Frasnian, Famennian) and Permian fauna and flora from Chariseh area (Esfahan Province, Central Iran).- *Annales de la Societe geologique du Nord* 8 (2eme serie): 93-102.- **FC&P 31-2**, p. 29, ID=1532^Topic(s): ; paleontology; Systematics: Porifera Cnidaria; Stratigraphy: Devonian -, Permian; Geography: Iran, Esfahan^Material collected during the fieldtrip of the 4th IGCP 421 meeting (December 1998) in the Palaeozoic (Frasnian, Famennian, Permian) of Kuh-e Kaftar section 2, Chahriseh area, as well as complementary material from Kuh-e Kaftar section 1 are studied. In the concerned area, the Frasnian succession can be divided into two successive units, a lower detrital unit and an upper carbonate unit. Few charophytes come from the lower Frasnian unit (Middle falsiovalis to Late ? hassi Conodont Zone). - Most of the collected material (stromatoporoids, tabulate and rugose corals, bryozoans, brachiopods, ostracods) come from the lower and middle part of the upper carbonate Frasnian unit, especially from two biostromal horizons, apparently located just below the jamieae Conodont Zone. - Some elements (brachiopods, ostracods, trilobites) come from the upper Famennian succession (probable expansa Conodont Zone). - Finally, some of the studied samples (trilobites) are from Permian. The following fossil groups are concerned with by this study: charophytes, carbonate microproblematica, stromatoporoids, tabulate and rugose corals, probable annelids, bryozoans, brachiopods, ostracods, trilobites and ichnofauna. Six of them are concerned with a separate systematic analysis (carbonate microproblematica, stromatoporoida, tabulate and rugose corals, probable annelids, brachiopods). ^1";
- 3664 s[3661] = "FONTAINE H., SEMENOFF-TIAN-CHANSKY P. (1977).- Apercu sur les coraux du Carbonifere de l'Hazarajat et des autres regions de l'Afghanistan.- *Comptes Rendus Sommaires Societe Geologique de France* 4: 235-237.- **FC&P 7-1**, p. 8, ID=0223^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: Afghanistan^R'sultats pr'liminaires d'une 'tude des coraux du Carbonifere de l'Hazarajat: faune assez pauvre, de type eurasiatique, montrant des affinit's avec les faunes d'crites en Chine. Une corr'lation stratigraphique avec les autres r'gions d'Afghanistan est propos'e, sous forme de tableau.^1";
- 3665 s[3662] = "SCHOUPPE A.von (1970).- Lower Carboniferous Corals from Badakhshan (North-East Afghanistan).- In *Italian Expeditions to the Karakorum (K2) and Hindu Kush, Scientific Reports* 4, 2: pp ??.- **FC&P 1-2**, p. 18, ID=4662^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Afghanistan, Badakhshan^1";
- 3666 s[3663] = "FLUGEL H.W. (1975).- Zwei neue Korallen der Sardar-Formation (Karbon) Ost-Irans.- *Mitt. Abt. Geol. Palaeont. Bergb. Landesmus. Joanneum* 35: 45-52.- **FC&P 5-1**, p. 32, ID=5384^Topic(s): new taxa; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Bashk; Geography: Iran E^Out of Lower Baskihrian of the Ozbak-kuh range, East-Iran, the tabulate coral *Donetzites mariae* n.sp. and the rugose coral *Pseudowannerophyllum differens* n.gen. et n.sp. are described.^1";
- 3667 s[3664] = "SOBHY M., EZAKI Y. (2006).- First record of Heterocorallia (Hexaphyllia Stuckenbergl 1904) from the Lower Carboniferous (Vis'an), west-central-Sinai, Egypt.- *Senckenbergiana lethaea* 86, 1: 1-21.- **FC&P 34**, p. 50, ID=1267^Topic(s): variation; Heterocorallia, Hexaphyllia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous Vise; Geography: Egypt, Sinai^The first record of Heterocorallia anywhere in Egypt is in Early Carboniferous (Vis'an) shallow-marine carbonates of the UM Bogma Formation in west-central Sinai. These strata contain the small,

single heterocoral species *Hexaphyllia marginata* (Fleming), for which we statistically document marked intraspecific morphological variations. *Hexaphyllia marginata* has a global geographical distribution longitudinally but occurs only in the tropical and sub-tropical regions within a latitude range of about 30° N to 30° S. This first Egyptian *Hexaphyllia* occurs with a particular association of exclusively nondissepimented, small, solitary rugose corals, brachiopods, bryozoans, and other organisms. Small-sized *Hexaphyllia marginata* might have been resistant palaeoecologically that they survived even in the unfavourable habitat conditions on an open, subtropical platform.¹¹;

- 3668 s[3665] = "KORA M. (1992).- Carboniferous Macrofauna from Wadi Khaboba, West-Central Sinai (Egypt).- *Geologica et Palaeontologica* 26: 13-27.- FC&P 22-1, p. 34, ID=3389^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Egypt, Sinai^Solitary rugose and tabulate corals are described from the Middle Visean carbonates of the Um Bogma Formation. Corallites belonging to *Amplexizaphrentis* Vaughan and *Syringopora* Goldfuss, though most abundant, are not diversified enough to be useful for zonation. *Amplexocarinia* sp. and *Pleurosiphonella* sp. are new for Egypt and may represent an undescribed species. Similarly, a marine fauna including the brachiopod *Orthotetes subglobosus* Girty and a velellid hydrozoan belonging to *Plectodiscus Ruedemann* is newly discovered from the Carboniferous clastics of Wadi Khaboba. This further indicates a nearshore shallow marine environment and a Late Visean-Early Namurian age for the kaolin-producing horizon Abu Thora Formation.¹¹;
- 3669 s[3666] = "FLUGEL H.W. (1991).- Rugosa aus dem Karbon der Ozbak-Kuh-Gruppe Ost-Irans (Teil 1).- *Jahrbuch Geol. B.-A.* 134, 4: 657-688.- FC&P 23-2.1, p. 44, ID=4249^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous ; Geography: Iran E^^1";
- 3670 s[3667] = "FLUGEL H.W. (1994).- Rugosa aus dem Karbon der Ozbak-Kuh-Gruppe Ost-Irans (Teil 2: Korallen des Sadar II-Member, Bashkirium).- *Jahrbuch der Geologischen Bundesanstalt* 137, 4: 599-616. [in German, with English abstract].- FC&P 24-2, p. 82, ID=4565^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Iran E^Description of *Koninckophyllum* cf. *divisum* Lewis 1930, *Heritschioides vepres* n.sp., *H. pseudosolitarius* n.sp., *Paraheritschioides antoni antoni* n.ssp., *P. antoni minor* n.ssp., *P. gracilis* n.sp., *Kleopatrina* (*Porfirievella*) *bashkirica* n.sp., *Opiphyllum?* sp., *Fomichevella uralica* (Dobr. 1936)?, *Palaeosmilia* sp. and *Multithecopora* sp. from the Sadar II Member of the Ozbak-Kuh Mts. Although the generic assembly of the fauna is similar to different faunas of lower Permian terranes of North America, fusulinids and conodonts demonstrate a Lower Bashkirian age.¹¹;
- 3671 s[3668] = "FLUGEL H.W. (1974).- *Minatoa*, eine Rugosengattung aus der Sadar II-Formation (Bashkirium) Ostirans.- *Archiv Lagerstättenforschung in den Ostalpen, Sonderband 2*: 95-107.- FC&P 5-1, p. 28, ID=5349^Topic(s): ; Rugosa, *Minatoa*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Bashk; Geography: Iran E^[describes and illustrates one new genus and 3 new species referred to *Yatsengiidae*]¹¹;
- 3672 s[3669] = "NIIKAWA I. (2006).- Lower Carboniferous coral biostratigraphy and discovery of tabulate coral *Vaughania* in Shahmirzad, north Iran.- *Earth Science [Chikyu Kagaku]* 60, 2: 85-92.- FC&P 34, p. 47, ID=1259^Topic(s): stratigraphy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous L; Geography: Iran^Paleozoic stratigraphy of the Shahmirzad area in the east Elburz Mountains, north Iran is described. The Carboniferous Mobarak Formation consisting of banded limestone and shale is divided into ten lithological units and

correlated with the Tournaisian and Lower Visean. A tabulate coral *Vaughania* sp. occurs from the lowest unit (Unit A) of the formation, which is correlated with the lowermost Carboniferous biozone. Geological ages of *Kueichouphyllum* and *Keyserlingophyllum* that were formerly described as the Upper Visean rugose corals in this area or north Iran are revised to the Upper Tournaisian.¹";

- 3673 s[3670] = "OMARA S. (1971).- Early Carboniferous Tabulate corals from Urn Bogma Area Southwestern Sinai, Egypt.- *Rivista Italiana di Paleontologia e Stratigrafia* 77, 2: 141-154.- FC&P 12-2, p. 39, ID=6226Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous L; Geography: Egypt, SinaiEarly Carboniferous tabulate corals collected from the Urn Bogma area, southwestern Sinai, Egypt, comprise two genera embracing two species, which belong to Syringoporidae and Pleurodictyidae. Critical study of the internal structures has revealed that the syringoporoid is a new species namely *Syringopora intraspinosa* sp.n., whereas the pleurodictyid identified previously as *Favosites michelini* is in reality *Michelinia egertoni* (Edwards & Haime). [original abstract]¹";
- 3674 s[3671] = "PILLE L., VACHARD D., ARGYRIADIS I., ARETZ M. (2010).- Revision of the late Visean - Serpukhovian (Mississippian) calcareous algae, foraminifers and microproblematica from Balia-Maden (NW Turkey).- *Geobios* 43, 5: 531-546.- FC&P 36, p. 131, ID=6588Topic(s): taxonomic revision; algae, forams, microproblematica; Systematics: algae; Stratigraphy: Carboniferous Vise - Serp; Geography: Turkey NWThe taxonomic revision of the carbonate microbiota of the limestone lenses intercalated into the Carboniferous siliciclastic series of Balia-Maden (Turkey) shows that most lenses are early or middle Brigantian in age (latest Visean), only a single lens being of younger age (late Serpukhovian). Calcareous microbiota are abundant in the Balia-Maden lenses carbonates. Microfacies analysis shows the dominance of shallow water environments. The Brigantian assemblage is accurately illustrated. The new foraminiferal taxon *Cribrospira baliamadani* nov. sp. is morphologically similar to type-material of *Cribrospira panderi* von Moller, but has a porous wall with wider pores, almost keriothecal. *C. baliamadani* nov. sp. corresponds to the misinterpreted *Bradyina* and *Janischewskina* of the previous literature on Balia-Maden lenses. These limestones show a great diversity of algaesponges (carbonate microproblematica). Among them, (1) small, atypical *Fasciella* previously confused with *Eosigmoilina*; (2) an abundant form described for the first time, *Frustulata reticulata* nov. sp.; and (3) typical *Falsocalcifolium punctatum* (Maslov), important for the biostratigraphic implications, are also mentioned. The single Serpukhovian lens consists of a grainstone and contains the age-sensitive alga *Archaeolithophyllum johnsoni* Racz, and the foraminifers *Monotaxinoides gracilis* and *Janischewskina* sp. [original abstract]¹";
- 3675 s[3672] = "KORA M., JUX U. (1986).- On the early Carboniferous macrofauna from the Um Bogma Formation, Sinai.- *Neues Jahrbuch für Geologie und Palaontologie Monatshefte* 1986, 2: 95-98.- FC&P 15-1.2, p. 31, ID=0810Topic(s): ; paleontology; Systematics: ; Stratigraphy: Carboniferous L; Geography: Egypt, SinaiThe marine macrofauna from the Um Bogma Formation (Egypt) is mainly composed of small corals, brachiopods, some bryozoans and a few molluscs. An early Carboniferous age of the fossiliferous carbonate deposits is confirmed and substantiated by either revised or additional material. Littoral marine deposits of both similar age and related biofacies occur in Libya, Morocco and to some extent even in western Europe, indicating benthonic communities which flourished on an agitated Tethyan shelf in moderately deep and rather warm water.¹";
- 3676 s[3673] = "SOBHY M., EZAKI Y. (2005).- Lithostratigraphy and microfacies of the Lower Carboniferous (Visean) Um Bogma Formation in

- Gabal Nukhul, west-central Sinai, Egypt.- Journal of Geosciences, Osaka City University 48, 8: 123-142.<http://scielinks.jp/j-east/article/200517/000020051705A0665078.php>.- **FC#038;P 34**, p. 104, ID=1368**Topic(s):** geology, stratigraphy; stratigraphy, facies; **Systematics:** **Stratigraphy:** Carboniferous Vise; **Geography:** Egypt, Sinai^The Lower Carboniferous (Visean) succession of the Um Bogma Formation at Gabal Nukhul, west-central Sinai is subdivided into lower, middle and upper members. Integrating field observations and microfacies analysis led to the recognition of six microfacies as follows: wackestone/packstone, packstone/grainstone, grainstone, bafflestone, calcareous quartz arenite and paleokarst breccia. The paleokarst breccia is the first record to indicate an Early Carboniferous karstification in the Gabal Nukhul area. During the Early Carboniferous (Visean) marine transgression, the lower member of Um Bogma Formation was deposited in intertidal to shallow subtidal environments. A marked drop in sea level and/or syndimentary block faulting (uplifting) led to subaerial exposure of the lower member and followed by karstification process (paleokarst surface). The middle member was deposited in an open platform environment followed by shallow subtidal facies of the upper member. The uniform stacking pattern of the middle and upper member's facies implies a characteristically regressive trend throughout the studied area. The abundance of oolitic deposits together with chlorozoan assemblage within the Um Bogma Formation indicates that the Lower Carboniferous sediments of Sinai were deposited in the lower subtropics region.^1";
- 3677 s[3674] = "KORA M. (1989).- Lower Carboniferous (Visean) fauna from Wadi Budra, west-central Sinai, Egypt.- Neues Jahrbuch fuer Geologie und Palaeontologie Monatshefte 9: 523-538.- **FC#038;P 20-2**, p. 57, ID=2934**Topic(s):** paleontology; **Systematics:** **Stratigraphy:** Carboniferous Vise; **Geography:** Egypt, Sinai^1";
- 3678 s[3675] = "KORA M. (1995).- Carboniferous macrofauna from Sinai, Egypt: biostratigraphy and palaeogeography.- Journal of African Earth Sciences 20, 1: 37-51.- **FC#038;P 24-1**, p. 57, ID=4464**Topic(s):** biostratigraphy, geography; paleontology; **Systematics:** **Stratigraphy:** Carboniferous Vise; **Geography:** Egypt, Sinai^The study of Carboniferous successions in the Um Bogma and Abu Durba areas of west-central Sinai yielded 70 species of brachiopods, corals, bryozoans, molluscs and trace fossils, 10 which are new to Sinai. The distribution of these fossils suggests the presence of three macrofaunal biostratigraphic units within distinctive lithofacies: a Middle-early Late Visean coral/brachiopod assemblage in the Um Bogma formation, a Serpukhovian-Bashkirian brachiopod/trace fossil assemblage in the Abu Thora Formation and an Early Moscovian brachiopod/bryozoan assemblage in the Abu Durba Formation. The fossil Associations indicate that the Carboniferous sequence of Sinai was deposited in a subtropical epicontinental sea inferred to have covered a greater area in northern Africa. The palaeoecological conditions and the palaeobiogeographic relations of this macrofauna to the Carboniferous Palaeothetys Realm are discussed. [the following corals of the Um Bogma formation are figured (pl. 4): Clisiophyllum garwoodi (Salee 1913), Amplexizaphrentis enniskilleni (Edwards & Haime 1851), A. palmatus (Easton 1944) and Sochkineophyllum sp.]^1";
- 3679 s[3676] = "FLUGEL H.W. (1995).- Biostratigraphie und Korallenfaunen des Jungpalaeozoikums Ost-Irans.- Geol. Palaeont. Mitt. Innsbruck 20: 35-49.- **FC#038;P 25-1**, p. 33, ID=3013**Topic(s):** biostratigraphy; stratigraphy; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Carboniferous, Permian; **Geography:** Iran E^Discussion of the biostratigraphy of the Upper Paleozoic Formations of East Iran and description of Pseudozaphrentoides winsnesi n.sp. from the Saludu Formation of the Ozbak-Kuh Mts. Brachiopods and fusulinids from the same Formation are of Lower Artinskian age. This

- age demonstrates the existence of a sedimentation gap between the underlying Sadar II Member of Lower Bashkirian age and the Saludu Formation. The lower part of the Lower Jamal Formation of the Shotori Range has probably the same age as the Saludu Formation.¹¹;
- 3680 s[3677] = "FLUGEL H.W. (1993).- Bothrophyllum Trautschold (Rugosa) aus dem Jungpaläozoikum von Nordiran und Bemerkungen zur Septenabspaltung bei Rugosa.- Geol. Palaeont. Mitt. Innsbruck 19: 49-70.- FC#038;P 23-1.1, p. 63, ID=4137Topic(s): septal splitting; Rugosa, Bothrophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: Iran EDescription of Bothrophyllum baculonodosum n.sp. from the Visean and B. asseretoi n.sp. from the Sakmarian (Lower Permian) of the Central Elburz. In spite of the different age both species are morphologically very similar and show the development of new septa by the modus ofSeptenabspaltung; described by Weyer 1972.¹¹;
- 3681 s[3678] = "PYZHYANOV I.V. (1980).- Rugozy verkhnego paleozoya Afganistana i Pamira (stratigraficheskoe-paleogeograficheskii obzor). [upper paleozoic rugosans of Afghanistan and Pamirs (stratigraphic-paleogeographic review; in Russian).- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: 141-148.- FC#038;P 9-1, p. 42, ID=5824Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: Afghanistan, Pamirs¹¹;
- 3682 s[3679] = "OEKENTORP K., MONTENAT C., FONTAINE H. (1978).- Eine kleine Korallenfauna aus dem unteren Oberperm von Saiq, Oman (Arabische Halbinsel).- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 155, 3: 374-397.- FC#038;P 7-1, p. 24, ID=0184Topic(s): ; Anthozoa faunule; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian U; Geography: OmanA fauna from the middle Murghabian contains Rugosa waagenophyllidae: Pseudohungia lapparenti n.sp., waagenophyllum (W.) pulchrum Hamada 1962, Iranophyllum (I.) tunicatum Igo 1956, and Durhaminidae: Heritschioides columbicum (Smith 1935) and Tabulata, Syringoporidae: Multithecopora omaniensis n.sp.). Praewentzelella of Matrah, Oman, described in a contribution by H. Fontaine, corresponds to P. honjoi Minato & Kato. Biogeographic relations exist with the waagenophyllidae-association mentioned by Minato & Kato, only Heritschioides is exceptional. Multithecopora is characterized by diameters ranging from 2.1 to 2.5 mm, tabulae are frequent.¹¹;
- 3683 s[3680] = "WEIDLICH O. (1999).- Taxonomy and reefbuilding potential of Middle/Late Permian Rugosa and Tabulata in platform and reef environments of the Oman Mountains.- N Jb. Geol. Palaont. Abh. 211/1/2: 113-131.- FC#038;P 28-1, p. 72, ID=4010Topic(s): taxonomy, reefs; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian M U; Geography: OmanMtsRugosa and Tabulata represented by about 30 taxa played a specific role in Late Permian limestones of the Oman Mountains. Growth form, colony size, skeletonization, abundance of colonies, and stabilization by biotic or inorganic processes triggered the reefbuilding potential of the corals. Solitary Rugosa and Tabulata colonized the shelf as dwellers and had no reefbuilding potential. In reefs, waagenophyllum and similar taxa developed a limited reefbuilding potential; Praewentzelella and compound taxa contributed as members of the constructor guild significantly to reef accretion, while platform representatives of Praewentzelella and waagenophyllum were only dwellers. The extraordinary skeletonization of Praewentzelella gives evidence of a symbiosis by algae.¹¹;
- 3684 s[3681] = "OEKENTORP K., KAEVER M. (1970).- Permische Korallen aus SE-Afghanistan.- Senckenbergiana lethaea 51, 4: 277-309.- FC#038;P 1-2, p. 16, ID=4656Topic(s): taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Afghanistan SEAus permischen Schichten SE-Afghanistans werden die Pterocorallia waagenophyllum

- (waagenophyllum) virgalense (Waagen & Wentzel 1886) und waagenophyllum (waagenophyllum) pulchrum Hamada 1962 sowie die Tabulata Multithecopora dendroidea (Yoh 1952) und Multithecopora syrinx (Etheridge 1900) beschrieben. Es wird speziell auf die Synonymie-Verhaeltnisse des Genus Multithecopora eingegangen.^1";
- 3685 s[3682] = "GRAF W. (1975).- Eine permische Korallenfauna aus dem Iran.- Mitt. Abt. Geol. Palaeont. Bergb. Landesmus. Joanneum 35: 75-81.- FC&P 5-1, p. 29, ID=5351^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian M U; Geography: Iran^[stratigraphic and geographic distribution of Middle and Upper Permian coral faunas]^1";
- 3686 s[3683] = "HOLZER H.-L. (1976).- Morphologische Studien on Polythecalis denticulatus (Huang, 1932) (Zoantharia, Rugosa) aus dem iranischen Mittelperm (Elburz-Gebirge, Ruteh-Kalk).- Geologica et Palaeontologica 10: 161-180.- FC&P 6-1, p. 25, ID=0052^Topic(s): ; Rugosa, Polythecalis; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: Iran, Elburz^Redefines genus and describes skeletal variation in one species.^1";
- 3687 s[3684] = "EZAKI Y. (1989).- Morphological and phylogenetic characteristics of Late Permian rugose corals in Iran.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 275-281.- FC&P 19-1.1, p. 14, ID=2545^Topic(s): systematics; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Iran^^1";
- 3688 s[3685] = "BLENDINGER W., FLUGEL W. (1990).- Permische Stockkorallen aus dem Hawasina-Becken, Oman.- Facies 22: 139-146.- FC&P 19-1.1, p. 46, ID=2653^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian Neoschwagerina Zone; Geography: Oman^Cerioid and thamnasterioid rugose corals are described from reworked boulders of the Hamrat Duru Group of the Murghabian (Neoschwagerina-zone) of the Hawasina basin, Oman. The faunula consists of Yokoyamella (Maoriphyllum) christofi n.sp., wentzelella (Wentzelella) annae n.sp., Paraipciiphyllum sp. and Omaniphyllum hawasinum n.g., n.sp. Omaniphyllum is provisionally included within the family Petalaxidae Fomichev. Diagnostic criteria of the new genus are a thamnasterioid corallum, more than two orders of septa and a septal, bar-like columella. The fauna is part of the waagenophyllid biogeographic province of the Paleotethys. It characterizes probably the southern shelf of the Paleotethys north of Gondwana.^1";
- 3689 s[3686] = "FLUGEL H.W. (1990).- Korallen aus dem Mittel-Perm Irans (Aufsammlung O. Thiele).- Jb. Geol. Bundes-Anstalt 133, 4: 523-536. [in German, with English summary].- FC&P 20-1.1, p. 53, ID=2820^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian M; Geography: Iran^From the Neoschwagerina zone (Middle-Permian) of Central Iran some corals of the waagenophyllum-province are described. Two genera (Parairanophylloides, Mictocystoides), four species and one subspecies are new (Table 1).^1";
- 3690 s[3687] = "WEIDLICH O. (1996).- Bioerosion in Late Permian Rugosa from Reefal Blocks (Hawasina Complex, Oman Mountains): Implications for Reef Degradation.- Facies 35: 133-142.- FC&P 25-2, p. 46, ID=3134^Topic(s): bioerosion; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Oman, Oman Mts^Rugose corals are known from allochthonous Late Permian reefal blocks of the Al Jil and Ba'id Formation (Hawasina Complex), Oman Mountains. In contrast to many Late Permian Rugosa found elsewhere in the Tethys, they occurred in sponge reefs and contributed to reef construction. The waagenophyllid warm water coral fauna is moderately diverse comprising cerioid, thamnasterioid, and fasciculate taxa. In contrast to sponges, chaetetids, and low-growing reefbuilders,

the corals secreted diagenetically stable, most probably Mg-calcitic skeletons. Borings in coral skeletons are consequently well preserved providing important data for the interpretation of reef destructive processes. Thin-section analysis revealed three taxa of infaunal borers including *Entobia* Bronn 1837, uncertain thallophyte borings, and borings of unknown bioeroders. Macroborers were more important than microborers, because of the dominance of clionid sponges. Good evidence exists also for the occurrence of two types of undetermined grazers which destroyed the coral surfaces. The amount and distribution of bioerosion is variable among different coral taxa. The fasciculate coral *Praewentzelella regulare* Fluegel 1995 was the favorite substrate. Up to 33% of the calices were bored. Dendroid and compound corals were bored subordinately. Bioerosion of these colonies does not exceed 2%. There is good evidence for substrate preference amongst the borers. Major controlling factors affecting borer distribution are believed to be variations of skeletal density and gross morphology. The borer assemblage could not limit reef accretion significantly. Factors controlling boring activity might have been quality of substrate, sedimentation rate, rapid incrustation of substrates, and competition for food with reef constructors including sponges, chaetetids, and rugose corals.¹¹;

- 3691 s[3688] = "EZAKI Y. (1993).- The last representatives of Rugosa in Abadeh and Julfa, Iran: survival and extinction.- Courier Forschungsinstitut Senckenberg 164: 75-080. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 12, ID=3440Topic(s): extinctions P/T; Rugosa, Pentaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: IranSolitary rugose corals (plerophyllids) are known to have flourished in the Upper Permian in the Abadeh and Julfa regions of Iran. They are phylogenetically one of the last representatives of Rugosa. Among them, of special interest are the two small-sized and simply constructed species (*Pentaphyllum brevisseptum* and *P. minimum*). Morphological changes during ontogeny, intraspecific variability, and their comparisons with those of other species, suggest that both species are phylogenetically related to *P. leptoconicum* from which they were independently derived. During the Late Permian, both *Pentaphyllum brevisseptum* and *P. minimum* followed an adaptive strategy: paedomorphosis, in order to survive under unfavourable conditions. The heterochronic change and the resultant variability closely interacted with palaeoecological conditions. Each species showed different morphological modifications within the inherited phylogenetic constraint characteristic of Rugosa. No further improvements finally appeared to combine "adaptation" to the prevailing, unfavourable environments. The latest Permian rugose corals failed to break through the phylogenetic constraint, resulting in their extinction.^11;
- 3692 s[3689] = "FLUGEL H.W. (1993).- Zur Palaeontologie des anatoisches Palaeozoikum. VIII. *Arctophyllum Fedorowski* 1975 (Rugosa) aus dem Unter-Perm (Sakmara-Stufe) von Nif, SW-Anatolien.- *Senckenbergiana lethaea* 73, 1: 25-30.- FC&P 22-2, p. 80, ID=3502Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian Sak; Geography: Turkey, Anatolia SWA new rugose coral species, *Arctophyllum permicum*, from the Lower Permian Sakmara Stage of Nif in SW Anatolia is described and its taxonomic and palaeobiogeographical implications are discussed.^11;
- 3693 s[3690] = "EZAKI Y. (1993).- Sequential disappearance of Permian Rugosa in Iran and Transcaucasus, West Tethys.- *Bulletin Geol. Surv. Japan* 44, 7: 447-453.- FC&P 23-1.1, p. 63, ID=4136Topic(s): extinctions P/T, gradual; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Iran, TranscaucasusAt the end of the Permian, many Palaeozoic organisms, including the Rugosa, became extinct. The marine Upper Permian yields

relict groups within Rugosa. The Abadeh and Julfa regions, Iran and Transcaucasus in the West Tethys are the important case areas for elucidating the end Permian extinction patterns of Rugosa. Permian Rugosa in those areas showed distinct disappearance patterns morphologically and taxonomically. The disappearance of Yatsengia and Wentzelellinae was succeeded by that of Waagenophyllinae, and Plerophyllidae were last to disappear. Each event boundary is marked by changes in sedimentary conditions and is associated with prominent biofacies changes in fusulinids, smaller foraminifers and so on, some of which were global and coeval. The disappearance pattern of corals in Iran and the Transcaucasus was sequential in abundance and composition, owing to successive selection caused by progressively more adverse, local habitat changes under pelagic to littoral [conditions]. However, similar faunal successions appeared in different places and synchronous geological events, such as sea-level changes and volcanism, were prevailing over areas. Not only single and/or local environmental conditions, but global factors having multiple interactions could produce such characteristic faunal successions.^1";

3694 s[3691] = "FLUGEL H.W. (1971).- Upper Permian Corals from Julfa.- Geol. Surv. of Iran Report 19: 109-139.- FC&P 1-2, p. 13, ID=4639^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Iran, Julfa^Study of the Late Permian coral fauna from Julfa (Iran) area indicates the presence of three new species of Plerophyllum (Ufimia) Stuckenbergl, two species of Cryptophyllum (Cryptophyllum) Carruthers, Pleramphilex leptonicus (Abich), Amphilexocarinia sp. and Barytichisma sp. ^1";

3695 s[3692] = "DILLMANN O.O. (1984).- Untersuchungen über Rugosa aus dem Perm Afghanistans.- FC&P 13, 2: 30.- FC&P 13-2, p. 30, ID=6371^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Afghanistan^Olaf Otto Dillmann arbeitet im Rahmen einer Dissertation an der Untersuchung permischer Rugosa aus Afghanistan. Das zu untersuchende Material stammt aus dem Mittelperm Ost-Afghanistans. Es handelt sich um eine Aufsammlung von Prof. G. Mennesier, Amiens. * Im folgenden soll ein kurzer Zwischenbericht über den Stand der bisherigen Arbeit gegeben werden. Die Untersuchung beschränkt sich auf kolonial auftretende Rugosa. Dabei handelt es sich ausnahmslos um Formen aus der Familie der Waagenophyllidae. So konnten bislang mit Sicherheit folgende Arten festgestellt werden: (1) Unterfamilie Wentzelellinae - Lonsdaleiastraea typica Gerth, L. cf. vinassai Gerth, Wentzelella (Wentzelella) wynnei (Waagen & Wentzel), Wentzelella (Szechuanophyllum) szechuanensis Huang, W. (S.) kitakamiensis Yabe & Minato, Wentzelelloides (Battambangina) frechi (Volz), W. (Multimurinus) n.sp., Polythecalis chinensis (Girty); Arten der Gattung Wentzelellophyllum Hudson sind ebenfalls vertreten. Ihre artliche Zuordnung steht jedoch noch aus. * Bemerkenswert aber ist, dass die Gattung Wentzelelloides Yabe & Minato ausserhalb Ost- und Südostasiens erstmals nachgewiesen wurde. Auffallend ist auch der hohe Anteil dieser in der Literatur nur wenig beschriebenen Gattung in der zu bearbeitenden Fauna. (2) Unterfamilie Waagenophyllinae - Ipciphyllum flexuosum (Huang), Paraipiphyllum n.sp., Yokoyamaella (Yokoyamaella) tertioseptata (Yokoyama), ? Yokoyamaella (Maoriphyllum) sp. [preliminary note]^1";

3696 s[3693] = "EZAKI Y. (1991).- Permian corals from Abadeh and Julfa, Iran, West Tethys.- J. Fac. Sci. Hokkaido Univ. 23, 1: 53-146.- FC&P 20-2, p. 50, ID=2920^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Permian M U; Geography: Iran^This paper mainly concerns the systematic palaeontology of some Middle to Upper Permian corals from the Abadeh and Julfa regions, Iran. The fauna consists of 35 species of 15 genera belonging to eight families. Two different kinds of faunas are clearly to distinguish. One is from the

Middle Permian and is characterised by such typically Tethyan elements as waagenophyilids and by several species of Ufimia and micheliniids. It is followed by an Upper Permian fauna, terminal phylogenetic representatives of the Rugosa, composed mostly of solitary corals (Pentaphyllum). The Permian fauna corresponds well to that of the Transcaucasus, USSR, reported by Iljina (1962, 1965a). Many of the Middle Permian corals are known from South China, whereas Upper Permian corals indicate high endemism. Each species of Pentaphyllum shows a wide range of morphological variation, phylogenetically irrespective of Scleractinia. Inter- and intraspecific variability as well as ontogenetic changes are especially documented to clarify the distinctness of each species. Tabulata mentioned are: a species of Sinopora (*S. asiatica*) and some species of the genus Protomichelinia (*P. microstoma*, *P. favositoides*, *P. laosensis*, *P. allata*, and *P. sp.*).¹;

3697 s[3694] = "FLUGEL H.W. (1972).- Die palaeozoischen Korallenfaunen Ost-Irans 2. Rugosa und Tabulata der Jamal-Formation (Darwasian?, Perm).- Jahrb. Geol. B.-A. 115: 49-102.- FC#038;P 2-1, p. 16, ID=4716^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Permian Darwasian ?; Geography: Iran E^The coral-fauna of the Jamal-formation of Eastern Iran can be subdivided in a "Cyathaxonia"-fauna and a "waagenophyllum"-fauna. The first mentioned faunal-type occurs in the lower Jamal-Formation, the last type in the upper Jamal-Formation (faunal-list Table 1). The age of the Cyathaxonia-fauna is probably the Pseudofusulina-or the lower Parafusulina-Zone, the age of the waagenophyllum-fauna is the Parafusulina-Zone and perhaps the Neoschwagerina-zone. The environment of the Cyathaxonia fauna was the deeper part of a shallow water, probably 50 or 60m. under the sea level, whereas the waagenophyllum-fauna indicates a high wave energy environment of a litoral zone.¹;

3698 s[3695] = "WEIDLICH O., SENOWBARI-DARYAN B. (1996).- Late Permian "sphinctozoans" from reefal blocks of the Ba'id area, Oman Mountains.- Journal of paleontology 70, 1: 27-46.- FC#038;P 25-2, p. 57, ID=3157^Topic(s): taxonomy, biogeography; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Permian U; Geography: Oman^Late Permian reefal blocks exposed in the Ba'id area of the Eastern Oman Mountains yield a sphinctozoan assemblage that has not been studied previously. The sphinctozoan fauna described here is the first report of such an assemblage from the Arabian Peninsula. Approximately 70 samples were studied with respect to systematic paleontology, as well as frequency of taxa based on presence / absence lists. The Sphinctozoans include 14 genera and 25 species. One genus (*Rahbahthalamia*) and five species (*Amblysiphonella omanica*, *salzburgia? irregularis*, *welteria? hawasinensis*, *Thaumastocoelia? irregularis*, and *Girtyocoelia gracilis*) are described as new. *Amblysiphonella* Steinmann (1882), *Colospongia* Laube (1865), and *Sollasia* Steinmann (1882) have the highest species diversity. On a generic level, *sollasia*, *Amblysiphonella*, and *Parauvanella* Senowbari-Daryan and Di Stefano (1988) occur most frequently in the investigated samples. The described fauna exhibits close relationships to sphinctozoan faunas known from the Middle and Late Permian of China and Tunisia.¹;

3699 s[3696] = "WEIDLICH O., BERNECKER M., FLUGEL E. (1993).- Combined Quantitative Analyses and Microfacies Studies of Andes Reefs: An Integrated Approach to Upper Permian and Upper Triassic Reef Carbonates (Sultanate of Oman).- Facies 28: 115-144.- FC#038;P 22-1, p. 54, ID=3430^Topic(s): reef complexes, geomorphology, microfacies; reef complexes; Systematics: ; Stratigraphy: Permian Triassic; Geography: Oman^The Internal architecture of Upper Permian calcisponge reefs, Upper Triassic coral thickets, and Upper Triassic coral reef communities of the Oman Mountains have been investigated. In order to gain comparable data sets, investigations

were carried out at different scales comprising quantitative data from outcrops and descriptions from thin-section. Methods of quantitative outcrop investigations were modified with reference to standard investigations techniques used in the study of communities of modern reefs. Data evaluation comprises mapping of reef fabric in natural scale on plastic sheets in the field. Data calculation was carried out utilizing the digitized image analysis system Vidas. Measurement parameter are the total detrital framework coverage, coverage of reef builder taxa, mean diameter of taxa, and mean distance. In addition, measured plastic sheets were printed for paleoecological interpretation. Thin-section analysis reveal microfacies types, sedimentological criteria and taxonomic inventory of reef organisms. Based on quantitative field data five Upper Permian and four Upper Triassic communities were differentiated. Late Permian communities are represented by a (1) Low-diversity sphinctozoan community, (2) Radiotrabeulopora Archaeolithoporella community, (3) Cerioid coral community, (4) Solitary coral community, and (5) waagenophyllid coral community. Upper Triassic communities comprise (1) Diverse coral community, (2) coral Spongiostromata community, (3) Solenporacean dendroid coral community, and (4) Crinoid community. The synthesis of both quantitative field data (plot technique with quadrats as sampling units) and the study of thin sections (microfacies analysis, taxonomy) is believed to result in data sets which could be used in comparative reef research with a higher degree of reliability than up to now.¹¹;

3700 s[3697] = "BERNECKER M., WEIDLICH O. (1994).- Attempted Reconstruction of Permian and Triassic Skeletonization from Reefbuilders (Oman, Turkey): Quantitative Assessment with Digital Image Analysis.- Abhandlungen der Geologischen Bundesanstalt 50: 31-56.- FC&P 23-1.1, p. 59, ID=4124Topic(s): reef builders, skeletonization; reef builders; Systematics: ; Stratigraphy: Permian Triassic; Geography: Oman, Turkey^Upper Permian and Upper Triassic reefbuilders from different tectonic units of the Oman Mountains and Turkey were analyzed quantitatively with respect to skeletonization (skeleton in area percent) and skeletal mass (skeleton in g/cm³). Data were derived from thin-sections using the digital image analysis system 'Vidas'. The quantitative data were combined with taxonomy, description of gross morphology and microfacies analysis in order to understand the influences of diagenesis in the different sizes and orientations of thin-sections. The investigated skeletons exhibit a wide range of preservation, ranging from unaltered to recrystallized with relic structures. Reefbuilders studied were "sphinctozoans"; "inozoans"; "chaetetids"; rugose corals, scleractinians, and hydrozoans. The measured parameters vary considerably for higher taxa (e.g., skeletonization of sphinctozoan sponges is 21-54%) as well as for species (e.g., the skeletonization of the sphinctozoan Alpinothalamia bavarica is 29-51%). The variation is regarded to be triggered by three main factors: a) differences in morphotypes, b) intraspecific variability, and c) variation of skeletal elements within the colony. well-skeletonized and weakly skeletonized higher taxa were observed in the mean skeletonization and the mean skeletal mass. These data help refine the guild concept proposed by Fagerstrom (1987). The quantitative assessment of the skeletonization and skeletal mass may provide data for the discussion about paleoproductivity of reefbuilders and the sedimentary net budget of ancient reefs.¹¹;

3701 s[3698] = "WEIDLICH O., BERNECKER M. (2003).- Supersequence and composite sequence carbonate platform growth: Permian and Triassic outcrop data of the Arabian platform and Neo-Tethys.- Sedimentary Geology 158, 1-2: 87-116.- FC&P 32-2, p. 72, ID=7161Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Permian Triassic; Geography: Arabian Platform, Neotethys^Correlation of maximum flooding surfaces with published data suggests that supersequences P1, P2, and Tr4 can be

traced across the Arabian platform into the Neo-Tethys basins, while supersequences P3, P4, and Tr1-Tr3 resulted from local tectonic events at the margin of the Arabian platform (Hulw half-graben). The presented sea level curve corresponds therefore to the Tethyan sea level curve during the Cisuralian and Guadalupian, but differs significantly during the Lopingian, as a result of the dispersal of Pangea. The Middle and Upper Triassic sea level curve from Oman is again in good correlation with published data. The Permian and Triassic sequence architecture on the Arabian plate and adjacent Neo-Tethys was predominantly triggered by the global warming after the Permian-Carboniferous glaciation, the initial rifting of Neo-Tethys, and subordinately by eustatic sea level changes. [end-fragment of extensive abstract]^1";

- 3702 s[3699] = "CREMER H. (1995).- Spicule pseudomorphs in Upper Triassic (Norian) chaetetid sponges from the Western Taurids (Antalya-Region, SW Turkey).- *Geobios* 28, 2: 163-174.- FC&P 24-2, p. 91, ID=4596^Topic(s): spicules; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Triassic Nor; Geography: Turkey SW^Four spicule-bearing chaetetid sponges are described from Upper Triassic (Norian) reef carbonates of the western Taurids (Antalya-Region, SW Turkey): *Atrochaetetes alakirensis* Cuif & Fisher, *Blastochaetetes dolomiticus* Bezarini & Braga, *Ptychochaetetes* sp. and ?*Bauneia* sp. Spicules are preserved as calcitic pseudomorphs. They are either short or long and slender, corresponding to typical styles; oxes are rarely present in *Atrochaetetes alakirensis*. The styles are mainly embedded in the secondary rigid skeleton, but their rounded ends appear to be attached to the primary wall. In *Blastochaetetes dolomiticus* and ?*Bauneia* sp. styles are also embedded in the primary wall. A comparison of these spicule-skeletons with those of other chaetetids, especially Paleozoic species, confirms the polyphyletic origin of the Chaetetida.^1";
- 3703 s[3700] = "CUIF J.-P., FISCHER J.C., MARCOUX J. (1972).- Découverte d'une faune de Chaetetida (Cnidaria, Hydrozoa) dans le Trias supérieur de Turquie.- *C. R. Acad. Sci. Paris* 275, sér. D: 185-188.- FC&P 1-2, p. 24, ID=4696^Topic(s): ; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Triassic U; Geography: Turkey^Jusqu'alors inconnu entre le Permien et le Lias, le phylum Chaetetida se trouve pour la première fois identifié avec certitude dans un niveau triasique. L'excellente conservation du matériel, fossilisé en aragonite originelle, se révèle très favorable pour l'étude histologique et géochimique. Du point de vue biosédimentaire, les conditions de gisement rappellent très précisément celles des "calcaires de Cipit" des Dolomites italiennes.^1";
- 3704 s[3701] = "CUIF J.-P., FISCHER J.C. (1974).- Etude systématique sur les Chaetetidae du Trias de Turquie.- *Annales de Paléontologie, Invertébrés*, Paris 14, 1-5: 320-324.- FC&P 3-2, p. 44, ID=4972^Topic(s): taxonomy; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Triassic; Geography: Turkey^Les gisements carnien de l'Alakir Çay (Taurus Lycien) ont livré une faune entièrement nouvelle de Chaetetida, remarquable par sa conservation et se répartissant en 2 genres: *Atrochaetetes* nov. gen., représenté par 3 espèces et qui présente une structure jusqu'alors inconnue chez cet ordre d'organismes et *Blastochaetetes* Dietrich 1919, également représenté par 3 espèces nouvelles. Les auteurs tirent de cette étude un ensemble de conclusions sur les liens existant entre les Chaetetida du Paléozoïque et ceux précédemment connus à partir du Lias supérieur.^1";
- 3705 s[3702] = "MELNIKOVA G.K. (1990).- Monstroseris, a new Upper Triassic scleractinian coral from Iran.- *Acta Palaeontologica Polonica* 34, 1: 71-74.- FC&P 23-1.1, p. 40, ID=4115^Topic(s): ; Scleractinia, Monstroseris; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Iran^^1";
- 3706 s[3703] = "CUIF J.-P. (1975).- Recherches sur les Madréporaires du

Trias II. *Astraeoidea*. Révision des genres *Montlivaltia* et *Thecosmilia*. Etude de quelques types structuraux du Trias de Turquie.- Bulletin du Museum national d'histoire naturelle 275: 293-400.- **FC**;P 4-2

FC;P 4-2, p. 51, ID=5234^**Topic(s)**: **systematics**; **Scleractinia**, **Astraeoidea**; **Systematics**: **Cnidaria**; **Scleractinia**; **Stratigraphy**: **Triassic**; **Geography**: **Turkey**^**étude des structures septales des principales espèces triasiques classées jusqu'à présent dans les genres Montlivaltia et Thecosmilia montre que ces deux genres, dont les définitions microstructurales sont maintenant mieux établies, ne sont pas représentés dans la faune de cette époque. En revanche, la comparaison des types microstructuraux mis en évidence au cours de cette recherche, aussi bien chez les formes alpines que chez les spécimens provenant du Trias de Turquie, fait apparaître des regroupements très significatifs quant aux rapports des faunes de ces deux régions.**

3707 **s**[3704] = "BERNECKER M. (2007).- Facies architecture of an isolated carbonate platform in the Hawasina Basin: The Late Triassic Jebel Kawr of Oman.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 252, 1-2: 270-280.- **FC**;P 35, p. 93, ID=2414^**Topic(s)**: **carbonates**; **carbonates**; **Systematics**: **Stratigraphy**: **Triassic U**; **Geography**: **Oman**^In the oceanic realm of the southern Tethys, carbonate production of isolated platforms ceased after the end-Permian mass extinction and did not recover until the Late Triassic. The Misfah Formation (MF) at Jebel Kawr in the Oman Mountains is interpreted as a relic of such an isolated Late Triassic platform of the Hawasina Ocean, a part of the Neo-Tethys. Correlation of three sections at Jebel Kawr points to a sequence attached to Arabian platform. The shallow-water carbonates of Jebel Kawr comprise a platform rim reef facies and bedded inner-platform facies characterized by stacked high-frequency cycles with subtidal to intertidal carbonate sequences. The depositional profile of this Late Triassic isolated platform evolved during Carnian and Norian time from a low-relief phase with volcanoclastic interruptions, followed by a carbonate bank stage with a shallow subtidal to peritidal interior and marginal oolite shoals. In the Norian vertical accumulation caused an increase of the platform height and developed a relief along the margins that progressively increased through the aggrading reef stage.

3708 **s**[3705] = "BERNECKER M. (1996).- Upper Triassic Reefs of the Oman Mountains: Data from the South Tethyan Margin.- *Facies* 34: 41-76.- **FC**;P 25-1, p. 50, ID=3060^**Topic(s)**: **reefs**, **geology**; **reefs**; **Systematics**: **Stratigraphy**: **Triassic U**; **Geography**: **Oman**^The Upper Triassic reefal limestones of the Oman Mountains were investigated with respect to their microfacies, palaeontology and community structure. The reef fauna described and figured for the first time occurs in parautochthonous slope deposits of the Arabian platform (Sumeini Group) and in allochthonous reefal blocks (Oman Exotics; Hawasina Complex). The Oman Exotics are tectonically dislocated blocks, derived from isolated carbonate platforms on seamounts in the Hawaska basin or in the South Tethys Sea. The lithofacies and fauna of these blocks comprise a cyclic platform facies with megalodonts, reef and reef debris facies. The reefal limestones are dated as Norian/Rhaetian by benthic foraminiferal associations (*Costifera*, *Siculocosta*, *Galeanella*) and typical encrusting organisms (*Alpinophragmium*, *Microtubus*). Some small Oman Exotics are of Carnian age. The shallow-marine organisms include scleractinian corals of different growth forms, siphonozoans, spongiomorpha, inozoans, chaetetes, spongiomorpha, disjectorids and solenoporacean algae as the main reef builders, various encrusters like microbes, foraminifers, sponges and many different problematical organisms for the stabilisation of the reef framework and a group of dwellers including benthic foraminifers, gastropods, bivalves and a few dasycladacean algae. The reef communities are characterized by the coverage of organisms and

distributional pattern. Analogies with the coeval reef deposits from the European part of the Tethys have been recognized. Some species, now collected in Oman, were also reported from American and Asian localities.¹¹;

- 3709 s[3706] = "FLUGEL E., BERNECKER M. (1996).- Upper Triassic Reefs of the South Tethyan Margin (Oman).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: 273-277.- FC&P 26-1, p. 39, ID=3601Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: OmanThe Upper Triassic reefal limestones of the Oman Mountains were investigated with respect to paleontology and community structure. The reef fauna occurs in parautochthonous slope deposits of the Arabian platform (Sumeini Group) and in allochthonous reefal blocks (&Oman Exotics&; Hawasina Complex). The &Oman Exotics& are tectonically dislocated blocks, derived from isolated carbonate platforms on seamounts in the Hawasina basin or in the South Tethyan Sea. The reefal limestones are dated as Norian & Rhaetian by benthic foraminiferal associations (Costifera, Siculocosta, Galeanella) and typical encrusting organisms (Alpinophragmium, Microtubus). Some small &Oman Exotics& are of Carnian age. The shallow-marine organisms include scleractinian corals of different growth forms, &sphinctozoans&; &inozoans&; chaetetids, spongiomorphids, disjectoporids and solenoporacean algae as the main reef builders, various encrusters like microbes, foraminifera, sponges and many different problematical organisms for the stabilization of the reef framework and a group of dwellers, including benthic foraminifera, gastropods, bivalves and a few dasycladacean algae. The reef communities are characterized by the coverage of organisms and distributional pattern. Analogies with the coeval reef deposits from the European part of the Tethys have been recognized. Some species, now collected in Oman, were also reported from American and Asian localities.¹¹;
- 3710 s[3707] = "FLUGEL E., LINK M. (1996).- Upper Triassic Reefs of Southwestern Turkey: Evidence of Reef Boulders (&Cipits&).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 40, ID=3602Topic(s): redeposition; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: TurkeyMost Carnian and Norian reefs occurring in Southwestern Turkey (Antalya and Isparta region) are represented by redeposited reef talus (&Cipits&). The &Cipits& occur in &Cipit fields& within siliciclastic basinal sediments and represent redeposited parts of sponge and coral patch reefs. Lower Carnian Cipit blocks differ distinctly in faunal composition and association patterns from the biota of Upper Norian & Rhaetian reefs.¹¹;
- 3711 s[3708] = "SENOWBARI-DARYAN B. (1996).- Upper Triassic Reefs and Reef Communities of Iran.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 41, ID=3605Topic(s): reefs, biostromes; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: IranUpper Triassic reefs and reefal buildups are lacking in Alborz and in the Zagros Mountains (in northern and in southwestern Iran respectively) but some small-scaled Norian-Rhaetian reefs and reef mounds occur in central and eastern Iran, belonging to the central Iranian plate as a part of the Cimmerian Continent. These reefs or bioconstructions are embedded within the Nayband Formation, a mixed siliciclastic-carbonate unit almost 2,800m thick, in the type locality in the Tabas area. Most

- of the buildups have a biostromal geometry, biohermal constructions are rare. A large number of reef organisms was found in the Iranian reefs and is also known from other Norian-Rhaetian reefs of the western Tethys. However, some organisms seem to be endemic and are not known from other localities. Based on the relative abundance of reef organisms, reefs within the Nayband Formation may be characterized as sponge dominated reefs (sponge reefs), coral-dominated reefs (coral reefs), or sponge-coral or coral-sponge reefs. In comparison with other Norian-Rhaetian reefs, the Iranian reefs are differentiated by their different organisms (especially foraminifera and microproblematica) and by encrustations represented mainly by small brachiopods and worm tubes. Reefs within the Naband Formation were formed on carbonate ramps in subtidal depths below the wave base.¹¹;
- 3712 s[3709] = "PANDEY D.K., FURSICH F.T. (2003).- Jurassic corals of east-central Iran.- *Beringeria* 32: 3-138.- FC&P 34, p. 68, ID=1299Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Iran⁹² taxa of scleractinian corals belonging to 50 genera are described from Toarcian to Kimmeridgian rocks of east-central Iran (Tabas-Kerman area). They formed, occasionally associated with calcareous sponges and microbial communities, small patch reefs or reef meadows in siliciclastic-dominated shelf environments of the Tabas and Lut blocks of the Central-East Iranian Microcontinent. On the large late Middle Jurassic to early Late Jurassic Esfandiar Carbonate Platform, situated at the eastern margin of the Tabas Block, corals were surprisingly rare. One of the genera (*Irania* gen. nov.) is new as are three species: *Irania hexagonalis*, *Dimorphoecandra iranensis*, and *Thamnasteria iranensis*.¹¹;
- 3713 s[3710] = "PANDEY D.K., FURSICH F.T. (2005).- A new name for the Jurassic coral genus *Irania* Pandey & Fursich, 2003.- *Beringeria* 35: 135.- FC&P 34, p. 68, ID=1301Topic(s): nomenclature, *Irania*; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Iran¹¹;
- 3714 s[3711] = "PANDEY D.K., AHMAD F., FURSICH F.T. (2000).- Middle Jurassic scleractinian corals from northwestern Jordan.- *Beringeria* 27: 3-29.- FC&P 30-2, p. 28, ID=1584Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Jordan¹¹;
- 3715 s[3712] = "GILL G.A. (1982).- *Epistreptophyllum* (Hexacoralliaire jurassique), genre colonial ou solitaire? Examen d'un materiel nouveau d'Israel.- *Geobios* 15, 2: 217-223.- FC&P 12-1, p. 17, ID=1880Topic(s): ; Scleractinia, *Epistreptophyllum*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Israel¹¹*Epistreptophyllum*, a rather common coral in M-U Jurassic of Europe, Asia and Madagascar is generally regarded as solitary. Specimens from Late Cretaceous beds from Israel show genuine branching which would suggest a colonial habit.¹¹;
- 3716 s[3713] = "PANDEY D.K., FURSICH F.T. (2006).- Jurassic corals from the Shemshak Formation of the Alborz Mountains, Iran.- *Zitteliana* A46: 41-74.- FC&P 35, p. 81, ID=2401Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Toar - Baj; Geography: Iran, Alborz Mts¹¹Nineteen taxa of scleractinian corals are described and figures from the Toarcian-Lower Bajocian part of the Shemshak Formation of the Alborz Mountains. Dominant taxa are *Isastrea*, *Microsolena*, *Trigerastraea*, *Periseris*, and *Collignoastrea*. Most of these corals occur near the top of the formation (lower Bajocian), close to the top of a large-scale shallowing cycle. Scattered specimens are found in transgressive lags of small-scaled parasequences in the Toarcian part of the succession. Corals are very rare in the Shemshak Formation with the exception of Rian, NE of Semnan, where strongly reduced sedimentation rate facilitated the establishment of coral meadows and a patch reef in mixed carbonate-siliciclastic setting on the crest of a tilted fault block.¹¹;

- 3717 s[3714] = "EL-ASA'AD G.M.A. (1989).- Callovian Colonial Corals from the Tuwaiq Mountain Limestone of Saudi Arabia.- Palaeontology 32, 3: 675-684.- FC&P 19-1.1, p. 53, ID=2668^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Call; Geography: Saudi Arabia^The earliest development of coral-bearing strata in Central Saudi Arabia took place during deposition of the Tuwaiq Mountain Limestone (upper Middle-Upper Callovian). It does not appear to constitute a major barrier reef, but rather a series of isolated corals and coral bioherms; coral heads (20-50 cm in diameter) are scattered in life position within an extensive sheet of pure limestone (20-40 m thick) stretching for more than 1000 km along strike in Central Saudi Arabia. This sheet could be described as an extensive biostrome. A striking feature of the Tuwaiq Mountain Limestone coral fauna is the low diversity of species that persisted throughout the development of the formation. These species are: Meandraraea gazaensis Alloiteau & Farag, Ovalastraea caryophylloides Goldfuss, Trigerastraea collignoni (Alloiteau), Columnocoenia lamberti Alloiteau and Brachthelia sp. A possible explanation for the low diversity of the fauna is inimical ecological conditions or palaeobiogeographical barriers which could have prevented the historical accumulation of species from neighbouring areas. Similar factors are responsible also for the endemism of the Jurassic Arabian fauna including ammonites, foraminifers, algae, ostracods, nautiloids, brachiopods and echinoids.^1";
- 3718 s[3715] = "GILL G.A. (1993).- Free pennulae within Dendraraea sp. (scleractinian coral) from the Callovian of southern Israel.- Courier Forschungsinstitut Senckenberg 164: 199-204. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 16, ID=3454^Topic(s): pennulae; Scleractinia, Dendraraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Call; Geography: Israel^Specimens of the Jurassic branching coral Dendraraea, collected from Middle and Late Callovian beds at Hamakhtesh Hagadol (Negev, Israel), commonly have free pennulae. The pennulae differ from each other in size and outline according to the space available for their growth. Their elevated rims are continuous all around, and bear numerous, uniform marginal teeth. The space between the pennular rim and the central trabecula remains equal all around. Such a degree of individuality is uncommon among pennular corals which mostly developed menianae (long balconies) by the fusion of the inner and outer flanks of each pennula to those in front and behind. The global formation of free pennulae within Dendraraea was apparently due to the trabecular growth at right angles to the long axis of the branch.^1";
- 3719 s[3716] = "GILL G.A., LAFUSTE J.G. (1972).- Madréporaires simples du Dogger d'Afghanistan; étude sur les structures de type "Montlivaltia".- Mém. Soc. géol. France, n. sér., 50, Mém. 115: 1-40.- FC&P 1-2, p. 22, ID=4682^Topic(s): structures; Scleractinia, Montlivaltia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Afghanistan^A study of several Jurassic solitary corals from Afghanistan led us to a detailed examination of structural features in Montlivaltia. The septa were found to consist of two distinct components: an axial structure formed by fibrous trabeculae rhombic in transverse section, and laminar layers which thicken secondarily the axial structure on both sides. The same sort of architecture for several genera is deduced from Koby's work and is confirmed in Stereophyllia All., Thecosmilia M.-E. & H. and Cyclastraea All. The septal structure of recent Fungia seems to be closer to the aforementioned structure than to those of typical Mesozoic Fungidae. The authors believe that corals having a "Montlivaltia-type" septal composition should be introduced as such in the classification (Superfamily Montlivaltioidae Alloiteau 1952 emend.). This group seems to had been widely spread geographically and

- over long periods of time. The presence of clear microstructure in specimens from different parts of the world allows us to deny the existence in Montlivaltia of an axis of divergence for the trabeculae as described in earlier works. An ecological interpretation for Chomatoseris and Montlivaltia is proposed as well. ^1";
- 3720 s[3717] = "TUZCU S., BABAYIGIT S. (1998).- The occurrence of Donacosmilia corallina de Fromentel (Upper Jurassic) from the Kastamonu region in Turkey.- Türkiye Jeoloji Bulteni 41, 1: 99-107.- FC&P 29-1, p. 41, ID=7029^Topic(s): taxonomy, stratigraphy; Scleractinia Donacosmillia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U; Geography: Turkey, Kastamonu^The species of Donacosmilia corallina de Fromentel (hermatypic coral) have been defined as Upper Jurassic (Oxfordian-Kimmeridgian, Portlandian?) in age by most European research workers. The presence of this form has also been noted from the reefal limestones of Yukariköy formation in the Araç-Daday (Kastamonu) region of Turkey. In this study systematic description of this form is presented and the associated reefal limestones are assigned to Upper Jurassic (Upper Oxfordian-Lower Kimmeridgian) in age. [original abstract]^1";
- 3721 s[3718] = "AL-SAAD H., SADOONI F.N. (2001).- A new depositional model and sequence stratigraphic interpretation for the Upper Jurassic Arab "D" reservoir in Qatar.- Journal of Petroleum Geology 24, 3: 243-264.- FC&P 31-1, p. 70, ID=1645^Topic(s): reefs, sedimentology, facies; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Qatar^Deposition of the Arab Formation on the Arabian Plate followed a eustatic sea-level high during the Oxfordian that deposited the open-marine shelfal carbonates of the Hanifa and Jubaila Formations. Oolite/peloidal shoals and local coral-algal stromatoporoid banks were subsequently deposited on the platform margin. These acted as barriers and led to the differentiation of intrashelf basins from open-marine (Tethyan) waters to the east. During the subsequent Kimmeridgian lowstand, gypsum wedges were laid down in the intrashelf basins. Slight changes in water depth, which exposed or flooded these barriers, are believed to be responsible for the cyclic nature of the Arab Formation sediments. Arab Formation cycles show a 4th order frequency but have thicknesses more typical of 3rd order Vail-type sequences. This is probably explained by the 4th order flooding events merely topping-up pre-existing accommodation space of tens of metres water depth in the intrashelf basin. Diagenesis associated with movement of hypersaline brines may have been responsible for the development of widespread dissolution porosity and dolomitization. The laminated, organic-rich, bituminous lime mudstones of the Hanifa/Jubaila Formations are the probable source of oil in the Arab Formation in Qatar. The main reservoir types are oolitic-peloidal grainstones and dolomitized limestones. [original abstract]^1";
- 3722 s[3719] = "de MATOS J.E., WALKDEN G.M. (2000).- Stratigraphy and sedimentation of the Middle Jurassic, U.A.E.- SEPM Special Publication 69: 21-35.- FC&P 31-1, p. 72, ID=7109^Topic(s): geology, reefs; geology, reefs; Systematics: ; Stratigraphy: Jurassic M; Geography: United Arab Emirates^In wadi Naqab, the Middle Jurassic corresponds to a broadly shallowing succession comprising multiple, meter-scale, fifth-order cycles. The Bajocian is predominantly subtidal, and cycles are commonly terminated by thick, massive oncoidal/peloidal packstones or grainstones. Most of the Bathonian and Callovian cycles start with spicular wackestones and end with cross-bedded peloidal/oolithic grainstones and/or stromatoporoid/coral rudstones. [fragment of extensive summary]^1";
- 3723 s[3720] = "CUFFEY R.J., BASILE L.L., LIENBEE A.L. (1979).- A bryozoan-like chaetetid (possible Sclerosponge) from Jurassic-Cretaceous limestone near Orhaneli, northwestern Turkey.- Geobios 12, 3: 473-479.- FC&P 11-2, p. 35,

- ID=1849^Topic(s): ; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Jurassic / Cretaceous; Geography: Turkey NW^A description of the chaetetid species *Atrochaetetes alakirensis* Cuif and Fischer, 1974.^1";
- 3724 s[3721] = "GAMEIL M. (1997).- Cretaceous corals of Gabal Mokattab, West Central Sinai, Egypt.- Egyptian Journal of Geology 41, 2A: 347-363.- FC&P 27-2, p. 58, ID=3920^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: Egypt, Sinai^Eight colonial coral species (Scleractinia) were collected and identified from the Cenomanian strata (Raha Formation) of Gabal Mokattab, west central Sinai. The identified species include *Phyllocoenia pediculata*, *Phyllocoenia* sp., *Polytremacis chalmasi*, *Thecosmilia* cf. *Tommasii*, *Thamnasteria* sp. and *Fungiastraea* cf. *conferta*. One species, *Fungiastraea mokattabensis* is considered to be new. The identified species belong to families Montlivaltiidae, Faviidae, Smilotrochiidae and Thamnasteriidae, with the exception of one species *Polytremacis chalmasi* which is an octocoral belongs to Family Helioporidae. The studied corals were collected from one horizon composed of argillaceous limestone, at the upper part of the Raha Fm. Corals occur with other fauna of pelecypods, gastropods and echinoids, they are recorded in different areas in Egypt (especially Sinai) as well as some North African and European regions. ^1";
- 3725 s[3722] = "ABOUL ELA N.M., ABDEL-GAWAD G.L., ALY M.F. (1991).- Albian fauna of Gabal Manzour, Maghara area north Sinai, Egypt.- Journal of African earth sciences 13, 2: 201-210.- FC&P 23-1.1, p. 72, ID=4153^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous Alb; Geography: Egypt, Sinai^[Ahermatypic and hermatypic corals are reported and figured from Albian sediments of Gabal Manzour, Maghara area, northern Sinai. They belong to the genera *Micrabacia*, *Parasmilia*, *Stylina*, *Thamnasteria*, *Thecosmilia* and *Montlivaltia*. Species names are not given.]^1";
- 3726 s[3723] = "BARON-SZABO R.C., HAMEDANI A., SENOWBARI-DARYAN B. (2003).- Scleractinian corals from Lower Cretaceous deposits north of Esfahan (Central Iran).- Facies 48, 1: 199-216.- FC&P 33-2, p. 25, ID=1140^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Iran^A new section through Cretaceous deposits was discovered 1 km west of the Dizlu village (approximately 40 km north of Esfahan, central Iran). Lithologically, the section distinctly differs from all other sections exposed in neighboring localities. A scleractinian coral fauna (Upper Aptian-Upper Albian), collected from a reefal limestone, is described in detail. The following taxa were found: *Actinastrea* aff. *pseudominima* (Koby), *Columactinastraea* sp., *Eugyra cotteaui* (d'Orbigny), *Pseudomyriophyllia turnsekae* Baron-Szabo, *Montlivaltia* sp., *Paraclausastrea pulchra* Morycowa, *Placocoenia robusta* Oppenheim, *Columnocoenia ksiazkiewiczzi* Morycowa, *Stylina micropora* Koby, *Felixigyra deangelisi* Prever, *Cyathophora haysensis* Wells, *Diploastraea harrisi* Wells, *Morphastrea* cf. *ludovicina* (Michelin), *Meandrophyllia meandroides* (Koby), *Eocomoseris raueni* Löser, *Fungiastrea crespoi* (Felix), *Latiastrea* cf. *kaufmanni* (Koby), *Kobyia* aff. *crassolamellosa* Gregory. The coral association of the Esfahan region is dominated by forms that are known to be cosmopolitan and semicosmopolitan in the Lower Cretaceous. It was found that over 40% of the coral fauna had previously been reported from both Lower and Upper Cretaceous strata. A similar pattern has been recognized for other reefal associations (e.g. Albian of Greece and Upper Barremian-Middle Albian of Mexico). In contrast, coral assemblages which developed in rather soft bottom environments have a significantly smaller percentage (15-20%) of taxa extending into the Upper Cretaceous and show closer affinities to Upper Jurassic and Lower Cretaceous faunas.^1";
- 3727 s[3724] = "GAMEIL M. (2005).- Palaeoecological implications of Upper Cretaceous Solitary Corals, United Arab Emirates / Oman Borders.-

Revue de Paléobiologie 24, 2: 515-532. ISSN 1661-5468.- FC&P 34, p. 57, ID=1279^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: United Arab Emirates, Oman^The Upper Cretaceous (Campanian-Maastrichtian) rocks that are exposed at several localities in the United Arab Emirates and the Sultanate of Oman are rich in macro- as well as microfossils. Solitary corals are found in these outcrops, associated with colonial corals, rudists, gastropods, pelycopods and echinoids. Nineteen species of solitary corals were identified from Jabal Buhays, Al Faiyah range Mountains (United Arab Emirates), Jabal El Rawdah and Jabal Huwayyah (Sultanate of Oman). Of these nineteen species ten species are described from the Qalah Formation (Upper Campanian) of Jabal Huwayyah and ten species are described from the Simsima Formation (Upper Campanian-Maastrichtian) of Jabal Buhays and Jabal El Rawdah where one species *Cunolites profundus* is common in the three localities. One species found in the Simsima Formation belongs to the new species *Cunolites trifurcata* described herein. Two morphotypes are observed in the studied solitary corals. Trochoid morphotypes prevailed during the deposition of the Qalah Formation, these lived on a hard substrate in a shallow marine protected environment. Hemispherical to dome-shaped morphotypes belonging to cunolitid corals prevailed during the deposition of the Simsima Formation. These are better adapted to a slightly higher energy environment with terrestrial supply by having elevated corallites which aided them to lie freely on the soft substrates as well as to free themselves from the fine sands and silts. The absence of costosepta at the basal part of cunolitid corals shows that they were immobile during life.^1";

3728 s [3725] = "BARON-SZABO R.C. (2000).- Late Campanian-Maastrichtian corals from the United Arab Emirates-Oman border region.- Bulletin natural History Museum London (Geology) 56, 2: 91-131 [impossible - see above!].- FC&P 29-1, p. ???, ID=1473^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: United Arab Emirates, Oman^1";

3729 s [3726] = "PANDEY D.K., FURSICH F.T., BARON-SZABO R.C., WILMSEN M. (2007).- Lower Cretaceous corals from the Koppeh Dag, NE-Iran.- Zitteliana A47: 3-52.- FC&P 35, p. 82, ID=2402^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Iran, Koppeh Dag^A new section through parts of the Middle Aptian to Early Albian Sanganeh Formation at the southwestern margin of the Koppeh Dag, NE-Iran, displays a succession of silty to fine-sandy marl between which limestone boulders and debris layers are intercalated at several levels. These boulders are olistoliths, derived from the edge of a nearby carbonate platform, long since eroded. Most of the olistoliths are reef limestones built of corals and calcareous sponges. At two levels, the reef fauna weathered out from the boulders and could be collected. Forty-seven taxa of Scleractinia have been described and figured, which considerably extend our knowledge of the biodiversity of Cretaceous corals from the area. The corals show an interesting mixture of taxa known since the Middle Jurassic and those known only from the Cretaceous.^1";

3730 s [3727] = "HANNA R.K. (1995).- Some macrofossils from the Aqra Limestone Formation (Maastrichtian), Aqra, Northern Iraq.- Neues Jahrbuch fuer Geologie und Palaeontologie, Monatshefte 5: 295-304.- FC&P 25-1, p. 41, ID=3031^Topic(s): paleontology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: Iraq^Six representatives of bivalvia and one coral (*Isastrea* sp.) are reported from the Aqra Limestone Formation (Iraq; Maastrichtian).^1";

3731 s [3728] = "METWALLY M.H.M. (1996).- Maastrichtian scleractinian corals from the western flank of the Oman Mountains, UAE and their

paleoecological significance.- N. Jb. Geol. Palaont. Mh. 1996, 6: 375-388.- FC&P 25-2, p. 54, ID=3151Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Maas; Geography: United Arab Emirates, Oman^Ten species of scleractinian corals, collected from two localities in the northwestern flank of Oman Mountains have been described and illustrated. The described fauna shows close affinities principally with those of Saudi Arabia, Baluchistan and India, with lesser affinities to those of the Mediterranean realm. The hermatypic nature of these coral associations and their patchy distribution suggests that they were confined to warm-shallow, well lighted water with considerable amount of reworking of mobile strata (bioturbation).^1";

3732 s[3729] = "LOSER H. (1998).- Lower Campanian corals from Amasya (Turkey).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 20: 77-87.- FC&P 28-1, p. 43, ID=3975Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Camp; Geography: Turkey, Amasya^From a rudist-bafflestone within transgressive sequences of the Early Campanian in Amasya (North-Central Anatolia, Turkey) eight colonial and solitary coral species are described. Species: Actinastrea ramosa (Michelin 1846), Actinastrea cf. sawerbyi Alloiteau 1954, Meandroria tenella (Goldfuss 1826), Astraeofungia columellahs (Hackemesser 1936), Astraeofungia cf. oppenheimi M.Beauvais 1982, Meandraraea sp., Cyclolites subcircularis Oppenheim 1930 non Alloiteau 1957, Cyclolites undulatus fossaenobilis Oppenheim 1930.^1";

3733 s[3730] = "ALI-HARITHI T., BIRENHEIDE R. (1993).- A new record of the scleractinian coral Stylopsammia judaica from the Upper Cretaceous (Campanian) of the Judean Desert.- Senckenbergiana lethaea 73, 2: 269-276.- FC&P 23-1.1, p. 72, ID=4154Topic(s): taxonomy, nomenclature; Scleractinia, Stylopsammia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Camp; Geography: Jordan^The scleractinian coral Stylopsammia judaica Oppenheim 1930 is redescribed by means of topotypical material from Israel and new discoveries from central Jordan. The genus Stylopsammia Oppenheim 1930 is compared to Astrhelia Milne-Edwards & Haime 1849 and Archohelia Vaughan 1919 and assigned to the family Oculinidae. The holotype of the type species of Astrhelia, Madrepora palmata Goldfuss 1826, is re-examined and figured. ^1";

3734 s[3731] = "GAMEIL M., ALY M.F. (2004).- Aptian corals from Gabal Abu Ruqum, North Sinai, Egypt: taxonomy and adaptive morphotypes.- 7th International Conference on the Geology of the Arab world, Cairo University, February 2004. [abstract] - FC&P 36, p. 90, ID=6503Topic(s): adaptive morphologies; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt; Geography: Egypt, Sinai^Colonial and solitary corals of variable morphotypes are abundant in the Aptian rocks of Gabal Abu Ruqum, North Sinai. A taxonomic study on these corals revealed the occurrence of 24 species 11 solitary and 13 colonial species. Six species are established as new: Trochosmia cretacea, Montlivaltia amini, Meandrastraea sinaiensis, Pepsomia gawadi, Acrosmia egyptiaca and Epistreptophyllum manzourensis. The solitary corals belong to genera Montlivaltia, Epistreptophyllum, Ellipsosmia, Paracycloseris, Acrosmia and Rennensismilia. Ceratoid and trochoid forms with a narrow base and a curved corallite dominate in these corals. Most corallites are filled with fine sand grains or clogged with large forams (mainly Orbitolina). Discoid solitary corals are rare and are represented by Paracycloseris sp. The dominance of ceratoid and trochoid forms in addition to the small-sized and curved corallites reflects unfavorable conditions with high terrigenous supply. On the other hand, colonial corals belong to the genera Eugyra, Stylina, Thamnastrea, Fungiastrea, Leptoria, Actinastrea and Ellipsocoenia. The colonial forms show a wide range of adaptation to

the soft substrate with much terrigenous influx. Most forms are hemispherical to mushroom shaped with wide bases for stability. These forms usually have a long peduncle or are usually elevated above the substrate to avoid being buried by sand and mud. Only two species [Eugyra (P.) rariseptata and Leptoria sp.] have encrusting morphotypes. [original abstract]^1";

- 3735 s[3732] = "SCHULKE I., DELECAT S., HELM C. (1995).- Upper Cretaceous rudist and stromatoporoid associations of Central Oman (Arabian peninsula).- Facies 32: 189-202.- FC&P 24-2, p. 107, ID=6866^Topic(s): sedimentology, sclerochronology; rudists, stroms; Systematics: Mollusca Porifera; Stromatoporoidea; Stratigraphy: Cretaceous U; Geography: Oman^Rudist and stromatoporoid associations of the Campanian from Central Oman are nearly monospecific. They are dominated by Durania aff. nicholasi, Vaccinites vesiculosus, Torreites milanovici or phaceloid and massive stromatoporoids. Several other rudist genera play a secondary role. The thickness of the associations is rarely more than one metre. Solitary corals do not occur in the associations. Colonial corals are less common, although they are up to 1m high and show considerable diversity. There are no binders. The reef structure indicates variable hydrodynamic conditions. They are always associated with very shallow water. The pure Durania aff. nicholasi patches with large colonial corals and Torreites milanovici are presumably the most rigid structures. The near monospecific associations of Vaccinites vesiculosus are widely distributed. Although mostly preserved in situ, strong currents, presumably caused by tropical storms, have repeatedly impaired and interrupted growth. The specific growth characteristics of the shell of some rudists, especially the radiolitids, enable an estimation of the individual lifespan. Frameworks of approximately 1m thickness probably developed in ± 100 years. The sediments of the complete sections are predominantly bioclastic. [original abstract]^1";
- 3736 s[3733] = "SCHUMANN D. (1996).- Upper Cretaceous Rudist Reefs of Central Oman.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 34, ID=3590^Topic(s): reefs rudist; rudist reefs; Systematics: Mollusca; Stratigraphy: Cretaceous Camp; Geography: Oman^Complete in situ rudist associations are preserved in the Campanian of Central Oman. They developed during a transgression onto the Arabian Plateau. Microfacial analysis reveals that vigorously turbulent conditions prevailed throughout the Lower Campanian. The development and preservation of in situ rudist associations are obviously rare events. As a rule, turbulence prevents the development of such structures. The absence of vast rudist reefs is not a consequence of an inherent inability of rudists to build reefs, but can be attributed to exogenous, abiotic factors. The associations investigated here inhabited restrictive shallow-marine environment. Rapid growth of a few rudists has been verified. Vertically growing rudist associations of 5-8 in situ generations represent a period of only 100-200 years.^1";
- 3737 s[3734] = "STEUBER T., YILMAZ C., LOSER H. (1998).- Growth rates of Early Campanian rudists in a siliciclastic-calcareous setting (Pontid Mts., North-Central Turkey).- Geobios. Memoire Special 22: 385-401.- FC&P 28-1, p. 45, ID=3978^Topic(s): growth rates; rudists, growth rates; Systematics: Mollusca; Stratigraphy: Cretaceous Camp; Geography: Turkey, Pontides^Rudist communities that developed on the southern slope of the Pontid magmatic arc during the late Cretaceous thrived in a tectonically unstable setting, and in environments that were strongly influenced by siliciclastic sedimentation. Strontium isotope stratigraphy indicates an early Campanian age of the investigated association at Hobek Tepe, near Amasya. Stable isotope analyses of: sclerochronological profiles of several shells of the three dominating hippuritid species yielded

cyclic variations of $\delta^{18}O$ that delineate seasonal variations in palaeotemperature. This allowed for the determination of individual life spans, skeletal growth rates and the reconstruction of the living growth fabric. Annual vertical shell growth of 35–40mm was maintained by cylindrical morphotypes of *Vaccinites ultimus* during several successive years, while adult annual shell accretion of conical morphotypes was only 27 to 30mm. Vertical growth of the co-occurring *Yvaniella alpani* was considerably slower and rarely exceeded 10mm/year. Differential growth rates of the two most abundant species, and morphological characters of *Yvaniella* which indicate that skeletal growth capacity was similar to sediment accumulation, allowed for a consistent reconstruction of the original growth fabric. $CaCO_3$ production of the rudist communities amounted to $20 \text{ kg} \times \text{year}^{-1} \times \text{m}^{-2}$ and contributed significantly to the sedimentary budget. Large-scale formation of fine-grained calcareous sediments by bioeroders occurred only in environments of less rapid burial, indicated by associations of slowly-growing geniculate rudist morphotypes and patellate corals. The implications of these results for the distribution of rudists and corals in Cretaceous shallow-marine environments are discussed.¹¹;

3738 s[3735] = "SCHUSTER F. (2002).- scleractinian corals from the Oligocene of the Qom Formation (Esfahan-Sirjan fore-arc basin, Iran).- *Courier Forschungsinstitut Senckenberg* 239: 5–55.- **FC#038**;P 33-2, p. 36, ID=1174^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Iran^Sixtyone scleractinian species of 39 genera are described from the section of Abadeh, central Iran. Nine of these species and one genus are new. The section comprises sedimentary rocks of the Qom Formation located on the Iranian Plate (Esfahan-Sirjan fore-arc basin). The age of the section ranges from latest Rupelian to Chattian (late Early to Late Oligocene) based on planktonic and larger foraminifers. The coral fauna belongs to three different assemblages: 1) a solitary coral assemblage, 2) a *Leptoseris-Stylophora* assemblage of a low light environment, and 3) a *Poritid-Faviidae* assemblage forming patch reefs. This study presents a detailed description of a previously unknown Oligocene coral record from this region. The study area is located palaeogeographically between the well known coral occurrences of the Mediterranean Tethys and the coral bearing Nari Series of Sind, Pakistan and eastwards following Indopacific localities, and is therefore of prime importance for palaeobiogeographical reconstructions. Comparisons at the species level show that the coral fauna from central Iran represents a mixture of Mediterranean Tethyan and Indopacific elements. Nevertheless, the majority of the species are unknown from the Mediterranean Tethys indicating a beginning of faunal separation despite an open Tethyan Seaway which still connected both regions during this time.¹¹;

3739 s[3736] = "GAMEIL M., ALY M.F. (2001).- Paleontological studies on some Oligocene colonial corals from Gabal Hafit, (Al Ain Area, UAE).- *M.E.R.C. Ain Shams University, Earth Sci. Ser.* 15: 61-78.- **FC#038**;P 31-2, p. 15, ID=1278^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: United Arab Emirates^A highly fossiliferous Lower Oligocene (Rupelian) section is well exposed on the flanks of Gabal Hafit anticline near Al Ain City, United Arab Emirates. The section contains different kinds of macro- and microfossils. Corals are the most abundant faunal element in that area and are represented by colonial and solitary forms where colonial forms dominate. Colonial corals are the main target of the present work and are studied here for the first time. The present work focuses on the taxonomic and stratigraphic aspect of these colonial corals. The study includes the identification and description of 21 species of which two species are believed to be new. These are *Tarbellastraea hqfitensis* and *Siderastraea osmani*. The paleoecologic aspect of the studied faunas and their relation to other Tethyan faunas are also discussed. [original

- abstract]^1";
- 3740 s[3737] = "SCHUSTER F., WIELANDT U. (1999).- Oligocene and Early Miocene coral faunas from Iran: palaeoecology and palaeobiogeography.- International Journal of Earth Sciences 88, 3: 571-581.- FC&P 29-1, p. 64, ID=7026Topic(s): ecology, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene Miocene L; Geography: Iran^Oligocene and Early Miocene coral assemblages from three sections of central Iran are investigated with respect to their palaeoecological and palaeobiogeographic implications. These corals are compared with faunas from the Mediterranean Tethys and the Indopacific. Associated larger foraminifers are used for biostratigraphy and to support the palaeoecological interpretation. The studied sections are situated in the foreland basins of the Iranian Plate which is structured into a fore-arc and a back-arc basin separated by a volcanic arc. The coral assemblages from Abadeh indicate a shallowing-upward trend. Infrequently distributed solitary corals at the base of the section indicate a turbid environment. Above, a distinct horizon characterised by a Leptoseris-Stylophora assemblage associated with lepidocyclinids and planktonic foraminifers is interpreted as maximum flooding surface. Small patch reefs with a Porites-Faviidae assemblage are a common feature of Late Oligocene to Early Miocene coral occurrences and indicate water depths of less than 20m. The diversity of the coral faunas shows marked differences. Oligocene corals from the Esfahan-Sirjan fore-arc basin comprise more than 45 species of 32 genera and occur in a wide range of environments. Early Miocene corals from the Qom back-arc basin are less frequent, show a lower diversity (13 genera with 15 species) and occur in single horizons or small patch reefs. [original abstract]^1";
- 3741 s[3738] = "BUCHBINDER B. (1977).- Different responses to diagenesis of various coral groups in the Miocene Ziqlag Formation, Israel.- Bureau Recherches Geologiques et Minieres Memoir 89: 026-033 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 28, ID=0082Topic(s): diagenesis; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Miocene; Geography: Israel^^1";
- 3742 s[3739] = "GAMEIL M. (2003).- Miocene corals from wadi El Hommor, Sinai, Egypt.- Neues Jahrbuch für Geologie und Palaeontologie Abhandlungen 229, 2: . ???.- FC&P 32-2, p. 66, ID=1404Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Egypt, Sinai^Eighteen species of colonial scleractinian corals and two solitary ones have been described and identified from wadi El Hommor, Sinai, Egypt. The colonial species belong to the genera Astrocoenia, Stylocoenia, Stylophora, Porites, Goniopora, Plesiastrea, Favia, Goniastrea, Montastrea, Leptastrea, Solenastrea and Tarbellastraea. The solitary species belong to the genera Fungia and Flabellum. One colonial species (Tarbellastraea hommorensis) is described as new. During Miocene rifting which started in the Late Oligocene, the Gulf of Suez was divided in faulted blocks, each was rising and subsiding with different magnitude and intensity on both sides of the Gulf. The presence of corals in certain exposures along the Gulf shoulders may reflect shallow clear water and relative tectonic stability. The majority of the studied corals belong to family Faviidae (thirteen species), followed by Astrocoeniidae and Poritidae (two species each). The other families (Pocilloporidae, Fungiidae and Flabellidae) are represented each by one species.^1";
- 3743 s[3740] = "OEKENTORP K. (1993).- Fruhdiagenese bei Galaxea und Goniastrea (Scleractinia) aus dem Jungpleistozaen der suedlichen Sinai-Halbinsel (Aegypten).- Sonderveroeffentlichungen, Geologisches Institut der Universitat zu Koeln 70 [Festschrift Ulrich Jux]: 349-368.- FC&P 23-1.1, p. 76, ID=4170Topic(s): diagenesis; Scleractinia; Systematics: Cnidaria;

Scleractinia; Stratigraphy: Pleistocene; Geography: Egypt, Sinai^The nature and distribution of syntaxial cements in Scleractinian corals and their growth in optical continuity with the skeletal carbonate fibres combined with simultaneous recrystallization allow a comparison with similar structures in Palaeozoic corals. Marked thickenings of the septa are due to cementation fabric, as syntaxial cements for instance. Moreover, these are also the cause of the development of pseudoskeletal elements, as for example the stereoplasmatic cones in the case of Cystimorpha. These studies of diagenesis of scleractinians from the Pleistocene of the Sinai Peninsula led to an analysis of the elements Ca, Sr, Mg, Na, Si, and Al in the skeletal carbonate as well as in syntaxial cements. The amount and distribution of these elements enable the identification and delimitation of organic and diagenetic carbonates, if no recrystallization has taken place. The results of the investigation demonstrate again that mere observation and graphic description of microstructures is not sufficient. Rather, the diversity of hitherto described microstructural units necessitates an interpretation which takes into account the diagenesis of the fossil. This leads to the conclusion that while the skeletal architecture of Paleozoic corals has in most cases been preserved, the microstructure may have suffered recrystallization. [an English version of this paper has been published in 'Memoir 8 of the Association of Australasian Palaeontologists'; = Oekentorp 1989]^1";

3744 s[3741] = "MCCALL J., ROSEN B., DARRELL J. (1994).- Carbonate Deposition in Accretionary Prism Settings: Early Miocene Coral Limestones and Corals of the Makran Mountain Range in Southern Iran.- Facies 31: 141-178.- FC&P 24-1, p. 90, ID=4524^Topic(s): reefs, accretionary prism setting; reefs; Systematics: ; Stratigraphy: Miocene Aquit Burd; Geography: Iran, Makran^The regional mapping of the Makran mountain range on behalf of the Geological survey of Iran represents a unique coverage: the entire area of the mountain range was compiled in a unified programme. During this mapping, Miocene limestones containing rich coral and foraminiferal faunas were recorded over a strike length of several hundred kilometres, as minor developments within thick neritic clastic sequences which in turn overlie great thicknesses of Eocene-Miocene flysch. These limestones include rigid bioconstructional frameworks, loosely compacted coralline assemblages and foraminiferal calcarenites: they include in situ reefal deposits and material redeposited quite close to their original site of depositions. Most are Burdigalian, as shown by the benthonic position foraminifera, but some are Aquitanian. The geotectonic setting was an accretionary prism in a zone of plate convergence. The limestones and enclosing clastic sediments comprise an intensely folded, reverse-faulted and locally dislocated sequence, the duplex structure being the result of a major Late Miocene-Pliocene episode of regional deformation. This concentration of the intense tectonic deformation in a late major episode requires a different model for this zone of plate convergence to the model widely applied to such zones. The possible controls on limestone deposition are discussed: tectonic uplift and shallowing of the sea, climatic warming and eustatic factors. Depositional features of reefal formations in the late Jurassic of the Caucasus, the Pliocene-Recent of Halmahera, and the early Miocene of SE France are discussed in comparison with the Makran model.[part of extensive summary]^1";

3745 s[3742] = "BUCHBINDER B. (1975).- Lithogenesis of Miocene Reef Limestones in Israel with particular reference to the significance of the red Algae.- Report OD/5/75, October 1975: 175 pp., 6 pls, text-figs, maps, tables + appendix: 25 pp., 6 pls, 6 tables; published by State of Israel, Ministry of Commerce & Industry, Geological Survey of Israel, Oil Research Division; Jerusalem.- FC&P 4-2, p. 51, ID=5232^Topic(s): reef carbonates, diagenesis; reef carbonates; Systematics: ; Stratigraphy: Miocene

Tort; Geography: Israel^A study on the Ziqlag Formation and its reefal sediments. Age: Upper Miocene (Tortonian). 249 representative samples of bio-calcarenites were analysed and they were divided into 3 mega facial groups: coral reefs, back reef platform, beach. Coralline algae are abundant in the coral reefs and back reef platform environments. They are dominant in the Ofaqim fore reef area forming steeply dipping algal layers which consist almost entirely of a single species (Mesophyllum laffittei). The diagenetic processes were studied.^1";

3746 s[3743] = "TUDHOPE A.W., LEA D., SHIMMIELD G.B., CHICOTT C.P., HEAD S. (1996).- Monsoon Climate and Arabian Sea Coastal Upwelling Recorded in Massive Corals from Southern Oman.- Palaios 11: 347-361.- FC&P 26-1, p. 59, ID=3631^Topic(s): paleoclimates; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Oman^Corals living in the coastal waters of southern Oman experience the influence of the seasonally reversing Asian monsoon system. The objective of the research reported here is to assess the potential for using the skeletal chemistry of these corals to investigate past variability in the monsoon climate. To this end, 20-year long, monthly resolution geochemical records are presented for cores from two massive Porites corals, located 20 km apart near Marbat on the Arabian Sea coast of southern Oman. We consider four aspects of skeletal chemistry: oxygen and carbon isotopic composition, barium content and the nature and occurrence of annual fluorescent bands within the coral skeletons. Coral skeletal δ180 documents variations in sea surface temperature which have regional and basin-wide significance. In particular, the δ180 of coral skeleton precipitated during the period of the NE monsoon is strongly correlated with annual rainfall anomalies in India, whilst that precipitated during the period of the SW monsoon appears to provide information on variability in the strength of coastal upwelling. The stable carbon isotope composition and barium content of these particular corals display strong annual cycles, but do not appear to directly record interannual climatic oceanographic variability. It is concluded that corals on the coast of southern Oman have great potential to provide high-resolution, century-long records of oceanographic and climatic variability associated with the operation of the monsoon climate system.^1";

3747 s[3744] = "PICHON M., BENZONI F., CHAINEAU C.H., DUTRIEUX E. (2010).- Field Guide of the Corals of South Yemen.- Collection"Parthenope"; Editions Biotope, 256 pp. ISBN 9782914817462.- FC&P 36, p. 101, ID=6528^Topic(s): excursion guide; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Yemen^1";

3748 s[3745] = "GVIRTZMANN G., KRONFELD J., BUCHBINDER B. (1992).- Dated coral reefs of southern Sinai (Red Sea) and their implication to late Quaternary sea levels.- Marine Geol. 108: 29-37.- FC&P 21-2, p. 58, ID=3358^Topic(s): reefs, geochronology, eustacy; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Egypt, Sinai^Coral reefs of Sinai constitute four morphological terraces: three emergent fossil reefs and one submergent modern fringing reef [labeled: I (28-35m above sea level), II (13-18m), III (5-8m) and IV (-1 to +1m)]. Four genetic reef complexes which do not necessarily correspond to the morphological terraces were identified and dated. The reef / terrace age relationship are as follows: (1) Ophira (Terrace I): 330-290ka; (2) Mureikha (Terrace II and/or III): 215-170ka; (3) Na'ama (Terrace II and/or III): 141-81ka; Umm-Sid (Terrace IV): 6,5-2,5ka. The age groups correspond to the oceanic oxygen isotope stages 9, 7, 5e and 1. The vertical uplift of the southern Sinai coast which is situated along the western margin of the Dead Sea Transform did not exceed 28-35m during the last 300.000 years.^1";

3749 s[3746] = "BRANTS A. (1972).- Remarks on the genus Laterophylia Kuehn

- (Scleractinia) on the basis of material collected south of Kerman, Central Iran.- Geological Survey of Iran, Report 26: 23-41.- FC&P 2-1, p. 19, ID=4730^Topic(s): Scleractinia, Laterophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: Iran^The genus Laterophyllia Kuehn 1933, represented by the species *L. turiformis* Kuehn 1933 and *L. minima* n.sp., is described in detail.^1";
- 3750 s[3747] = "BOULIN J., BOUYX E., LAPPARENT A.F.de, LYS M., SEMENOFF-TIAN-CHANSKY P., (1975).- La transgression du Paléozoïque supérieur dans le versant nord de l'Hindou Kouch occidental, en Afghanistan.- C. R. Acad. Sci. Paris 281, Sér. D: 497-502.- FC&P 4-2, p. 68, ID=5322^Topic(s): paleogeography; Systematics: ; Stratigraphy: ; Geography: Afghanistan^[l'étude de la microfaune et des Tétracoralliaires a permis de dater le début de la transgression (Namurien-Bashkirien); plusieurs espèces de coraux sont citées]^1";
- 3751 s[3748] = "DILLMANN O.O. (1987).- Koloniale Rugosa der waagenophyllidae aus dem Perm von Afghanistan, von Kreta und aus der Türkei.- FC&P 16, 1: 45-47. [short note] - FC&P 16-1, p. 45, ID=6761^Topic(s): Rugosa Waagenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Afghanistan, Crete, Turkey^[short paleontological note, with emphasis on taxonomy and biogeography]^1";
- 3752 s[3749] = "PICKETT J.W. (1983).- An annotated bibliography and review of Australian fossil sponges.- Mem. Ass. Australas. Palaeontols 1 [J. Roberts & P.A. Jell (eds): Dorothy Hill Jubilee Memoir]: 93-120.- FC&P 12-1, p. 12, ID=6177^Topic(s): bibliography; Porifera; Systematics: Porifera; Stratigraphy: fossil; Geography: Australia^^1";
- 3753 s[3750] = "DEBRENNE F., GRAVESTOCK D. (1990).- Archaeocyatha from the Sellick Hill Formation and Fork Tree Limestone on Fleurieu Peninsula.- Geol. Soc. Austr. Spec. Publ. 16 [Jago J. B. & Moore P. J. (eds): The Evolution of a Late Precambrian-Early Paleozoic rift complex: The Adelaide Geosyncline]: 290-309.- FC&P 19-1.1, p. 71, ID=2712^Topic(s): taxonomy, ecology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia^An oligotrophic archaeocyathan fauna, consisting entirely of Regulares occurs in the upper Sellick Hill Formation and lower to middle Fork Tree Limestone. In the upper Sellick Hill Formation thin laterally persistent archaeocyath - rich bioclastic packstone has eroded pioneer bioherms but succeeding biohermal buildups are present. Regular Archaeocyaths with extensive outgrowths held together an open framework also occupied by sponges, Epiphyton and encrusting Girvanella. Anaptyctocyathus sellicksi (Taylor) is revised and 13 additional taxa described (among them 3 new species). 3 species allow correlation with the lower Wilkawillina Limestone (Flinders Ranges). The fauna is not older than mid-Atadabanian and arguably Botomian in age.^1";
- 3754 s[3751] = "DEBRENNE F., ZHURAVLEV A.Yu., GRAVESTOCK D.I. (1993).- Etheridge collection: systematic revision of some of the first archaeocyaths discovered in Australia.- Alcheringa 17: 179-183.- FC&P 23-1.1, p. 83, ID=4191^Topic(s): revision; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia^^1";
- 3755 s[3752] = "KRUSE P.D., WEST P.W. (1980).- Archaeocyatha of the Amadeus and Georgina Basins.- BMR Journ. Australian, Geology and Geophysics 5, 3: 165-181.- FC&P 10-1, p. 60, ID=6026^Topic(s): ; Archaeocyatha ?; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: Australia^^1";
- 3756 s[3753] = "HILL D. (1978).- Bibliography and index of Australian Palaeozoic corals.- Queensland University, Department of Geology Papers 8, 4: 38 pp.- FC&P 8-1, p. 53, ID=0225^Topic(s): bibliography, index; Anthozoa; Systematics: Cnidaria;

- Anthozoa; Stratigraphy: Paleozoic; Geography: Australia^1";
- 3757 s[3754] = "WEBBY B.D. et al. (12 others) (2000).- Ordovician biogeography of Australasia.- In: Wright A.J., Young G.C., Talent J.A. & Laurie J.R. (eds): & Palaeobiogeography of Australasian faunas and floras&;.- Memoir Association of Australasian Palaeontologists 23: 63-126.- FC&P 31-1, p. 75, ID=1658^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia^Webby describes the distribution of Ordovician stromatoporoids on pages 69 and 70. The earliest assemblages are labechiids best represented in the middle Ordovician of Tasmania which show affinities with Chazyan and Blackriveran forms of Laurentia. Late Darriwilian faunas from New South Wales show relationships to north China and Korea. The diverse labechiid fauna of earliest Eastonian (mid-Caradoc) age includes species with relationships to Tasmania, Malaysia, north China, Mongolia, Tuva and Siberia. Clathrodictyids first appearing in late Caradoc rocks also have Asian connections but appear about the same time in Australia, east Canada, and north China.The most diverse Ordovician faunas occur in early Ashgill rocks. Aulacera is common in late Ordovician rocks in Tasmania, the Siberian platform, Urals, Novaya Zemlya, etc. but not in New South Wales. The affinities of island-arc assemblages from New South Wales are closest to SE Asia and China. The affinities of the Tasmanian shelf fauna is dominantly Asian, but at least twice had influxes of North American stocks.^1";
- 3758 s[3755] = "WEBBY B.D., NICOLL R.S. (1989).- Australian Phanerozoic timescales, No. 2 Ordovician.- Australian Bureau of Mineral Resources, Record L989/32.- FC&P 19-1.1, p. 68, ID=2704^Topic(s): stratigraphy; stratigraphy, timescale; Systematics: ; Stratigraphy: Ordovician; Geography: Australia^A short discussion of the succession of stromatoporoid faunas, and their correlation with other biostratigraphic scales in a correlation chart is included in this report; notable is the occurrence of such typical Silurian genera as Clathrodictyon and Ecclimadictyon in rocks of Caradoc age^1";
- 3759 s[3756] = "MUNSON T.J., PICKETT J.W., STRUSZ D.L. (2000).- Biostratigraphic review of the Silurian tabulate corals and chaetetids of Australia.- Historical Biology 15, 1-2: 41-60.- FC&P 31-1, p. 60, ID=1625^Topic(s): stratigraphy; Tabulata, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Chaetetida; Stratigraphy: Silurian; Geography: Australia^The biostratigraphic distribution of the Silurian Tabulata and Chaetetida of Australia can informally be described in terms of four successive coral assemblages. * The earliest Bridge Creek Assemblage (Rhuddanian-Aeronian) contains abundant halysitids and is not geographically widespread. Species of this assemblage tend to be holdovers from Late Ordovician faunas. * A major radiation event occurred at the time of the Quarry Creek Assemblage (Telychian-early Sheinwoodian), involving favositids, heliolitids, halysitids, and other groups. This may indicate the onset of conditions favourable to corals over widespread areas of eastern Australia. * The late Sheinwoodian-earliest Gorstian Dripstone Assemblage is characterised by a continued expansion in the number of species of favositids, the appearance of auloporids, and a contraction in the number of species of sarcinulids, multisoleniids, and halysitids. * Favositids continued to dominate the youngest Hatton's Corner Assemblage (Gorstian-Pridoli), but halysitids almost became extinct by the end of the Ludlow. * Faunas of Pridoli age are neither abundant nor well studied, but appear to be reduced continuations of earlier faunas. A number of tabulate taxa are identified as possibly useful biostratigraphic indicators in Silurian sequences. [original abstract]^1";

- 3760 s[3757] = "ZHEN YONGYI (1998).- Biogeographic and biostratigraphic perspectives for Australian Devonian rugose corals.- Acta Palaeontologica Sinica 37, 3: 359-379.- FC&P 27-2, p. 50, ID=3906^Topic(s): biogeography, biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Australia^The highly diverse Early Devonian rugose corals characterized by the occurrences of Carlinastraea, Martinophyllum and Pradisphyllum of the late Lochkovian-Pragian faunas and of Chalcidophyllum. Macgeea and Protomacgeea of the Emsian faunas are widely distributed in eastern Australia, and exhibit a high ratio of newly evolved generic taxa. Philipsastreids and endophyllids made their first appearance in the Pragian and became common in the Emsian. The earliest elements of the stringophyllids occur in the various rock units of Emsian age. While in the other provinces of the Old world Realm, these three families are recorded mainly from the Middle or even Upper Devonian. This pattern of distribution suggests that many of the common genera belonging to these families originated in eastern Australia during the Early Devonian. Middle Devonian rugosan faunas of eastern Australia are characterized by endemic Sanidophyllum and Blysmatophyllum. The Eifelian faunas seem to exhibit gradational changes from the earlier faunas. In contrast to a strong northwestwards dispersal from eastern Australia to south China and other provinces of the Old world Realm during the Early Devonian, the diverse Givetian faunas of Australia were less provincial, and exhibit a major influx of elements from south China, central Asia, Europe, northwestern Canada and other provinces of the Old World Realm. The Upper Devonian of eastern Australia is dominated by red-beds and associated facts of non-marine depositional setting with only rare records of rugose corals. Western Australian Frasnian faunas consist of both shelf and basin dwelling forms and show a long diversity and a strongly cosmopolitan nature.^1";
- 3761 s[3758] = "DARGAN G.M. (2000).- Regressional episodes and diversity patterns of Australian Devonian tabulate corals.- Records of the Western Australian Museum, Supplement 58: 273-277.- FC&P 33-2, p. 15, ID=1112^Topic(s): diversity patterns; Tabulata, diversity; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Australia^Biostratigraphical distribution of Australian Devonian tabulate corals appears to be influenced by episodes of transgression and regression both locally and world wide. Decrease in species diversity can be related to local regressive phases. Examination of contemporaneous sequences unaffected by regression is needed before a strong cause and effect relationship can be established.^1";
- 3762 s[3759] = "HILL D., JELL J.S. (1970).- The Tabulate Coral Families Syringolitidae Hinde, Roemeriidae Pocta, Neuroemeriidae Radugin and Chonostegitidae Lecompte, and Australian species of Roemeripora Kraicz.- Roy. Soc. of Victoria Proc. 83, 2: 171-190.- FC&P 1-2, p. 14, ID=4644^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L M; Geography: Australia^The genera Roemeria E. & H., Roemeripora Kraicz (and its possible synonym Vaughanites Paul 1937, non Woodring 1928), Roemerolites Dubatolov, Armalites Chudinova, Pseudoroemeripora koksharskaya, and Bayhaium Langenheim & McCutcheon are considered to have syringoporid affinities and to form a family Roemeriidae Pocta. The three Australian Lower or early Middle Devonian species Michelinia progenitor Chapman, Syringopora thomii Chapman and Roemeria ocellata Hill are revised, transferred to Roemeripora, and considered probably synonymous. Pseudoroemeria Chekhovich and Syringoporinus Sokolov are possibly better grouped with Troedssonites Sokolov than in the Roemeriidae. Neuroemeria Radugin and Thecostegites E. & H. have syringoporid affinities and are grouped in the family Neuroemeriidae while Chonostegites E. & H., also with syringoporid affinities, is considered the sole member of its

family Chonostegitidae Lecompte. Haimeophyllum Billings is shown to be a synonym of Chonostegites. Gorskyites Sokolov, Neosyringopora Sokolov and Roemeripora wimani Heritsch form a group of Upper Carboniferous and Permian Tabulates that appears to deserve syringoporid subfamily status. Syringolites Hinde is considered more closely related to Favosites than to Syringopora, and is treated herein as the only genus in the family Syringolitidae Hinde of the Favositoidea.¹;

3763 s[3760] = "WOOD R., OPPENHEIMER C. (2000).- Spur and groove morphology from a Late Devonian reef.- Sedimentary Geology 133, 3-4: 185-193.- FC&P 30-1, p. 9, ID=7052^Topic(s): reefs morphology; reefs, morphology; Systematics: ; Stratigraphy: Devonian U; Geography: Australia^Spur and groove structures form on the windward side of modern coral reefs in response to wave action. Hitherto, no examples have been confirmed in the Palaeozoic record. We confirm here ancient spur and groove morphology from the Teichert Hills, an exhumed platform atoll from the Upper Devonian (Frasnian) reef complex of the Canning Basin, Western Australia. Oriented growth of the reef-building metazoans (laminar tabulate corals and stromatoporoid sponges) proves an organic and constructional origin for the spurs. Grooves acted as sediment traps that filled with coarse bioclastic sand and winnowed brachiopods derived from the back reef and reef flat. Geometry and style of ancient spurs and grooves may provide indications of ancient synoptic hydrodynamic regimes: on the basis of the relationship between modern coral reef spur orientation and incoming wave direction, these ancient spurs are inferred to have formed normal to refracted waves. The presence of these structures offers unequivocal evidence for the active growth of mid-Palaeozoic reefs in wave-dominated hydrodynamic regimes, and demonstrates that reef-building biota can show a common morphological response to wave energy independent of taxonomic position. [original abstract]¹;

3764 s[3761] = "TALENT J.A. et al. (22 others) (2000).- Devonian palaeobiogeography of Australia and adjoining regions.- Memoir Association of Australasian Palaeontologists 23 [Palaeobiogeography of Australasian faunas and floras: A.J. Wright, G.C. Young, J.A. Talent & J.R. Laurie (eds)]: 167-257.- FC&P 31-1, p. 75, ID=7113^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Devonian; Geography: Australia^[Stromatoporoid faunas are described by webby and Zhen on pages 196 to 198. They discuss whether stromatoporoids were restricted to latitudes 40°N and 35°S as suggested by Heckel & Witzke or show a wider spread (60°N to 45°S) as supported by Stock. Several Pragian-Emsian genera found in eastern Australia show affinities with the Kuznetsk basin, Siberia and the Tien Shan, Altai mountains, Uzbekistan, Salair, arctic Canada, and south China. The Eifelian record of north Queensland is linked to the Urals and the early Devonian of the Czech republic and the Reefton occurrences of New Zealand, Givetian-Frasnian faunas of Queensland and western Australian basins are much more cosmopolitan and have many species in common with European faunas. The dramatic reduction in diversity at the Frasnian-Famennian boundary led to a relict fauna of labechiids, stromatoporellids and stromatoporoids.]¹;

3765 s[3762] = "PISERA A., BITNER M.A. (2007).- The sponge genus Brachiaster (Pachastrellidae, Demospongiae) and its first known fossil representative, from the late Eocene of southwestern Australia.- Alcheringa 31, 4: 365-373.- FC&P 36, p. 39, ID=6406^Topic(s): ; Demospongiae Brachiaster; Systematics: Porifera; Demospongiae; Stratigraphy: Eocene; Geography: Australia^The pachastrellid genus Brachiaster wilson (Pachastrellidae, Demospongiae, Porifera) has had until now no known fossil representatives. Here we describe its first known fossil representative from the late Eocene of southwestern western Australia, assigned to Brachiaster claudellevii sp.nov. Brachiaster claudellevii has well-developed axial canals in the mesotrider, which points to it

being intermediate in character between the typical tetraxial desmas of lithistids, and tetraxial spicules of non-lithistid demosponges. This further supports the position of Brachiaster among the Pachastrellidae. The geographic and bathymetric distribution of the extant and newly described fossil representatives of Brachiaster indicates that the Eocene sponge described here is important in understanding the evolution of Indo-West Pacific sponges because it points to a long evolutionary history and complex biogeographic distribution of this lineage of pachastrellid sponges. [original abstract]^1";

- 3766 s[3763] = "REITNER J., WORHEIDE G. (1995).- New recent sphinctozoan coralline sponge from the Osprey Reef (N Queensland Plateau, Australia).- FC&P 24, 2: 70-72.- FC&P 24-2, p. 70, ID=4547^Topic(s): ; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: Recent; Geography: Australia^[presented is an unnamed living branching sphinctozoan sponge, with taxonomic and morphological similarities to reef-building Triassic sphinctozoans of the Tethys]^1";
- 3767 s[3764] = "VERSELOT J. (1977).- Australian Octocorallia (Coelenterata).- Australian Journal of Marine and Freshwater Research 28: 171-240.- FC&P 15-2, p. 40, ID=0729^Topic(s): new taxa; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Australia^This paper presents a taxonomic treatment of four Australian collections of octocorals belonging to the orders Stolonifera, Telestacea, and Alcyonacea. The four collections are located in the Australian Museum, Sydney, the Department of Fisheries, Adelaide, the National Museum of Victoria, Melbourne, and the Fisheries Laboratory, Queensland Fisheries Service, Mourilyan Harbour, Queensland. The material contains 67 species, 20 being found in Australian waters for the first time. Forty-five are known species, but nine of these are more or less completely redescribed. Twenty-two species are new, including eight new species of Capnella. A key to the species of this genus is given.^1";
- 3768 s[3765] = "CAIRNS S.D. (2004).- The Azooxanthellate Scleractinia (Coelenterata: Anthozoa) of Australia.- Records of the Australian Museum 56, 3: 259-329.- FC&P 33-2, p. 26, ID=1142^Topic(s): azooxanthellate; Scleractinia, Azooxanthellate; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Australia^A total of 237 species of azooxanthellate Scleractinia are reported for the Australian region, including seamounts off the eastern coast. Two new genera (Lissotrochus and Stolarskicyathus) and 15 new species are described: Crispatotrochus gregarius, Paracyathus darwinensis, Stephanocyathus imperialis, Trochocyathus wellsii, Conocyathus formosus, Dunocyathus wallaceae, Foveolocyathus parkeri, Idiotrochus alatus, Lissotrochus curvatus, Sphenotrochus cuneolus, Placotrochides cylindrica, P. minuta, Stolarskicyathus pocilliformis, Balanophyllia spongiosa, and Notophyllia hecki. Also, one new combination is proposed: Petrophyllia rediviva. Each species account includes an annotated synonymy for all Australian records as well as reference to extralimital accounts of significance, the type locality, and deposition of the type. Tabular keys are provided for the Australian species of Culicia and all species of Conocyathus and Placotrochides. A discussion of previous studies of Australian azooxanthellate corals is given in narrative and tabular form. This study was based on approximately 5500 previously unreported specimens collected from 500 localities, as well as a re-examination of most of the types and previously reported specimens from the Australian region. Fifty-six species are recorded as new to Australia; 183 state range extensions are listed; and 96 worldwide bathymetric range extensions are noted. In order to characterize the Australian fauna, all 703 known azooxanthellate species were tabulated as to coloniality, method of attachment, and depth range: 187 species are colonial, 516 solitary; 373 are attached, 265 free, and 54 transversely dividing; and 200-1000 m is the most common depth range. Compared to all

azooxanthellate species, those from Australia have a slightly higher percentage of species that are solitary and unattached (or transversely dividing), due to a disproportionate number of species in the families Flabellidae and Turbinoliidae. Bathymetrically they are typical of the worldwide fauna. Sixty-seven species are endemic to the Australian region. Both UPGMA cluster analysis and MDS ordination reveal two main regions: a northern tropical region and a southern warm temperate region, consistent with zonation patterns of shallow-water marine invertebrates.¹;

- 3769 s [3766] = "HOOPER J.N.A., WIEDENMAYER F. (1994).- Zoological Catalogue of Australia, Volume 12, Porifera.- CSIRO Publishing & Australian Biological Resources Study (ABRS); 632pp ISBN 9780643056862. [catalogue] - FC&P 25-1, p. 25, ID=6867Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia^This is the authoritative source on sponges of Australia and its territorial waters. It is the first comprehensive catalogue of Australian Porifera, and an essential text for those involved with this group. * The Catalogue is being compiled as a public enquiry database and will serve as a directory to the most comprehensive and recent information available on each species of the Australian fauna. * Information on each species includes synonymy, literature citation, location and status of type material, and type locality for each available name, a brief summary of geographical distribution and ecological attributes, and important references on various aspects, especially biology. [the volume deals with some 1400 species in 77 families; it contains numerous taxonomic decisions and includes an historical overview of sponge taxonomy; a synopsis of the location and status of Australian collections is also provided]^1";
- 3770 s [3767] = "FROMONT J. (1999).- Demosponges of the Houtman Abrolhos.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 175-184.- FC&P 28-2, p. 8, ID=6949Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia^1";
- 3771 s [3768] = "FROMONT J. (1999).- Reproduction of some demosponges in a temperate Australian shallow water habitat.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 185-193.- FC&P 28-2, p. 8, ID=6950Topic(s): reproduction; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia^1";
- 3772 s [3769] = "MARSHALL J.F. (1983).- Submarine cementation in a high-energy platform reef: One Tree Reef, Southern Great Barrier Reef.- Journal of Sedimentary Petrology 53, 4: 1133-1149.- FC&P 13-1, p. 26, ID=0407Topic(s): reefs, cementation; reefs; Systematics: ; Stratigraphy: Recent; Geography: Australia^Three major framework facies (algal pavement, coral heads, and branching corals) identified within the Holocene section of One Tree Reef shows varying degrees of cementation. The widest distribution and greatest variety of submarine cements occur within those facies or subfacies that have extensive encrustation by coralline algae; these are found beneath the windward margin and within the patch reef drilled. Both Mg calcite and aragonite cements exhibit diverse fabrics and textures. Mg calcite is the dominant cement and is present as both an interskeletal and intraskeletal infill, whereas aragonite cement is exclusively intraskeletal. Interskeletal cements are relatively uncommon and are only developed within those facies or subfacies whose particular style of framework construction is capable of trapping significant quantities of fine-grained internal sediment. Lithified crusts, with either a laminated or columnar morphology, are a prominent cavity infill within many of the reef framework facies. Although direct evidence is lacking at this stage,

the morphology and other features of these crusts probably indicate some form of organic influence during their formation. Peloids, which are the major component of the lithified crusts as well as many other cavity infillings, are considered to be a particular form of Mg calcite micrite and to have nucleated within the interstitial waters of the reef. Microcrystalline rim cements around the peloids have often cemented them into a coherent mass that resembles detrital lime mudstones. (Original summary)^1";

- 3773 s[3770] = "WOLANSKI E. (ed.) (2001).- Oceanographic Processes of Coral Reefs: Physical and Biological Links in the Great Barrier Reef.- CRC Press, Boca Raton, Florida, 356 pp. ISBN/ISSN: 84930833X.- FC&P 30-1, p. 24, ID=1547^Topic(s): reefs, oceanography; reefs; Systematics: ; Stratigraphy: Recent; Geography: Australia^Demonstrating the relevance and need of science in planning the future of the Great Barrier Reef and coral reefs worldwide, Oceanographic Processes of Coral Reefs: Physical and Biological Links in the Great Barrier Reef emphasizes multi-disciplinary processes - physical and biological links - that have emerged as the dominant forces shaping and controlling the ecosystem. The book draws heavily on data from coral reefs in Australia, Indonesia, Thailand, and the Philippines. Oceanographic Processes of Coral Reefs: Physical and Biological Links in the Great Barrier Reef covers: * Climate and global change * Coastal oceanography * Wetlands ecology * Estuaries * Marine biology * Land use management in the tropics * Fisheries management * Coral Reef ecological modeling * Biodiversity and the human impact. Explore how the ecosystem responds to both physical and biological stimuli, and how they interact. Understand processes imperative to create sustainable design strategies Comprehend the connectivity of biotopes - land, mangroves, seagrass, and corals Discover the relationship between managing marine resources and managing adjoining land use Learn how fish behavior and migration patterns control fisheries.^1";
- 3774 s[3771] = "BEAMEN R., LARCOMBE P., CARTER R.M. (1994).- New evidence for the Holocene sea-level high from the inner shelf, Central Great Barrier Reef, Australia.- J. sediment. Res. A, 64, 4: 881-885.- FC&P 24-1, p. 83, ID=4516^Topic(s): reefs, eustacy, geochronometry; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Australia^Radiocarbon dates from fossil oyster beds of intertidal origin on Magnetic Island, north Queensland indicate that the local Holocene maximum of relative sea level was attained no later than 5660 ±50 B.P. (conventional uncorrected age) and remained at 1.6-1.7m above modern levels until 4040 ± 50 B.P. Given the tectonic stability of the area, this implies that eustatic sea level remained at its Holocene peak for at least ca. 1600 yr. The new high-precision sea-level data indicate sea levels 1-5m higher than those of the same age inferred from buried mangrove deposits on the inner shelf in north Queensland. Uncertainties in deriving relative sea level from such mangrove deposits may be a significant source of error in worldwide attempts to distinguish the eustatic and crustal warping components of relative sea-level change, especially in the tropics.^1";
- 3775 s[3772] = "HEIDECKER E. (1973).- Structural and Tectonic factors influencing the development of Recent Coral Reefs off Northeastern Queensland.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 273-298.- FC&P 3-1, p. 22, ID=4870^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Australia^^1";
- 3776 s[3773] = "JONES O.A. (1977).- The Great Barrier Reef province, Australia.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 8.- FC&P 7-1, p. 32, ID=5598^Topic(s): reefs; Great Barrier Reef; Systematics: ; Stratigraphy: ; Geography: Australia^^1";
- 3777 s[3774] = "LLOYD A.R. (1977).- The basement beneath the Queensland

- continental shelf.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 9.- **FC#038;P 7-1**, p. 32, ID=5599**Topic(s):** reefs; geology, reefs; **Systematics:** **Stratigraphy:**; **Geography:** Australia¹;
- 3778 s[3775] = "WEBBY B.D. et al. (12 others) (2000).- Ordovician palaeobiogeography of Australasia.- Memoir Association of Australasian Palaeontologists 23 [Palaeobiogeography of Australasian faunas and floras: A.J. Wright, G.C. Young, J.A. Talent & J.R. Laurie (eds)]: 63-126.- **FC#038;P 31-1**, p. 75, ID=7114**Topic(s):** biogeography; biogeography; **Systematics:**; **Stratigraphy:** Ordovician; **Geography:** Australasia^{[webby describes the distribution of Ordovician stromatoporoids on pages 69 and 70. The earliest assemblages are labechiids, best represented in the middle Ordovician of Tasmania, which show affinities with Chazyan and Blackriveran forms of Laurentia. Late Darriwilian faunas from New South Wales show relationships to north China and Korea. The diverse labechiid fauna of earliest Eastonian (mid-Caradoc) age includes species with relationships to Tasmania, Malaysia, north China, Mongolia, Tuva and Siberia. Clathrodictyids first appearing in late Caradoc rocks also have Asian connections but appear about the same time in Australia, east Canada, and north China. The most diverse Ordovician faunas occur in early Ashgill rocks. Aulacera is common in late Ordovician rocks in Tasmania, the Siberian platform, Urals, Novaya Zemlya, etc. but not in New South Wales. The affinities of island-arc assemblages from New South Wales are closest to SE Asia and China. The affinities of the Tasmanian shelf fauna is dominantly Asian, but at least twice had influxes of North American stocks.]¹;}
- 3779 s[3776] = "ZHEN YONGYI, WRIGHT A.J., JELL J.S. (2000).- Rugose coral diversifications and migrations in the Devonian of Australasia.- Historical Biology 15: 61-76.- **FC#038;P 30-2**, p. 22, ID=1575**Topic(s):** radiations, migrations; Rugosa; **Systematics:** Cnidaria; Rugosa; **Stratigraphy:** Devonian; **Geography:** Australasia^{The occurrence of approximately 100 rugose coral genera has been confirmed in the Devonian carbonate dominated successions of Australasia. Their temporal distribution shows that the largest faunal turnovers were in the Pragian and Givetian, with profound extinction events at or near the ends of the Emsian, Givetian and Frasnian. The evolutionary innovation and diversification of the Early Devonian rugose corals of eastern Australia are characterized by a high turnover rate in the late Lochkovian-Pragian and strong dynamism of radiation from late Pragian to medial Emsian, implying considerable dispersal to South China, central Asia and Europe. After a high intensity of origination in the Pragian, maximum diversity was reached in the Emsian. Phillipsastreids and endophyllids appeared late in the Pragian and became common in the Emsian; stringocephalids appeared in the Emsian. As elements of these families are recorded mainly from the Middle, or even Upper Devonian of other provinces of the Old World Realm, it appears that they may have originated in eastern Australia during the Early Devonian. Following a marked decrease in generic richness in the Eifelian, faunal diversity reached another high peak in the early mid-Givetian as a result of immigration of coral genera, probably from South China, central Asia, Europe and northwestern Canada in the Old World Realm.}¹;
- 3780 s[3777] = "LIN BAOYU, WEBBY B.D. (1989).- Biogeographic relationships of Australian and Chinese Ordovician corals and stromatoporoids.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 207-217.- **FC#038;P 19-1.1**, p. 13, ID=2539**Topic(s):** biogeography; biogeography; **Systematics:** Cnidaria Porifera; Anthozoa Stromatoporoidea; **Stratigraphy:** Ordovician; **Geography:** Australia, China¹;
- 3781 s[3778] = "GEHLING J.G., RIGBY J.K. (1996).- Long expected sponges from

the Neoproterozoic Ediacara fauna of South Australia.- *Journal of Paleontology* 70, 2: 185-195.- FC&P 25-1, p. 46, ID=3054^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Neoproterozoic; Geography: Australia, Ediacara^New fossils from the Neoproterozoic Ediacara fauna of South Australia are interpreted as the oldest known hexactinellid sponges. They occur within the Ediacara Member of the Rawnsley Quartzite (Pound Subgroup) from several locations in the Flinders Ranges. The new genus, *Palaeophragmodictya*, is characterized by disc-shaped impressions preserving characteristic spicular networks and is reconstructed as a convex sponge with a peripheral frill and an oscular disc at the apex.^1";

3782 s[3779] = "SAVARESE M., MOUNT J.F., SORAUF J.E. (1993).- Paleobiologic and paleoenvironmental context of coral-bearing Early Cambrian reefs: Implications for Phanerozoic reef development.- *Geology* 21: 917-920.- FC&P 23-1.1, p. 91, ID=4210^Topic(s): reefs, biology, ecology; reefs, Archaeocyatha corallimorpha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia S^Early Cambrian corals from South Australia have been found within fossil reefs of unusual biological and paleoecological composition. The framework of these reefs is composed of a diverse assemblage of calcareous sponges (e.g., archaeocyaths and sphinctozoans), calcimicrobes, and at least two species of coral-like organisms, one of which is first reported herein and bears similarities to younger Palaeozoic tabulate corals. Complex growth interactions occur among these organisms, suggesting that space was a limiting factor in Early Cambrian reef ecosystems, as it is today in modern scleractinian reefs. In striking contrast to most Early Cambrian archaeocyath-calcimicrobe reefs, these South Australian reefs flourished within energetic, mixed siliciclastic-carbonate shallow-marine environments along the margins of arid, coarse-grained, sea-marginal alluvial fans. The implications of these coral-bearing reefs are multifold. First, their existence not only extends the range of tabulatelike corals to the Botomian (middle Early Cambrian), but it adds an additional clade of participants to the Early Cambrian metazoan radiation event. Second, the existence of Botomian-aged skeletonized colonial cnidarians necessitates an earliest Cambrian or Neoproterozoic ancestor for the group. Third, the presence of tabulatelike corals and their involvement in reef building prior to the Toyonian extinction (late Early Cambrian) challenges hypotheses (e.g., lack of a suitable reef builder after the extinction of archaeocyaths until the Ordovician) used to explain the paucity of Middle and Late Cambrian reefs worldwide. The presence of these corals on sea-marginal fans contradicts the perception that early reefs were restricted to low-energy, predominantly carbonate subtidal environments.^1";

3783 s[3780] = "DEBRENNE F. (1973).- Les Archéocyathes Irréguliers d'Ajax Mine (Cambrien inférieur, Australie du Sud).- *Bulletin du Museum national d'histoire naturelle*, 3e ser, 195, *Sci. Terre* 33: 185-258.- FC&P 3-1, p. 34, ID=4908^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia S^Révision de l'ensemble des types antérieurement décrits appartenant à la classe des Irregulares. Proposition d'une classification unifiée pour l'ensemble du phylum, par définition de types morphologiques de l'intervallum, et reconnaissance des caractères de porosité des murailles.^1";

3784 s[3781] = "DEBRENNE F. (1974).- Anatomie et systématique des Archéocyathes réguliers sans plancher d'Ajax Mine (Cambrien inférieur, Australie du Sud).- *Geobios* 7, 2: 91-138.- FC&P 3-2, p. 51, ID=4988^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia S^Two preliminary volumes tentatively gave the specialists a redefinition of the British Museum

collections (1969) and a brief reconsideration of every genus previously established on Australian material either by Taylor T.G., Bedford R., W.R. and J. or by subsequent designation. The aim of this new volume is to give a modern approach of Monocyathina, Dokidocyathina and Ajacicyathina (i.e. regular atabulate Archaeocyatha) present into the whole material collected on Ajax Mine area. The most up-to-date results of anatomic and systematic studies are used and carried further on distinction between wall-canals and simple pores, porous and non porous septa (in connexion with stirrup-pores) are taken into consideration for the definition of new taxa.¹";

3785 s[3782] = "BRASIER M.D. (1976).- Early Cambrian intergrowths of archaeocyathids, Renalcis and pseudostromatolites from South Australia.- Palaeontology 19, 2: 223-245.- FC&P 6-1, p. 31, ID=5523^Topic(s): ; Archaeocyatha reefs; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia S^1";

3786 s[3783] = "LAFUSTE J., DEBRENNE F., GANDIN A., GRAVESTOCK D. (1991).- The oldest tabulate coral and the associated Archaeocyatha, Lower Cambrian, Flinders Ranges, South Australia.- Geobios 24, 6: 697-718.- FC&P 21-1.1, p. 51, ID=3257^Topic(s): ; Tabulata, Flindersipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Cambrian L; Geography: Australia S, Flinders Ranges^The oldest known tabulate, Flindersipora bowmani Lafuste gen. et sp.nov. from the Flinders Ranges of South Australia is described for the first time. The new genus presents all morphological and structural characteristics of Tabulata: cerioid shape, septal ridges, tabulae, wall pores. Its microstructure is nevertheless new, formed by "platelets". Specimens have been found associated with archaeocyaths and calcified cyanobacteria in Lower Cambrian shelf margin buildups in the Oraparinna Shale and Moorowie Formation in two different localities: Ten Miles Creek where they are associated with solitary archaeocyaths, and Moorowie Mine, where they built complex bioconstructions associated with colonial archaeocyaths. The archaeocyaths, comprising 11 species indicate a middle Botomian age. One species Robertocyathus brenti Debrenne is new. The buildups were among the last to flourish prior to widespread regression in the Early Cambrian in South Australia. With this discovery, the present opinions on the phylogeny of Tabulate Corals must be modified. In comparison with some Cambrian or even Ordovician forms which have been supposed to have affinities with corals, Flindersipora has a less rudimentary morphology and could not be said more primitive than these previously known genera. Because of its advanced favositid architectural type Flindersipora reinforce the idea that the origin of Tabulata is very ancient and must be looked for in the Precambrian.¹";

3787 s[3784] = "KRUSE P.D. (1983).- Middle Cambrian "Archaeocyathus" from the Georgina Basin is an anthaspidellid sponge.- Alcheringa 7: 49-58.- FC&P 13-1, p. 51, ID=6352^Topic(s): >false archaeocyathan; Archaeocyatha false; Systematics: Porifera; Stratigraphy: Cambrian M; Geography: Australia, Georgina Basin^Fossils from the Ranken Limestone previously referred to the genus Archaeocyathus were reputedly one of the last Australian occurrences of the phylum Archaeocyatha prior to its extinction. These fossils in fact represent an anthaspidellid sponge, and are by far the earliest known example of the family Anthaspidellidae.¹";

3788 s[3785] = "MEHL D. (1998).- Porifera and Chancelloriidae from the Middle Cambrian of the Georgina Basin, Australia.- Palaeontology 41, 6: 1153-1182.- FC&P 28-1, p. 49, ID=3984^Topic(s): sclerites; Porifera, Chancelloriidae; Systematics: Porifera; Stratigraphy: Cambrian M; Geography: Australia, Georgina Basin^A rich assemblage of poriferan spicules and sclerites of the Chancelloriidae has been found in Mid Cambrian phosphatic sediments of the Georgina Basin. The hexactinellid spicules are especially diverse,

and contain several new types. These include pulvinusactins (nom. nov.) and follipinules, strongly inflated triaxons which probably formed an armouring dermal layer in Thoracospongia, and cometiasters which may be the first Cambrian evidence of the Hexasterophora. Demosponge spicules, especially triaenes, are moderately diverse. Polyactine spicules with central canals are interpreted as proto-aster megascleres, which may have evolved into aster microscleres. Calcarean, heteractinellid spicules are also common. These features suggest an early Cambrian diversification of the Porifera. The systematic position of the Chancelloriidae is still controversial.¹¹;

3789 s[3786] = "ZHEN YONGYI, LANG S.C., JELL J.S. (1993).- A new biostratigraphic framework and lithostratigraphic nomenclature for the Devonian Fanning River Group, Burdekin Basin, North Queensland.- Queensland Government Mining Journal 1993: 7-14.- FC&P 23-1.1, p. 62, ID=4133Topic(s): biostratigraphy, lithostratigraphy; stratigraphy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L M; Geography: Australia, Burdekin Basin^A biostratigraphic study of coral faunas from the Early to Middle Devonian Fanning River Group has been completed in conjunction with geological mapping of the Burdekin Basin, north Queensland. Ten coral associations are now recognised. Associations A-D from the Laroona Formation (new name) and the Mount Podge Limestone (new name) are late Emsian to early Eifelian in age. Associations E-J occur in the Burdekin Formation and Cultivation Gully Formation and range in age from late Eifelian to middle or late Givetian. The recognition of early Devonian faunas is a significant new discovery and demonstrates that rugose corals are useful for regional biostratigraphic correlation.¹¹;

3790 s[3787] = "BROWNLAW R.L.S., JELL J.S. (1997).- Upper Devonian (Upper Frasnian) platform rugose corals of the Canning Basin, Northwestern Australia.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 325-338.- FC&P 26-2, p. 33, ID=3724Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: Australia, Canning Basin^Upper Frasnian coral-bearing platform deposits are limited in the Devonian reef complexes of the Lennard Shelf, Northwestern Australia. A well preserved fauna from the upper Frasnian Sparke Conglomerate is described herein, together with several collections from the Virgin Hills Formation that are late Frasnian in age as determined by conodonts. Hillastraea gen. nov., with type species H. floriforme (Hill 1954) and H. georgeae sp. nov. are described. Smithiphyllum coppi sp. nov. is the first species of Smithiphyllum described from Western Australia. A further specimen of Tabulophyllum lowryi Hill & Jell 1970 is noted, and one other species of Tabulophyllum is described in open nomenclature. Phillipsastrea sparkensis sp. nov. is described, Phillipsastrea delicatula Hill 1936 is reassigned to Frechastraea, Phacellophyllum kimberleyense Hill & Jell 1970 to Thamnophyllum and Haplothecia ? laciniosa Hill & Jell 1970 to Kuangxiastraea.¹¹;

3791 s[3788] = "ZHEN YONGYI (1994).- Givetian rugose corals from the northern margin of the Burdekin Basin, north Queensland.- Alcheringa 18: 301-343.- FC&P 24-1, p. 65, ID=4482Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Australia, Burdekin Basin^The Fanning River Group is among the best exposed marine-dominated Devonian sequences in eastern Australia. It consists of limestone, sandstone and conglomerate of shallow marine origin, which form the basal sequence of the Burdekin Basin. Sixteen species and subspecies (9 new) of rugose corals are described from outcrops of the Fanning River Group exposed in the Kirkland Downs, Boundary Creek and Lime Creek areas; these areas represent the north and northwestern margins of the Burdekin Basin during the early Givetian transgression. The coral taxa are determined as: Lythophyllum proliferum sp. nov.,

- Endophyllum jelli sp.nov., lowaphyllum schlueteri (Etheridge 1898), Blysmatophyllum isisense Pedder 1970, Blysmatophyllum multigemme sp.nov., Blysmatophyllum? sp., Sanidophyllum kirklandense sp.nov., Spongophyllum (Beugniesastraea) variabilis sp.nov., Australophyllum cyathophylloides yohi subsp.nov., Xystriphyllum dotswoodense sp. n., Xystriphyllum sp., Taimyrophyllum crassiseptatum sp.nov., Acanthophyllum (Acanthophyllum) sp., Amaraphyllum amoenum Pedder 1970, Argutastrea sp., and Aristophyllum planotabulatum sp.nov.^1";
- 3792 s[3789] = "BROWNLOW R.L.S., JELL J.S. (2008).- Middle and Upper Devonian rugose corals from the Canning Basin, Western Australia.- Memoir of the Association of Australasian Palaeontologists 35: 1-126. [monograph] - FC&P 36, p. 52, ID=6433^Topic(s): taxonomy, reefs; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M U; Geography: Australia W^Forty-two rugose coral species referable to 18 genera are described. Two new genera, Noviphyllum and Careophyllum, are erected and are typified by N. canningense sp.nov. and C. brevilamellatum (Hill, 1936) respectively. Eleven other new species are described: Grypophyllum benbowi, Sociophyllum homense, Disphyllum patulum, D. hockingi, D.? murum, Spinophyllum prolatum, Temnophyllum spissum, Chostophyllum apertum, Peneckiella naniforme, P. moniliforme and P. capitanea. New material is described for, or additional observations are made on 13 previously described species: Smithiphyllum coppi Brownlow & Jell, Disphyllum caespitosum (Goldfuss), D. virgatum (Hinde), D. incomptum (Hill & Jell), Argutastrea hullensis (Hill), Temnophyllum turbinatum Hill, Hillastraea floriformis (Hill), H.? georgeae Brownlow & Jell, Phillipsastrea sparkensis Brownlow & Jell, Frechastraea delicatula (Hill), Thamnophyllum kimberleyense (Hill & Jell), Peneckiella teichertii Hill and Kuangxiastraea laciniosa (Hill & Jell). Eleven species are left in open nomenclature due to insufficiency of available specimens. [last part of extensive summary]^1";
- 3793 s[3790] = "COCKBAIN A.E. (1984).- Stromatoporoids from the Devonian Reef complexes, Canning Basin, Western Australia.- Geological Survey of Western Australia Bulletin 129: 1-107.- FC&P 13-2, p. 47, ID=0567^Topic(s): reef complexes; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Australia, Canning Basin^This major monograph in addition to describing and illustrating 27 taxa of Givetian, Frasnian and Fammenian Stromatoporoids also has valuable general discussions of their occurrence in the reefal facies, their shapes, microstructures, basal layers and contained organisms. Three new species are described Actinostroma windjanicum, Hermatostroma ambiguum, and Stromatopora lennardensis. The author supports his determinations with many measurements and adopts a broad species concept that results in many species being placed in synonymy including the widely recognized late Devonian species Actinostroma clathratum. Many northern European species are recognized. The genus Euryamphipora is reinterpreted as a particular growth form of Amphipora and placed in synonymy.^1";
- 3794 s[3791] = "COCKBAIN A.E. (1985).- Devonian stromatoporoids from the Carnarvon Basin, Western Australia.- Special Publication, S. Australia Department of Mines and Energy 5: 29-33.- FC&P 14-2, p. 44, ID=0932^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv Fra; Geography: Australia, Carnarvon Basin^Six species are recorded from the Givetian to early Frasnian Gneudna Formation and two taxa occur in the coeval Point Maud Formation. All are also known from the Canning Basin reefs. Species that are briefly described and illustrated are: Actinostroma papillosum, Amphipora sp., Dendrostoma oculatum, Hermatostroma roemeri, Pseudoactinodictyon dartingtonensis, Stachyodes costulata, and Trupetostroma laceratum.^1";
- 3795 s[3792] = "WOOD R.A. (2000).- Palaeoecology of a late Devonian back reef: Canning Basin, Western Australia.- Palaeontology 43, 4: 671-703.-

FC&P 30-1, p. 23, ID=1503^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Devonian Fra; Geography: Australia, Canning Basin^Back-reef ecologies within the celebrated mixed carbonate-siliciclastic Late Devonian (late Frasnian) Pillara Limestone of Windjana Gorge, in the Canning Basin, Western Australia, are re-interpreted as being dominated by microbial communities. Proposed microbialites are expressed as weakly-laminated, fenestral micrite, that show unsupported primary voids, peloidal textures, disseminated bioclastic debris, and traces of microfilaments. These grew as either extensive free-standing mounds or columns, often intergrown with encrusting metazoans, or thick post-mortem encrustations upon skeletal benthos. In some cases, microbial encrustations are inferred to have developed in protected cavities formed by progressive burial of the reef. The calcimicrobe Shuguria also shows a preferentially cryptic habit, encrusting either primary cavities formed by skeletal benthos, microbialite, or the ceilings of mm-sized fenestrae within microbialite. A further calcimicrobe, Rothpletzella, formed columns up to 0.3m high in areas enriched by very coarse siliciclastic sediment. * Stromatoporoid sponges with a diverse range of morphologies also formed in situ growth fabrics. Monospecific thickets of closely-aggregating dendroid stromatoporoid sponges (Stachyodes costulata), and platy-laminar forms (?Hermostroma spp.) were common, as were remarkably large stromatoporoids (Actinostroma spp.) that grew as isolated individuals up to 5m in diameter. Such sponges showed impressive powers of regeneration from partial mortality, and individual clones may have been capable of substantial longevity of up to 500 years. Actinostroma spp. showed highly complex growth forms including platy-multicolumnar (A. windjanicum), and a hitherto undescribed inferred whorl-forming foliaceous morphology (Actinostroma sp.) reminiscent of the modern photosymbiotic coral Acropora palmata. These complex morphologies formed abundant primary cavities, previously thought to be only rarely developed in association with stromatoporoids. [original abstract]^1";

3796 s[3793] = "WOOD R.A. (2000).- Novel paleoecology of a postextinction reef: Famennian (Late Devonian) of the Canning basin, northwestern Australia.- Geology 28, 11: 987-990.- FC&P 30-1, p. 37, ID=1504^Topic(s): reefs, post-extinction reefs; reefs ecology; Systematics: ; Stratigraphy: Devonian Fam; Geography: Australia W^Reefs are supposed to be particularly susceptible to mass-extinction events, and to survive only as low-diversity, remnant communities dominated by holdover or disaster taxa. Famennian (Late Devonian) reefs exposed in the Windjana Limestone of the Canning Basin, northwestern Australia, demonstrate, however, that a novel reef ecology was established in the immediate aftermath of the Frasnian-Famennian mass extinction. Here diverse calcimicrobes (including Rothpletzella spp., Shuguria spp., Ortonella and Girvanella) together with bryozoans, brachiopods and stromatoporoid, sphinctozoan, and lithistid sponges grew as complex framework intergrowths in previously undocumented morphological forms, forming spectacular elevated laminar to platy structures up to 3 m in diameter and 0.35 m thick. At least 15 morphospecies of lithistids are now identified, where only two were previously documented. These communities show no substantial reduction in biodiversity compared to Frasnian counterparts, nor any change in tiering or loss of complex ecological interactions. These observations suggest that where stable carbonate platforms persisted after mass-extinction events, reef-building could continue. More important, they demonstrate that no protracted interval of time was necessarily required either for recovery to ecological stability or for completely new ecologies to assemble. Such studies highlight the need to document ecosystem recovery after mass-extinction events using detailed paleoecological analyses in addition to simple compilations of global biodiversity changes.^1";

3797 s[3794] = "PLAYFORD P.E., COCKBAIN A.E. (1989).- Devonian reef

- complexes, Canning Basin, Western Australia: a review.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 401-411.- FC&P 19-1.1, p. 14, ID=2558^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Devonian; Geography: Australia, Canning Basin^1";
- 3798 s[3795] = "HURLEY N.F., VOO R.van der (1990).- Magnetostratigraphy, Late Devonian iridium anomaly, and impact hypotheses.- Geology 18: 291-294.- FC&P 20-1.1, p. 67, ID=2848^Topic(s): extinctions; iridium anomaly; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: Australia, Canning Basin^Paleomagnetism, sedimentology, and fine-scale stratigraphy have been integrated to explain the origin of an iridium anomaly in the Late Devonian of Western Australia. Thermal demagnetization experiments were carried out on 93 specimens of marginal-slope limestone from the northern Canning Basin. Samples are from a condensed sequence of deep-water (> 100 m) Frutexites microstromatolites. Frutexites is a shrublike cyanobacterial organism that probably precipitated hematite, or a metastable precursor, from sea water. When plotted within the microstratigraphic framework for the study area, the observed characteristic directions from the sampled interval (14.5 cm thick) are in five discrete, layer-parallel, normal- and reversed-polarity zones. The measured northeast-southwest declinations and shallow inclinations probably record Late Devonian magnetostratigraphy on a centimetre scale. The Frutexites bed studied here occurs close to the Frasnian / Famennian (Late Devonian) boundary, a time of mass extinction of a wide variety of marine organisms throughout the world. Anomalously high iridium concentrations observed in the Frutexites bed have suggested to some authors that the mass extinction was caused by meteorite impact. This study concludes that iridium, which is present over the span of five layer-parallel magnetic reversals, was concentrated over a long period of time by biologic processes. Thus, the Canning Basin iridium anomaly may be unrelated to meteorite impact. ^1";
- 3799 s[3796] = "GEORGE A.D., PLAYFORD P.E., POWELL C.McA. (1995).- Platform-margin collapse during Famennian reef evolution, Canning Basin, Western Australia.- Geology 23, 8: 691-694.- FC&P 25-1, p. 52, ID=3065^Topic(s): reefs, margin collapse; reefs; Systematics: ; Stratigraphy: Devonian Fam; Geography: Australia, Canning Basin^Sedimentological investigations of well-exposed slope strata in the Upper Devonian reef complexes of the northern Canning Basin lead to a sequence-stratigraphic interpretation that differs from others based on predictive models in which coarse carbonate debris deposits are regarded as lowstand deposits. In the upper Frasnian-Famennian Napier Range slope succession, we recognize an important phase of platform-margin collapse during a sea-level highstand in the middle Famennian. At this time the reef-rimmed margin was rapidly prograding, and the platform was producing carbonate grains (notably ooids and peloids) that were being transported by turbidity currents to the slope and basin floor. Periodic collapse of the platform margin led to deposition on the slope of allochthonous blocks of reefal limestone and channelized debris-flow units, intercalated with the ooid-peloidal turbidites and quartzo-feldspathic sandstones. Collapse of the early-cemented margin was probably triggered by gravitational instability caused by oversteepening during rapid progradation and/or tectonic activity, with falling blocks initiating some of the debris flows.^1";
- 3800 s[3797] = "PAUL J. (1996).- Stromatolites of the Canning Basin (Upper Devonian, W-Australia).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation

I. Reef Evolution]: pp ???.- FC&P 26-1, p. 46, ID=3620^Topic(s): stromatolites; stromatolites; Systematics: ; Stratigraphy: Devonian U; Geography: Australia, Canning Basin^In the Canning Basin of Western Australia stromatolites are very abundant in marine sediments overlying Frasnian reefs. There are stratiform and columnar types in beds of some meters thickness as well as small bioherms of the same size. They are associated with normal marine fossils like sponges, corals, crinoids, brachiopods, ammonoids, and conodonts. Growth rates of stromatolite beds were very low. Stromatolite bearing beds are preferentially red probably due to the presence of hematite indicating oxidizing conditions as a consequence of low productivity. Crinoidal fastholds are very common at the surface and within stromatolites. They prove a very early lithification as they need a hardground for settling. The syndimentary lithification may be the reason for the preservation of the stromatolites as their potential of fossilization is usually relatively low.^1";

3801 s[3798] = "WOOD R.A. (1998).- Novel reef fabrics from the Devonian Canning Basin, Western Australia.- Sedimentary Geology 121: 149-156.- FC&P 28-1, p. 57, ID=4000^Topic(s): reef fabrics; reef fabrics; Systematics: ; Stratigraphy: Devonian Fra; Geography: Australia, Canning Basin^Large cement-filled cavities (0.2 to 1.5 m wide) are well developed in slope-margin sediments of the spectacular Upper Devonian (Frasnian) reefs of the Canning Basin, Western Australia, where they account for up to 50% of the primary porosity. These are here interpreted as primary reef framework cavities formed beneath a variety of domal, tabular, or laminar stromatoporoid sponges. Of particular note are those created by unusual, very thin (2 to 8 mm) laminar stromatoporoids (mainly *Stachyodes australe*), that formed arching hollow domes up to 0.3 m in height and 1.5 m in diameter over the sediment surface to enclose flat-based cavities. The free undersurface of these stromatoporoids often supported a hitherto unrecognized cryptic community, dominated by pendant growth of the putative calcified cyanobacterium *Renalcis*, with rare intergrown lithistid sponges and spiny atrypid brachiopods. The uneven growth surface of the cryptos imparts an irregular stromatactis-like texture to the upper surface of the remaining cavity, which is filled by early marine, finely banded fibrous cements (mainly radial calcite) embedded with often multiple generations of geopetal cement containing peloids and ostracod debris. This ecology yields the tabular stromatoporoid-*Renalcis* fabric described ubiquitously from the Canning Basin reef complex. Such unusual reef fabrics are a consequence of the ecology of shallow-water marine mid-Palaeozoic reefs which were quite unlike that of modern coral reefs. The frequent preservation of relatively delicate, in situ communities was due to (1) rapid and pervasive early cementation, (2) growth under non-energetic conditions, and (3) the relative insignificance of bioeroders associated with reefs at this time.^1";

3802 s[3799] = "PLAYFORD P.E. (1973?).- Devonian reef complexes of the Canning Basin, Western Australia.- Annales de la Societe geologique de Belgique Liège 95, 2: 399-400.- FC&P 2-2, p. 18, ID=4809^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Devonian; Geography: Australia, Canning Basin^^1";

3803 s[3800] = "MATTER A. (1984).- The Devonian reef complex of the Canning Basin (Australia).- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 9.1-9.11.- FC&P 13-1, p. 11, ID=6322^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Devonian; Geography: Australia, Canning Basin^The Devonian reef belt of the Canning Basin is one of the best exposed and best preserved ancient reef complexes of the world. The reefs crop out over about 350 km in a 1.5 to 50km wide zone along the northern margin of the Canning Basin. This zone, called the Lennard

Shelf is bounded on the north by the Precambrian rocks of the Kimberley Block and to the south by the deep Fitzroy Trough. A marginal fault (Pinnacle Fault) with a throw of about 6000 m displaces the Fitzroy Trough from the Lennard Shelf. * As a result of block faulting preceding the beginning of reef growth in Middle Devonian times a relief of locally up to 1000m was formed. The reefs were established on this rugged topography along the coasts of the Kimberley Block and also surrounded offshore islands. It is thought that they once also flanked the shores of the Kimberley Basin to the west and north over a distance of another 1000km. Thus the "Great Devonian Barrier Reef"; as it was called by Teichert (1943) in analogy to the modern Great Barrier Reef is quite an appropriate term. [extracted from an introduction]^1";

3804 s[3801] = "PLAYFORD P.E., COCKBAIN A.E., HOCKING R.M., WALLACE M.W. (2001).- Novel paleoecology of a post-extinction reef: Famennian (Late Devonian) of the Canning Basin, northwestern Australia: Comment. [with subsequent reply by Rachel Wood].- *Geology* 29, 12: 1155.- **FC#038;P 31-1**, p. 73, ID=7111^Topic(s): reefs, bioconstructors; reefs; Systematics: ; Stratigraphy: Devonian Fam; Geography: Australia, Canning Basin^[the relative roles of stromatoporoid/coral and calcimicrobe reefs in Frasnian-Givetian and Famennian intervals in the Canning Basin are discussed in the light of Wood's paper in *Geology* 28: 987-990]^1";

3805 s[3802] = "WOOD R. (2001).- Reply by Rachel Wood. [to Playford et. al. 2001; *Geology* 29: 1155].- *Geology* 29, 12: 1156.- **FC#038;P 31-1**, p. 73, ID=7116^Topic(s): reefs, bioconstructors; reefs; Systematics: ; Stratigraphy: Devonian Fam; Geography: Australia, Canning Basin^[the relative roles of stromatoporoid/coral and calcimicrobe reefs in Frasnian-Givetian and Famennian intervals in the Canning Basin are discussed in the light of Wood's paper in *Geology* 28: 987-990]^1";

3806 s[3803] = "WOOD R. (2004).- Palaeoecology of a post-extinction reef; Famennian (Late Devonian) of the Canning Basin, north-western Australia.- *Palaeontology* 47, 2: 415-445.- **FC#038;P 33-1**, p. 102, ID=7200^Topic(s): reefs, post-extinction; reefs; Systematics: ; Stratigraphy: Devonian Fam; Geography: Australia, Canning Basin^Reefs were decimated by the Frasnian/Famennian (Late Devonian) mass extinction event (371 Ma) and are assumed to have survived only as depauperate calcimicrobial communities dominated by disaster taxa. Descriptions of Famennian proximal reef-slope communities within the Windjana Limestone, Canning Basin, north-western Australia, show that, notwithstanding the loss of large metazoans, novel ecologies were established in this setting by a rich biota of survivor and progenitor taxa. Diverse calcimicrobes, together with algae, crinoid, bryozoans, brachiopods and abundant sponges (stromatoporoids, inozoans, sphinctozoans, lithistids and hexactinellids) formed a reef framework of either elevated platy structures up to 4m in diameter and 0.35m thick, or mounds up to 15m in diameter. This framework was dominated by a complex intergrowth of calcimicrobes where *Rothpletzella* formed the primary framework, *Ortonella* and *Girvanella* were secondary encrusters, and *Shuguria* spp. occupied small crypts 2-30mm in diameter. Contiguous columnar stromatolites up to 50mm in height and 1m in width grew upwards from substrate sheltered beneath large sheltered primary cavities; based on minimum growth rates of 50-100 $\mu\text{m}/\text{year}$ these are estimated to have been 500-1000 years old. The elevated platy community is inferred to have grown in conditions of episodic siliciclastic sediment input; the reef mounds grew during either episodes, or in localized areas, of low sedimentation. At least 14 species of spicular sponges are now identified from the Windjana Limestone where only two were previously documented. These fore-slope reef communities exposed in Windjana Gorge flourished in high energy carbonate environments dominated by coated grain sediments and, where rapid, early lithification was pervasive. * Such observations demonstrate that no protracted interval of time was

necessarily required for post-extinction recovery; in regions where some reef-building taxa survived and suitable carbonate habitats persisted or returned. Moreover, they show that new ecologies, rather than remnants of the pre-extinction community, could be established rapidly. The reef-slope communities of the Windjana Limestone offer little evidence to support the ideas of resurgence or invasion of taxa from deeper waters after the Frasnian-Famennian extinction event. Indeed, there is evidence to suggest that similar microbial-sponge communities were already established in margin and reef slope communities in the latest Frasnian. As such, the most dramatic ecological changes caused by the extinction occurred in back-reef communities, [original abstract]^1";

- 3807 s[3804] = "WEBB G., JELL J.S. (2002).- A new species of Palaeacis from western Australia.- Coral Research Bulletin 7: 221-227. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 34, ID=7106^Topic(s): new species; Tabulata Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Vise; Geography: Australia w^Palaeacis irregularis n.sp. is described from the middle to lowermost upper Visean Utting Calcarenite from the Bonaparte Basin of western Australia. The species is characterised by: 1) wedge-shaped corallum; 2) occurrence of all corallites within a single plane; 3) divergence of mature corallites away from each other so as to end up as isolated tubes; and 4) sessile, attached or free-living habits. Palaeacis irregularis n.sp. does not bear close affinities to any described Palaeacis species from the Lower Carboniferous of eastern Australia, although it conceivably could be derived from the P. cuneiformis group, which occurs in eastern Australia. Regardless, the difference between P. irregularis and relatively well known forms in eastern Australia supports the palaeobiogeographic distinction of the two regions. [original summary]^1";
- 3808 s[3805] = "SARTI M., RUSSO A., BOSELLINI F.R. (1992).- Rhaetian strata, Wombat Plateau: analysis of fossil communities as a key to Palaeoenvironmental changes.- Proceedings of the Ocean Drilling Program, Scientific Results 122 [von Rad U., Haq B.U. et al. (eds)]: 181-195.- FC&P 23-1.1, p. 78, ID=3304^Topic(s): reefs, biocoenoses; reefs; Systematics: ; Stratigraphy: Triassic Rhaet; Geography: Australia, Wombat Plateau^A Rhaetian fossil reef on the Wombat Plateau (northern Exmouth Plateau, northwest Australia) is studied. Vertical changes in fossil populations and sediment types are shown. A coral assemblage includes corals of the genera Retiophyllia and Astreomorpha. ^1";
- 3809 s[3806] = "PICKETT J.W. (1982).- Vaceletia progenitor, the first Tertiary sphinctozoan (Porifera).- Alcheringa 06: 241-247.- FC&P 12-1, p. 44, ID=6186^Topic(s): nomenclature; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Eocene; Geography: Australia w^Vaceletia progenitor sp.nov., the first sphinctozoan of Tertiary age, is described from the Late Eocene Pallinup Siltstone of western Australia. The name Vaceletia is introduced as a nomen novum for Neocoelia Vacelet (1977), the first extant sphinctozoan, preoccupied by Neocoelia McKellar (1966). [original summary]^1";
- 3810 s[3807] = "WIEDENMAYER F. (1989).- Demospongiae (Porifera) from northern Bass Strait, southern Australia.- Mem. Museum of Victoria 50, 1: 1-242.- FC&P 19-1.1, p. 20, ID=2575^Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Australia s^^1";
- 3811 s[3808] = "REITNER J., PAUL J., ARP G., HAUSE-REITNER D. (1996).- Lake Thetis Domain Microbialites - a Complex Framework of Calcified Biofilms and Organomicrites (Cervantes, Western Australia).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Oekentorp F. (eds): Global and Regional Controls on

- Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 27, ID=3573Topic(s): reefs microbialites; reefs, microbialites; Systematics: Monera; Stratigraphy: Recent; Geography: Australia WLake Thetis is a small saline lake with an increased alkalinity and abundant domal microbialites. These microbialites exhibit a rough stromatolitic structure. The recent growth results mainly from calcifying Entophysalis-biofilms which are forming a more or less laminated crust. Within the deeper parts of the Entophysalis-biofilm the outer basophilic polysaccharide envelopes contain abundant heterotrophic bacteria. Calcification events exactly start at these points. The older, subfossil portions of the microbialites are characterized by plumosely arranged Scytonema-filaments which are enclosed by fibrous aragonite. Within small cryptic primary and secondary cavities clearly laminated organomicrites are lining the cavity walls. The formation of this type of "microstromatolites" is related to organic films, which contain no active microbes. These organic films are composed of degraded organic material (polysaccharides, proteins etc.) acting as matrices and templates for nucleation and growth of organomicrites and fibrous aragonite crystals.^1";
- 3812 s[3809] = "AYLING A.L., STONE S., SMITH B.J. (1982).- Catalogue of types of sponge species from southern Australia described by Arthur Dendy.- Rep. Natl. Mus. Victoria 1: 97-109.- FC&P 11-1, p. 26, ID=6116Topic(s): collections, types; sponges collections; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia S^^1";
- 3813 s[3810] = "BURNE R.V., MOORE L.S. (1993).- Microatoll Microbialites of Lake Clifton, western Australia: Morphological Analogues for Cryptozoon proliferum Hall, the first formally-named Stromatolite.- Facies 29, 1-2: 149-168.- FC&P 23-1.1, p. 87, ID=6840Topic(s): carbonates microbial; microbialites; Systematics: ; Stratigraphy: Recent; Geography: Australia W^^1";
- 3814 s[3811] = "JELL P.A., JELL J.S. (1976).- Early Middle Cambrian corals from western New South Wales.- Alcheringa 01: 181-195.- FC&P 7-2, p. 17, ID=5619Topic(s): coralomorpha; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian M; Geography: Australia, New South Wales^Three forms: Cothonion sympomatum gen. et sp.nov. with a bi-radially septate operculum, and the new species lissa and daseia of the genus Lipopora gen. nov. are described from the early Middle Cambrian Coonigan Formation in the Mootwingee district of western New South Wales, Australia. They may be representatives of hitherto unknown groups of organisms, but they are tentatively interpreted as coelenterates that reached a level of development comparable with the Anthozoa. Cothonion is placed in the new family Cothoniidae and questionably referred to the Rugosa. Lipopora is considered to be similar to Coelenteratella Korde; both are grouped in the new family Lipoporidae and tentatively referred to the Tabulata. [original summary]^1";
- 3815 s[3812] = "KRUSE P.D. (1978).- New Archaeocyatha from the Early Cambrian of the Mt. Wright area, New South Wales.- Alcheringa 02: 27-47.- FC&P 7-2, p. 14, ID=5609Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia, New South Wales^^1";
- 3816 s[3813] = "KRUSE P.D. (1982).- Archaeocyathan biostratigraphy of the Gnalta Group at Mt. Wright, New South Wales.- Palaeontographica A177: 129-212.- FC&P 11-2, p. 34, ID=6170Topic(s): biostratigraphy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Australia, New South Wales^This substantial work deals with a diverse Archaeocyathan assemblage preserved in limestone lenses within a volcanic sequence of the Gnalta Shelf of western New South Wales, Australia. The early Cambrian stratigraphic column commences with basic

volcanics (Mount Wright Volcanics), which are succeeded by tuffs and cherts (Cymbric Vale Formation) and finally by limestones and shales of the Coonigan Formation. Archaeocyath-bearing lenses are present in the first two formations. Two successive faunas are evident: a lower, probably later Atdabanian fauna and an upper, more diverse, early Lenian fauna which includes several species previously described from South Australia. Globally, strongest faunal affinities are with the Siberian region. Comments on Archaeocyathan classification, Australian and intercontinental correlation are included. [original abstract; comments by F. Debrenne: the present publication corresponds mainly to P. Kruse's PhD (Sydney 1980) for which he has done patient, careful and skillful work for several years. The results are clearly exposed and abundantly illustrated in a well-produced book published by Paleontographica. We must compliment the author for his well-documented descriptions and clever comments, his interpretative pen-and-ink sketches, essential for the understanding of the anatomic structures, and his extremely good photographs perfectly printed in well-composed plates, and thank the Commonwealth Postgraduate Research Commission to have given him an Award without which such a beautiful piece of work would not exist.]^1";

3817 s[3814] = "PICKETT J.W., JELL P.A. (1983).- Middle Cambrian Sphinctozoa (Porifera) from New South Wales.- Mem. Ass. Australas. Palaeontols 1 [J. Roberts & P.A. Jell (eds): Dorothy Hill Jubilee Memoir]: 85-92.- FC&P 12-1, p. 12, ID=6176^Topic(s): ; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Cambrian M; Geography: Australia, New South Wales^^1";

3818 s[3815] = "BISCHOFF G.C.O. (1989).- Byroniida new order from early Palaeozoic strata of eastern Australia (Cnidaria, thecate scyphopolyps).- Senckenbergiana lethaea 69, 5/6: 467-521.- FC&P 18-2, p. 41, ID=2493^Topic(s): taxonomy; Scyphozoa ?, Byroniida; Systematics: Cnidaria; Scyphozoa; Stratigraphy: Paleozoic L; Geography: Australia E^Morphological characteristics, zoological affinity, and phylogenetic importance of the "byroniids" have already been discussed by Bischoff 1978b and Glaessner 1984. Taxa from eastern Australia are now formally introduced. The new order Byroniida is established and compared with morphologically similar extinct and extant tube-forming organisms. Morphologically and phylogenetically closest are species of the living scyphopolyp Stephanoscyphus Allman 1874. The new families, the Byroniidae and Prestephanoscyphidae are introduced to accommodate non-septate and septate forms. The new septate genera Prestephanoscyphus and Coadunatoscyphus, and the new species Prestephanoscyphus borensis, P. devonica, P. cobcrensis, P. rosemariae, Coadunatoscyphus waugoolaensis, and C. sp. A are described. Non-septate Byroniidae are represented by the new species Byronia displosa, B. mirrabookaensis, B. petila, and B. n.sp. A as well as by Byronia sp. a aff. B. mirrabookaensis and Byronia ? sp. b.^1";

3819 s[3816] = "WEBBY B.D. (1975).- Succession of Ordovician coral and stromatoporoid faunas from central-western New South Wales, Australia.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 57-68.- FC&P 5-2, p. 8, ID=5423^Topic(s): biostratigraphy; corals stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia, New South Wales^Includes comments on the zoogeographical relationships of the faunas.^1";

3820 s[3817] = "MCLEAN R.A., WEBBY B.D. (1976).- Upper Ordovician rugose corals of Central New South Wales.- Proceedings of the Linnean Society of New South Wales 100, 4: 231-244.- FC&P 8-2, p. 41, ID=5324^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: Australia, New South Wales^Ten species of rugose corals are described and illustrated from the Upper Ordovician (Caradoc)

- Limestones of central New South Wales. They include the new genera *Bowanophyllum* (type species *B. pilatum*) and *Rhabdelasma* (type species *R. exigua*), and four other new species, *Palaeophyllum jugatum*, *P. arrectum*, *Palaeophyllum? patulum* and *P.? laxum*. *Rhabdelasma* is one of the earliest rugosans to show rhabdacanth, occurring in an horizon of probably early Bolindian (late Caradoc) age. The New South Wales Ordovician fauna also exhibits representatives of *Helicelasma*, *Streptelasma?* and *Grewingkia*. [original summary]^1";
- 3821 s[3818] = "WEBBY B.D. (1991).- Ordovician Stromatoporoids from Tasmania.- *Alcheringa* 15: 191-227.- FC&P 22-2, p. 95, ID=3549^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia, Tasmania^New species described: *Stylostroma ugbrookensis*, *S. bubsense*, *Aulacera denensis*, *A. gunnesis*, *Thamnobeatricia gouldi*, *T.? vesiculosa*. Species of *Labechia*, *Stromatocerium*, *Labechiella*, *Pachystylostroma*, *Rosenella*, *Pseudostylodictyon*, *Cystostroma*, and *Alleynodictyon* are described. Early assemblages have closest biogeographic relationships with North America but higher sequence affinities seem to be mainly Asian with some American links.^1";
- 3822 s[3819] = "WEBBY B.D. (1971).- *Alleynodictyon*, a new Ordovician stromatoporoid from New South Wales.- *Palaeontology* 14: 10-15.- FC&P 1-2, p. 19, ID=4669^Topic(s): new taxa; stroms, *Alleynodictyon*; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia, New South Wales^^1";
- 3823 s[3820] = "WEBBY B.D., MORRIS D.G. (1976).- New Ordovician stromatoporoids from New South Wales.- *J. Proc. Roy. Soc. NSW* 109: 125-135.- FC&P 6-2, p. 18, ID=5544^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia, New South Wales^[six species of the genera *Cliefdenella*, *Ecclimadictyon* and *Plexidictyon?* are described and the distribution of related forms is discussed]^1";
- 3824 s[3821] = "WEBBY B.D. (1979).- The oldest Ordovician stromatoporoids from Australia.- *Alcheringa* 03: 237-251.- FC&P 9-1, p. 53, ID=5839^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia, Tasmania^[fauna from the Cashions Creek limestone of Tasmania contains new species of *Labechia*, *Stratodictyon* and *Stromatocerium* and is the approximate of Chazyan faunas of North America; distribution of the earliest Ordovician stroms is reviewed]^1";
- 3825 s[3822] = "WEBBY B.D., BANK M.R. (1976).- *Clathrodictyon* and *Ecclimadictyon* (Stromatoporoidea) from the Ordovician of Tasmania.- *Proc. Roy. Soc. Tasmania* 110: 129-137.- FC&P 6-2, p. 18, ID=5543^Topic(s): ; stroms, *Clathrodictyon*; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: Australia, Tasmania^^1";
- 3826 s[3823] = "WEBBY B.D., SEMENIUK V. (1971).- The Ordovician tabulate coral genus *Tetradium* Dana from New South Wales.- *Proceedings of the Linnean Society of New South Wales* 95: 246-259.- FC&P 1-2, p. 19, ID=4668^Topic(s): ; Tabulata, *Tetradium*; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: Australia, New South Wales^^1";
- 3827 s[3824] = "RIGBY J.K., WEBBY B.D. (1988).- Late Ordovician sponges from the Malongulli Formation of central New South Wales, Australia.- *Palaeontographica Americana* 56: 147 pp.- FC&P 18-1, p. 50, ID=2297^Topic(s): monograph; Porifera; Systematics: Porifera; Stratigraphy: Ordovician U; Geography: Australia, New South Wales^^1";
- 3828 s[3825] = "PERCIVAL I.G., WEBBY B.D., PICKETT J.W. (2001).- Ordovician (Bendigonian, Darriwilian to Gisbornian) faunas from the northern Molong Volcanic Belt of central New South Wales.- *Alcheringa* 25, 2:

211-250.- FC&P 31-2, p. 58, ID=1716Topic(s):taxonomy; fossils; Systematics: ; Stratigraphy: Ordovician; Geography: Australia, New South WalesDiverse shallow water assemblages dominated by brachiopods, molluscs, sponges and stromatoporoids, and a tabulate coral, in the Wahringa Limestone Member (Darriwilian-Gisbornian), and Yuranigh Limestone Member (Gisbornian, or early Late Ordovician) of the Fairbridge Volcanics, are documented from the northern Molong Volcanic Belt in central N.S.W. New species described include Billingsaria spissa, Shlyginia printhiensis and Sowerbyites? wahringaensis. Elements of the Wahringa Limestone Member assemblage such as Labechia banksi, Labechiella regularis, and Maclurites cf. M. florentinensis are biogeographically significant in displaying strong similarities with contemporaneous Tasmanian faunas. The brachiopods Ishimia and Shlyginia from the Yuranigh Limestone Member are recognised for the first time outside Kazakhstan and Sibumasu. The presence of the brachiopod Anoptambonites in allochthonous limestone breccia within the lower Fairbridge Volcanics provides evidence of a regionally significant hiatus of 10-15 Ma duration separating this unit from the underlying Hensleigh Siltstone, of Early Ordovician (Bendigonian) age. The sponge Archaeoscyphia?, from allochthonous limestones in the latter formation, is the oldest macrofossil yet described from the Lachlan Fold Belt in central N.S.W. [original abstract]^1";

3829 s[3826] = "WEBBY B.D. (1992).- Ordovician island biotas: New South Wales record and global implications.- Journal and Proceedings, Royal Society of New South Wales 125: 51-77.- FC&P 22-1, p. 45, ID=3416Topic(s):island biota, phylogeny, biogeography; island biotas; Systematics: ; Stratigraphy: Ordovician; Geography: Australia, New South WalesThe evolutionary and biogeographic significance of stromatoporoids is considered in three paragraphs in this paper which examines the Sepkoski hypothesis that innovative faunas appear inshore and displace older faunas offshore. In NSW the onshore-offshore record of island biotas shows more new taxa and communities produced in mid-outer shelf and slope habitats.^1";

3830 s[3827] = "WEBBY B.D., ZHEN Y.Y., PERCIVAL I.G. (1997).- Ordovician coral- and sponge-bearing associations: distribution and significance in volcanic island shelf to slope habitats, Eastern Australia.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 163-175.- FC&P 26-2, p. 27, ID=3710Topic(s): biocoenoses; coral & sponge associations; Systematics: ; Stratigraphy: Ordovician; Geography: Australia, New South WalesThe Cliefden Caves area of central New South Wales has a well preserved Late Ordovician sedimentary succession that formed in an offshore, near-equatorial, volcanic island setting. Initially fringing deposits (the Fossil Hill Limestone) accumulated, with occurrences of corals such as Tetradium cribriforme, Nyctopora, Bajgolia?, Dualites, Hillophyllum, and stromatoporoids like Cystistroma, Rosenella and Stratodictyon. These were particularly characteristic of the shoal-type, mid-shelf T. cribriforme biofacies, and were contributors to a number of bioherms and biostromes. The succeeding, massive Belubula Limestone accumulated mainly in shallow lagoonal phases of the planated island with only sparse heliolitine corals, Aulopora, Bajgolia?, the stromatoporoids Cystostroma and Alleynodictyon? and the sphinctozoan sponge Belubulaia. The overlying deeper platform carbonates of the Vandon Limestone have a more diverse fauna with T. cribriforme, numerous heliolitines, Palaeophyllum, the sphinctozoan Cliefdenella, and stromatoporoids (Ecclimadictyon, Clathrodictyon), but no indubitable "reefs". Deep water assemblages of the overlying Malongulli Formation include reworked and in situ siliceous sponge associations. Limestone breccias include; (1) clasts with corals (Favistina and favositids) and rare silicified sphinctozoans, presumed to be derived from the adjacent shallow platform; and (2) clasts eroded from the slopes, with a diverse assemblage of demosponges,

hexactinellids and discrete spicules. The in situ Malongulli assemblage occupied a lower slope / basin position, and includes undescribed hexactinellids and abundant spicules. A striking onshore-offshore faunal differentiation exists, with (1) the corals and stromatoporoids, most diversified and abundant in the mid-shelf island settings above wave base, (2) the sphinctozoans, rare constituents of lagoonal to subtidal "level bottom" carbonate platform habitats, (3) the demosponges, most common and diversified in the upper slope, and (4) the hexactinellids, well represented in both upper and lower slope / basin habitats.^1";

3831 s[3828] = "PICKETT J.W., PERCIVAL I.G. (2001).- Ordovician faunas and biostratigraphy in the Gunningbland area, central New South Wales, Australia.- Alcheringa 25, 1: 9-52.- FC&P 31-2, p. 30, ID=7127^Topic(s): geology, fossils; geology, paleontology; Systematics: ; Stratigraphy: Ordovician; Geography: Australia, New South Wales^The Billabong Creek Formation and overlying Gunningbland Formation within the Northparkes Group in the Gunningbland area, 28km west of Parkes, range in age from late Darriwilian (late Middle Ordovician) to late Eastonian (middle Late Ordovician). These strata provide the most complete sequence through this interval in the central Lachlan Orogen in New South Wales. A biostratigraphic zonation spanning the Darriwilian to Gisbornian is proposed, employing conodonts and corals. This supplements the existing coral / stromatoporoid, brachiopod and trilobite faunal assemblages defining Eastonian and Bolindian shelly fossil zones. The Pygodus anserinus Zone (late Darriwilian) in the basal Billabong Creek Formation is succeeded by the Foerstephyllum-Billingsaria-Stratodictyon Assemblage-Zone (of Gisbornian age) in the middle Billabong Creek Formation. A further five Assemblage-Zones extending through the Eastonian succession are formally defined to replace the existing shelly fossil 'faunas'. New coral species described are Billingsaria domica, Eofletcheria subcerioidea, Foerstephyllum nelungaloo, and ?Paleoalveolites explanatus; a possible new species of the conodont Eoplacognathus is described, but not formally named. [original abstract]^1";

3832 s[3829] = "TALENT J.A., MAWSON R., SIMPSON A.J., BROCK G.A. (2002).- Palaeozoics of NE Queensland: Broken River Region: Ordovician-Carboniferous of the Townsville hinterland: Broken River and Camel Creek regions, Burdekin and Clarke River basins.- International Palaeontological Congress 2002 (IPC2002) Field Excursion Guidebook, Macquarie University Centre for Ecostratigraphy and Palaeobiology Special Publication 1: 82 pp., 23 figs, 14 pls; Sydney. [excursion guidebook] - FC&P 31-2, p. 31, ID=7128^Topic(s): geology; geology; Systematics: ; Stratigraphy: Ordovician - Carboniferous; Geography: Australia, Queensland^^1";

3833 s[3830] = "JONES B.G., CHENHALL B.E., WRIGHT A.J., PEMBERTON J.W., CAMPBELL C. (1987).- Silurian evaporitic strata from New South Wales.- Palaeogeography, Palaeoclimatology, Palaeoecology 059: 215-225.- FC&P 16-2, p. 7, ID=2033^Topic(s): geology; geology; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Silurian; Geography: Australia, New South Wales^[includes observations on the environmental distribution of corals and stromatoporoids in a regressive sequence which finishes in evaporitic deposits]^1";

3834 s[3831] = "MCLEAN R.A. (1985).- New Early Silurian rugose corals from the Panuara area, central New South Wales.- Alcheringa 9: 23-34.- FC&P 14-2, p. 34, ID=0913^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: Australia, New South Wales^Cystipaliphyllum conspersum sp.nov., Amplexoides gephyra sp.nov. and Cantrillia webbyi sp.nov. are described from the Bridge Creek Limestone Member, of late early to early middle Llandoveryan age, in

the Panuara area of central New South Wales. This represents the first record in Australia of the genera concerned. The general Asian affinities of the Llandovery and younger Silurian rugose corals of New South Wales are reviewed and related to a Silurian palaeogeographic reconstruction.¹¹;

- 3835 s[3832] = "MUNSON T.J., JELL J.S. (1999).- Llandovery rugose corals from the Quinton Formation, Broken River Province, northeast Queensland.- Memoirs Association Australasian Palaeontologists 21: 1-65.- FC&P 29-1, p. 57, ID=1447^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Llan; Geography: Australia, Queensland^Three late Llandovery rugose coral faunas are described from allochthonous limestones near the base of the Quinton Formation in the north of the Graveyard Creek Subprovince, northeast Queensland. The limestones occur within predominantly siliciclastic turbiditic sediments, and consist of large slumped blocks, calcirudites and calcarenites. These were probably derived from contemporaneous shallow marine areas along the unstable northern margin of a small, rapidly subsiding basin, which developed during the Early Silurian in a probably extensional tectonic setting. Twenty-three species referable to 17 genera are described, including the new taxa: Aphyphyllum leprostylum sp.nov.; Dentilasma benestratum sp.nov.; Holmophyllum hadrakainum sp.nov.; Plektelasma eurybykane gen et sp.nov. (Streptelasmataceae); Spinocarina vitilia gen. et sp.nov. (Palyphyllidae); Amplexoides grayense sp.nov.; Amplistela speciosa gen. et sp.nov. (Arachnophyllidae); and Burota compluvium gen. et sp.nov. (Burotidae fam nov.). Other genera recorded include Tryplasma, Stortophyllum, Rhizophyllum, Cystiphyllum (Cystiphyllum), Palaeophyllum?, Pycnostylus, Lindstroemophyllum?, Grewingia and Cyathactia. The faunas are endemic at the specific level, but have some generic links with faunas of central and southern New South Wales, southern China and to a lesser extent, the Siberian Platform. Age interpretations from the faunas are consistent with associated conodont, graptolite and trilobite age determinations of Telychian (late Llandovery).¹¹;
- 3836 s[3833] = "STRUSZ D.L., MUNSON T.J. (1997).- Coral assemblages in the Silurian of Eastern Australia: a rugosan perspective.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 311-323.- FC&P 26-2, p. 32, ID=3723^Topic(s): biostratigraphy; Rugosa assemblages; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Australia E^Four successive coal assemblages can be recognized in the Silurian of Eastern Australia. The Bridge Creek Assemblage (Rhuddanian-Aeronian) is of limited extent, characterized by species of C. (Cystiphyllum), Grewingia and Calostylis as well as numerous halysitids and Pseudoplasmopora. The earliest arachnophyllids and species of Ptychophyllum occur in the widespread Quarry Creek Assemblage (Telychian-early Sheinwoodian), in which there is greater rugosan and halysitid diversity. The late Sheinwoodian-earliest Gorstian Dripstone Assemblage is mainly characterized by changes in the tabulate fauna, but is also notable for the appearance of Entelophyllum, Holmophyllia, and Zenophila. The Gorstian-Pridoli Hattous Corner Assemblage is a diversification of older faunas (except the halysitids), and is characterized by such rugosans as Phaulactis shearsbyi, Aphyllum lonsdalei, as well as Idiophyllum patulum and species of Toquimaphyllum.¹¹;
- 3837 s[3834] = "MCLEAN R.A. (1974).- The rugose coral genera Streptelasma Hall, Grewingia Dybowski and Calostylis Lindstroem from the Lower Silurian of New South Wales.- Proceedings of the Linnean Society of New South Wales 99, 1: 36-53.- FC&P 4-2, p. 59, ID=5280^Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: Australia, New South Wales^Description de nouvelles espèces: Streptelasma recisum, Grewingia parva, G. neumani, Calostylis

- panuaronsis. Les affinités possibles entre les genres *Grewingkia* et *Calostylis* sont discutées.¹";
- 3838 s[3835] = "MCLEAN R.A. (1975).- Lower Silurian rugose corals from central New South Wales.- J. Proc. R. Soc. NSW 108: 54-69.- FC&P 5-1, p. 31, ID=5377Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Llan; Geography: Australia, New South Wales^[six (four new) species of rugose corals are described from beds of Upper Llandovery age west of Orange, NSW]^1";
- 3839 s[3836] = "MCLEAN R.A. (1975).- Silurian rugose corals from the Mumbil area, central New South Wales.- Proceedings of the Linnean Society of New South Wales 99: 181-196.- FC&P 5-1, p. 31, ID=5378Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian wen Ludl; Geography: Australia, New South Wales^[six (three new) species of rugose corals are described from beds of late wenlock to early Ludlow age in the Mumbil area, NSW]^1";
- 3840 s[3837] = "MCLEAN R.A. (1976).- Aspects of the Silurian rugose coral fauna of the Yass region, New South Wales.- Proceedings of the Linnean Society of New South Wales 100: 179-194.- FC&P 5-1, p. 32, ID=5379Topic(s): distribution; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Australia, New South Wales^[rugose coral biostratigraphy of the Yass region is tabulated; two species and two subspecies of Rugosa are revised and a new, colonial species of Rhizophyllum is described]^1";
- 3841 s[3838] = "MCLEAN R.A. (1977).- Biostratigraphy and zoogeographic affinities of the Lower Silurian rugose corals of New South Wales, Australia.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 102-107.- FC&P 8-2, p. 40, ID=5500Topic(s): biostratigraphy, biogeography; Rugosa, zonation; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Llan; Geography: Australia, New South Wales^[Five distinct coral faunal assemblages have been recognized in the Lower Silurian of Central New South Wales. Two assemblages are of late Lower or early Middle Llandovery age whilst the other three belong to the Upper Llandovery. Differences between largely contemporaneous faunas are attributed mainly to environmental factors. Zoogeographic affinities of the Australian faunas are obscured by the general scarcity of detailed information on Llandovery rugosans elsewhere in the world, but would appear strongest with those of the Siberian Platform region. At present distinct rugose coral faunal provinces in the Lower Silurian cannot be elucidated with any certainty. [original summary]^1";
- 3842 s[3839] = "WRIGHT A.J., BAUER J.A. (1995).- New Silurian corals from New South Wales.- Mem. Ass. Australas. Palaeontols 18: 97-104.- FC&P 25-1, p. 35, ID=3018Topic(s): new taxa; Rugosa, Arachnophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Australia, New South Wales^[Two Silurian tetracorals are described from the ?Ludlow Lookdown Lst, Bungonia, New South Wales: Bungoniella clarkei wright & Bauer gen. et sp.nov., a monotypic thamnasterioid arachnophyllid lacking minor septa and Hedstroemeophyllum? sp. indet, which is unlike known Australian forms. Mazaphyllum currani wright sp.nov., from the late Llandovery (?) Quarry Creek Lst. at Quarry Creek, is also described and figured; known species of Mazaphyllum are reviewed, and it is reinterpreted as a probable arachnophyllid.^1";
- 3843 s[3840] = "MCLEAN R.A. (1974).- Chonophyllinid corals from the silurian of New South Wales.- Palaeontology 17, 5: 655-668.- FC&P 4-2, p. 58, ID=5279Topic(s): taxonomy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: Australia, New South Wales^[une nouvelle espèce est décrite, Ketophyllum attenuatum sp. n.; des affinités entre les genres Ketophyllum, Mictocystis et Yassia sont mises en évidence]^1";

- 3844 s[3841] = "MCLEAN R.A. (1974).- Cystiphyllidae and Goniophyllidae (Rugosa) from the Lower Silurian of New South Wales.- Palaeontographica A147, 1-3: 1-38.- FC&P 4-1, p. 34, ID=5119^Topic(s): ; Rugosa, Cystiphyllidae Goniophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: Australia, New South Wales^Rugose corals belonging to the families Cystiphyllidae Milne Edwards & Haime and Goniophyllidae Dybowski from the Middle-Upper Llandoveryan of the Orange district, central N.S.W., are described. Cystiphyllidae represented include Cystiphyllum siluriense cylindricum Lonsdale, C. khantaikaense (Zaprudskaya), "Microplasma" cf. lovenianum Dybowski, Dentilasma honorabilis Ivanovskiy, D. ramosum n.sp., Holmophyllum confertum n.sp., Hedstroemophyllum crebrum n.sp. and Angullophyllum warrisi n.gen. et sp. Goniophyllidae include Rhizophyllum antiquum n.sp., being the oldest known record of this genus (Upper Llandoveryan). Generic composition of the Cystiphyllidae is reviewed. The affinities of these genera, together with guidelines for distinguishing them, are discussed.^1";
- 3845 s[3842] = "BIRKHEAD P.K. (1976).- Silurian stromatoporoids from Cheesemans Creek, with a survey of some stromatoporoids from the Hume Limestone Member, Yass, New South Wales.- Rec. geol. Surv. NSW 17, 2: 87-112.- FC&P 5-1, p. 13, ID=5323^Topic(s): ; Stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Wen Ludl; Geography: Australia, New South Wales^This is a strictly systematic study of a sequence of Wenlock and Ludlow faunas in the Lachlan Fold Belt of central New South Wales. Of 27 species, only 3 are new - Labechia oligolepida, Anostylostroma mirrabookense, and Anostylostroma pilaevarium.^1";
- 3846 s[3843] = "PICKETT J.W., JELL J.S. (1974).- The Australian tabulate coral genus Hattonia.- Palaeontology 17, 3: 715-726.- FC&P 4-1, p. 37, ID=5129^Topic(s): ; Tabulata, Hattonia; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Devonian; Geography: Australia E^Hattonia Jones, reinterpreted on type and topotype material of Hattonia etheridgei Jones, the type species, is a Silurian and Devonian favositid. It is characterized by distant groups of tabulae developed at the same level throughout the corallum and by pores which are confined to these levels. The genus is endemic to eastern Australia. Two new species, H. fascitabulata from the lower Gedinian of New South Wales and H. spinosa from the Emsian of north Queensland, are referred to it.^1";
- 3847 s[3844] = "TROTTER J.A., TALENT J.A. (2005).- Early Devonian (mid-Lochkovian) brachiopod, coral and conodont faunas from Manildra, New South Wales, Australia.- Palaeontographica 273, 1-2: 1-54.http:////hdl.handle.net/1959.14/32268.- FC&P 34, p. 39, ID=1242^Topic(s): ; paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Lochk; Geography: Australia, New South Wales^New data are provided for assessing the sedimentary context, palaeoecology and biogeographic affinities of the brachiopod, coral and conodont faunas from Manildra. The deeper-water Maradana Shale shallows upwards into the shallow marine, brachiopod-dominated Garra Limestone The latter is characterised by angular, poorly sorted allochemical constituents, high mud contents, and encrusting algal mats of Girvanella, all implying low-energy conditions with limited post-mortem transport. This is supported by the relatively low degree of valve disarticulation of the silicified brachiopod assemblages. The sedimentological data accord with a shallow (photic zone), open marine environment, with moderate to low-energy conditions of a protected zone within a carbonate platform or shelf-margin. The Garra Limestone is terminated by an influx of clastics and volcanoclastics, the Mandagery Park Formation (redefined). The 55 species of brachiopods from the Garra Limestone at Manildra are referred to 36 genera including two new rhynchonellid genera, Protodorsisus and Discamella, with type species P. similis sp nov.

and *D troparvis* sp, nov. respectively. A new species of the cemented strophomenid, *Colletostracia*, is described but not named. None of the coral and conodont taxa documented appear to be new. [end-fragment of extensive abstract]^1";

- 3848 s[3845] = "ZHEN YONGYI (1996).- Succession of coral associations during a Givetian transgressive-regressive cycle in Queensland.- *Acta Palaeontologica Polonica* 41, 1: 59-88.www.ppp.pan.pl/article/item/app41-059.html.- FC&P 25-2, p. 59, ID=3158^Topic(s): ecology, succession; coral associations; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Giv; Geography: Australia, Queensland^The small solitary coral dominated, *Grypophyllum-Chostophyllum* association, a pioneer coral community, is widely distributed at the base of the Givetian Burdekin Formation of north Queensland in the mixed arkose-carbonate sediments. It is succeeded by fasciculate coral dominated, *Dendrostella trigemne* association, which is mainly associated with wackestone or bioclastic calcirudite of inner shelf, lagoonal or protected environments. The *Australophyllum-Sanidophyllum* association, *Blymatophyllum-Iowaphyllum schlueteri* association, and *Spongophyllum* association, all dominated by in situ, large massive coral colonies, formed biostromal deposits on the margins of the basin. They developed in nearshore environments during the maximum flooding in the region. The *Aphyllum salmoni-Stringophyllum* (*Neospongophyllum*) *bipartitum* association indicates relatively deeper, mid-outer shelf environments connected with maximum flooding in the depocentre and least terrigenous influx. The massive coral dominated *Endophyllum columna-Stringophyllum* (*Stringophyllum*) *isactis* association, developed in the initial regressive phase, forms a distinctive biostromal unit at the top of the Burdekin Formation. The *Lekanophyllum* association developed at the base of the Cultivation Gully Formation in a very shallow nearshore environment with a large terrigenous influx as a result of the basin wide, relatively rapid regression. It is characterised by the abundant occurrence of solitary corals and large sized, cerioid *Endophyllum columna*, which often formed micro-atolls. Rugose corals were better adapted than stromatoporoids to survive of mud influx. [original abstract]^1";
- 3849 s[3846] = "WRIGHT A.J., PICKETT J.W., SEWELL D., ROBERTS J., JENKINS T.B.H. (1990).- Corals and conodonts from the Late Devonian Mostyn Vale Formation, Keepit, New South Wales.- *Mem. Ass. Australas. Palaeontols* 10: 211-254.- FC&P 20-2, p. 49, ID=2917^Topic(s): taxonomy, biostratigraphy; corals, conodonts; Systematics: Cnidaria Chordata; Anthozoa Conodonta; Stratigraphy: Devonian U; Geography: Australia, New South wales^^1";
- 3850 s[3847] = "ZHEN YONGYI (2007).- Revision of *Microplasma parallelum* Etheridge 1899 (Cnidaria: Rugosa) from the Middle Devonian Moore Creek Limestone of New South Wales.- *Proceedings of the Linnean Society of New South Wales* 128: 201-208.- FC&P 35, p. 61, ID=2359^Topic(s): revision; Rugosa, *Microplasma*; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Australia, New South wales^The holotype and sole known specimen of the rugosan coral *Microplasma parallelum* Etheridge 1899 is reassessed. This phaceloid species with only sporadic occurrence of isolated dissepiments or presepiments is here selected as type species of the new subgenus *Loyolophyllum* (*Fasciloyolophyllum*), which is erected to accommodate phaceloid species otherwise resembling *Loyolophyllum* (*Loyolophyllum*). Two other species previously referred to *Fasciphyllum*, from the Devonian of China, are also ascribed to this new subgenus. Review of the concept of *Loyolophyllum* sensu stricto leads to a reappraisal of those species assigned to it.^1";
- 3851 s[3848] = "YU CHANGMING, JELL J.S. (1990).- Early Devonian rugose coral fauna from the Shield Creek Formation, Broken River Embayment, north Queensland.- *Mem. Ass. Australas. Palaeontols* 10: 169-209.- FC&P 20-2, p. 49, ID=2918^Topic(s): ; Rugosa;

- Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Australia, Queensland^1";
- 3852 s[3849] = "YONGYI ZHEN (1995).- Late Emsian rugose corals of the Mount Podge area, Burdekin Basin, north Queensland.- Alcheringa 19: 193-234.- FC&P 25-1, p. 36, ID=3020^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Australia, Queensland^The Laroona Formation and Mount Podge Limestone are defined for the lower conglomerates and micaceous sandstones, and the upper coralline limestones exposed in the Mount Podge area, north Queensland. Acanthophyllum (Acanthophyllum) clermontense-Protomacgeea fauna from these two units (mainly from the Mount Podge Limestone) in the area is of late Emsian age, and comparable with other Emsian to early Eifelian coral faunas from Queensland and New South Wales. Fifteen species belonging to 14 genera (one genus and 7 species new) are described from the Mount Podge Limestone, including Microplasma ronerise (Mansu 1913), Lekanophyllum laroonaense sp.nov., Sanidophyllum sp., Tabulophyllum carinatum sp.nov., Carlinastraea callosa sp.nov., Australophyllum sp., Xystriphyllum cf. dunstani (Etheridge 1911), X. cf. magnum Hill 1942a, Taimyrophyllum pedderi sp.nov., Laroonaephyllum jacki gen. et sp.nov., Acanthophyllum (Acanthophyllum) clermontense (Etheridge 1911), Disphyllum (Disphyllum) paracouvinese sp.nov., Phillipsastrea sp. cf. maculosa Hill 1942a, Protomacgeea minor sp.nov. and Thamnophyllum sp., and one new species Gaynaphyllum runningense sp.nov. from the very top of the underlying Laroona Formation.^1";
- 3853 s[3850] = "JELL J.S., ZHEN Y.Y. (1994).- Middle Devonian rugose coral biostratigraphy of the Fanning River Group, north Queensland, Australia.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 1-6.- FC&P 23-1.1, p. 12, ID=4057^Topic(s): biostratigraphy; stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Australia, Queensland^Coral assemblages (A-F) are recognized in the late Eifelian to Givetian Fanning River Group of the Burdekin Basin, west of Townsville, north Queensland. Assemblages (A-D) are recognized in the upper Big Bend Arkose, the Burdekin Formation, and basal Cultivation Creek Formation in the southern half of the Basin; this area was the late Eifelian to early Givetian depocentre of the Basin. Assemblage (A) is the most diverse and widely distributed; it is correlated with late Eifelian and early Givetian faunas of western Canada, southern China, and western Europe. The middle or possibly late Givetian Assemblage (D), the youngest recognized, is confined to the southern margin of the Basin; Assemblages (E) and (F) are latest Eifelian to early Givetian in the condensed Burdekin Formation on the northern flanks of a central basin high. Assemblage (F) is similar to faunas at the top of the Timor Limestone of northern New South Wales.^1";
- 3854 s[3851] = "WRIGHT A.J. (2008).- Emsian (Early Devonian) tetracorals (Cnidaria) from Grattai Creek, New South Wales.- Proceedings of the Linnean Society of New South Wales 129: 83-96.http:////linneansocietynsw.org.au/recvol.html.- FC&P 36, p. 70, ID=6471^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Australia, New South Wales^The tetracoral species Phillipsastrea scotti sp.nov. and Trapezophyllum grattaiensis sp.nov. are described from strata assigned to the middle Emsian (nothoperbonus to inversus conodont zones: Early Devonian) part of the Cunningham Formation at Grattai Creek, west of Mudgee, N.S.W. For comparison with the former, Phillipsastrea oculoides, from the Early Devonian (late Pragian or early Emsian) Garra Formation in the Wellington area of N.S.W., is revised on the basis of the type material; new longitudinal thin sections show indisputable horseshoe dissepiments and trabecular fans in this species. [original abstract]^1";

- 3855 s[3852] = "ZHEN YONGYI (1990).- Rugose coral faunas from the Fanning River Group of North Queensland.- FC&P 19, 1.1: 37-38. [short note] - FC&P 19-1.1, p. 37, ID=6785^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Australia, Queensland^The Fanning River Group is a shallow marine sequence of arkose, sandstone, siltstone, conglomerate and limestone with rich coral faunas exposed sporadically in the Burdekin Basin, to the west of the Townsville and to the north of Charters Towers, North Queensland. [...] Ten coral assemblages including 43 genera and 79 species and subspecies (among them 32 are new) of the rugose corals have been recognized and serve as a biostratigraphic framework for the group. This sequential succession also represents the lateral, ecologically controlled, replacement. [extracted from the note; the corals indicate the Pragian - Givetian interval (?)]^1";
- 3856 s[3853] = "WRIGHT A.J. (2000).- A new Early Devonian operculate tetracoral genus from eastern Australia.- Records of the western Australian Museum, Supplement 58: 21-35.- FC&P 30-2, p. 21, ID=1573^Topic(s): new taxa; Rugosa, Calceolidae, Chakeola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Australia E^Chakeola, a solitary latest Lochkovian to late Emsian (Early Devonian) new genus of the operculate tetracoral family Calceolidae, is characterized by: opercular septa that are present from adjacent to the median septum to the lateral extremities of the operculum; a lack of rootlets on the counter face of the corallite; a weak counter opercular face in mature specimens; and eccentric growth increments on the external opercular surface. The type species, C. johnsoni new species, is described from latest Lochkovian (pesavis Zone), early Pragian (sulcatus Zone) and late Pragian (pireneae Zone) strata of the Garra Formation, Wellington, NSW. C. whitehousei new species is described from the Ukalunda Beds (perbonus Zone, mid-Emsian), near Ukalunda, Queensland. Specifically indeterminate occurrences of the genus from the Mudgee district in New South Wales are in: the Taylors Hill Formation (?kindlei Zone, late Pragian); the Sutchers Creek Formation (serotinus Zone, late Emsian); and possibly the Mullamuddy Formation (sulcatus Zone, early Pragian). Rhizophyllum calceoloides from the Tabberabbera Formation (Emsian), Victoria also belongs to this new genus. Calceola sinensis and Calceola sandalina acuminata from Emsian strata in northern Vietnam are also assigned to this genus.Chakeola thus ranges from the latest Lochkovian (pesavis Zone) to the late Emsian serotinus Zone; it presumably arose from Rhizophyllum or a related form, and probably gave rise to Calceola in the Emsian in eastern Australia or SE Asia. The occurrence of the genus in eastern Australia and Vietnam provides further evidence of faunal exchange during the Early Devonian. This study concludes that features of the exterior and interior surfaces of the opercula of genera of the Calceolidae are diagnostic at the generic level.^1";
- 3857 s[3854] = "WRIGHT A.J. (1978).- A new Early Devonian solitary'cystimorph' tetracoral from New South Wales.- Alcheringa 03: 135-140.- FC&P 9-1, p. 33, ID=259^Topic(s): new taxa; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Australia, New South Wales^Gubbera regina nov. with an unusually wide stereozone, is described.^1";
- 3858 s[3855] = "WRIGHT A.J. (1981).- A new Phillipsastraenid tetracoral from the Devonian of New South Wales.- Palaeontology 24, 3: 589-608.- FC&P 10-2, p. 65, ID=6082^Topic(s): ; Rugosa, Phillipsastreaeidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: Australia, New South Wales^Fromeophyllum climax gen. et sp.nov. is a phillipsastraenid tetracoral from the Mount Frome Limestone near Mudgee, New South Wales, Australia, where it occurs over a stratigraphical thickness of 98 m, ranging between Dalejan (Early

Devonian) and possibly Eifelian (Middle Devonian) strata. The subfamily assignment is based on a close similarity to *Macgeea touti* Pedder, which appears to be ancestral to *F. climax*. Silicified specimens show *F. climax* to be a polymorphic fasciculate form which undergoes up to three phases of parricidal peripheral increase. When basal structures are preserved, *F. climax* is mostly found attached to various types of fossil skeletons which offered a firm substrate above the muddy sea floor by sheaths of skeletal material. Calcareous specimens show a well-defined vertical series of horseshoe dissepiments outside which are horizontally disposed ranks which consist alternately of mostly horseshoe dissepiments and flat dissepiments. Outside this zone normal dissepiments are developed which are proximally and outwardly inclined. This outermost array of skeletal material often spreads down the side of the colony over the wall of the trunk, demonstrating the presence of a highly extensile edge zone and everted calyx. Polymorphism is manifest in the diameter and number of septa developed in each of the several generations within a colony. [original summary]^1";

3859 s[3856] = "STRATFORD J., AITCHISON J. (1996).- Devonian corals from the upper Barnard River: New age constraints for the Anaiwan terrane, southern New England Orogen, eastern Australia.- N. Jb. Geol. Palaeont. Abh. 201, 3: 289-301.- FC&P 25-2, p. 49, ID=3138^Topic(s): biobstratigraphy; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Devonian L M; Geography: Australia E, Anaiwan terrane^Rugose and tabulate corals were recovered from two localities in the Anaiwan terrane. Fossils from locality A include *Tryplasma* sp. aff. *T. columnare* Etheridge 1907, *Tabulophyllum* sp., *Heliolites* sp., and unidentified favositids and syringoporoids, indicating an Emsian age. The only fossil collected from locality B was *Thamnophyllum* sp., giving a possible Lower to Middle Devonian age for this site. These are the first reported Lower to Middle Devonian fossils from the Anaiwan terrane and provide constraints on the timing of the development of its southern edge.^1";

3860 s[3857] = "JELL J.S., HILL D. (1970).- The Devonian Coral Fauna of the Point Hibbs Limestone, Tasmania.- Papers & Proc. of the Roy. Soc. of Tasmania 104: 16 pp., 6 pls.- FC&P 1-2, p. 14, ID=4645^Topic(s): ; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Devonian Sieg - Eif; Geography: Australia, Tasmania^Of the fourteen species (six new) assigned to eight rugosan and five tabulatan genera, identified in the coral fauna of the Point Hibbs Limestone of the west coast of Tasmania, eleven are systematically examined and illustrated. The genus *Endophyllum* is discussed in relation to *Sinospongophyllum* and *Tabulophyllum*. The microstructure of Silurian and Devonian cystimorphs is considered. The age indicated by the coral fauna is within the range Siegenian to Lower Couvinian and is possibly Emsian.^1";

3861 s[3858] = "JELL J.S., HILL D. (1970).- Revision of the Coral Fauna from the Devonian Douglas Creek Limestone, Clermont, Central Queensland.- Proc. Royal Soc. Queensland 81, 10: 93-120.- FC&P 1-2, p. 15, ID=4646^Topic(s): revision; Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Devonian Ems Eif?; Geography: Australia, Queensland^Nine species, *Cyathophyllum* (*Radiophyllum*) *arborescens*, *Lyrielasma aggregatum*, *Xystriphyllum* sp., *Fasciphyllum rugosum* sp.nov., *Favosites goldfussi*, *Thamnopora randsi* sp.nov., *Cladopora* sp., *Pseudoplasmopora* sp. cf. *P. gippslandica* and *Syringopora jonesi* sp.nov. are described from the Douglas Creek Limestone of the Clermont District, for the first time, and thirteen previously described species are revised. The lectotype of *Acanthophyllum* (*Acanthophyllum*) *clermontense* is redescribed and thin sections figured. The type specimens of *Xystriphyllum dunstani*, *Australophyllum cyathophylloides*, *Thamnopora plumosa* and *Yacutiopora hillae* are refigured. The age of the fauna is considered to be late Emsian or possibly early Couvinian.^1";

- 3862 s[3859] = "BRADSHAW.M.A., HEGAN B.D. (1983).- Stratigraphy and structure of the Devonian rocks of the Inangahua Outlier, Reefton, New Zealand.- New Zealand Journal of Geology and Geophysics 26: 325-344.- FC&P 14-1, p. 55, ID=1038^Topic(s): stratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: New Zealand^The stratigraphy, structure and paleoenvironments of these stromatoporoid-bearing rocks are summarized. Anostylostroma clarum (Pocta) and Stromatopora sp. cf. S. hupschii (Bargatzky) are listed from the Lankey Limestone but not described.^1";
- 3863 s[3860] = "ADACHI N., EZAKI Y., PICKETT J.W. (2006).- Marked accumulation patterns characteristic of Lower Devonian stromatoporoid bindstone: Palaeoecological interactions between skeletal organisms and microbes.- Palaeogeography, Palaeoclimatology, Palaeoecology 231, 3-4: 331-346.- FC&P 34, p. 26, ID=1220^Topic(s): reefs, ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Australia, New South Wales^The growth history of stromatoporoid bindstones is as follows: 1) the laminar stromatoporoid "Aculatostroma" first grew laterally, thereby stabilizing bioclastic sediments; 2) the stromatoporoid growths were partly or totally interrupted in relation to deteriorating habitat conditions, where micritization (leiolites with microborings), and encrustation by thrombolites occurred in succession. However, somewhat ameliorated conditions enabled Syringodictyon to temporarily dominate; 3) surviving parts of "Aculatostroma" again spread vertically and laterally upon the recovery of optimum conditions and; 4) the ceilings of cryptic spaces produced within "Aculatostroma" are affected by micritization (leiolites) and then encrustation of thrombolites. Repeated accumulations at various scales indicate antagonistic interrelationships within skeletal organisms and between skeletal organisms and microbes within their habitable ranges. These accumulation patterns thus provide invaluable clues for biotic interactions between skeletal frameworks and microbes, biological successions in accordance with microenvironmental changes, and resultant depositional sequences of bindstones. [last part of extensive abstract]^1";
- 3864 s[3861] = "COOK A.G. (1999).- An overview of stromatoporoid-dominated Middle Devonian reef complexes in North Queensland.- Memoir of the Queensland Museum 44: 99. [abstract] - FC&P 30-1, p. 32, ID=1516^Topic(s): reefs; reefs stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian M; Geography: Australia, Queensland^^1";
- 3865 s[3862] = "WEBBY B.D., ZHEN Y.Y. (1993).- Lower Devonian stromatoporoids from the Jesse Limestone of the Limekilns area, New South Wales.- Alcheringa 17: 327-352.- FC&P 23-1.1, p. 81, ID=4184^Topic(s): redeposited material; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Ems; Geography: Australia, New South Wales^The fauna of the limestone breccia is interpreted as allochthonous and consists of 11 species including representatives of Actinostroma, Gerronostroma, Schistodictyon, Amnestostroma, Pseudotrurpetostroma, Salairella, Stromatopora, Atopostroma, and Habrostroma. Details of the microstructure of Amnestostroma and Pseudotrurpetostroma are presented for the first time. New species include Gerronostroma vergens, Amnestostroma crassum, Pseudotrurpetostroma jessensis, and P. ripperae. Occurrences of Siberian, S. Chinese and Canadian elements suggest links with these areas. The Jesse Limestone has been interpreted as of late Emsian age but the stromatoporoids seem to have been reworked from earlier Emsian beds.^1";
- 3866 s[3863] = "WEBBY B.D., STEARN C.W., ZHEN Y.Y. (1993).- Lower Devonian (Pragian-Emsian) stromatoporoids from Victoria.- Royal Society of Victoria Proceedings 105, 2: 113-185.- FC&P 23-1.1, p. 81,

ID=4185^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Australia, Victoria^Thirty-seven species representing 23 genera are described from the collections of Elizabeth Ripper and new material. New species include: Atelodictyon hicksense, Clathrodiction? heathense, Amnestostroma holmesae, Parallelopora ampla, Habrostroma tyersense, Columnostroma clathratum, Stellopora porecta. The assemblages represent: i) the lower to mid-Pragian of the Lilydale Limestone and the Coopers Creek Limestone that include: Plectostroma altum, Aculatostroma? sp., Schistodictyon? cylindriferrum, Pseudoactinodictyon sp., Atelodictyon chapmani, Stromatoporella cf. granulata, Tubuliporella calamosa, Amnestostroma holmesae, Salairella lilydalensis, Syringostromella zintchenkovi, Habrostroma tyerense, Columnostroma clathratum, Dendrostroma? sp.; ii) the basal Emsian of the Buchan Caves Limestone that includes: Clathrodiction? heathense, Pseudotrurpetostroma buchannense (and possibly P. ripperae), Syringostromella cf. labyrinthea, Coenostroma sp., Atopostroma distans; iii) the lower to mid-Emsian of the Murrindal Limestone that includes: Petridiostroma delicatulum, Pseudotrurpetostroma sp., Parallelopora ampla, Atopostroma sp. Many genera are more typical of Middle rather than Lower Devonian successions in other areas. The Australian Devonian, and the global Lower Devonian succession of stromatoporoid faunas are reviewed.^1";

- 3867 s[3864] = "BIRKHEAD P.K. (1978).- Some stromatoporoids from the Bowspring Limestone Member (Ludlovian) and Elmside Formation (Gedinnian), Yass Area, New South Wales.- Geological Survey of New South Wales Records 18, 2: 155-168.- FC&P 8-2, p. 50, ID=5726^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Australia, New South Wales^[species of Plexodictyon (new), Intexodictyon, Anonystylostroma, Parallelostroma, Stromatopora, and Stachyodes are described]^1";
- 3868 s[3865] = "COOK A.G., WADE M. (1997).- Symbiotic stromatoporoid - nautiloid Association, Middle Devonian, North Queensland.- Memoirs Queensland Museum 42, 1: 81-89.- FC&P 29-1, p. 44, ID=7032^Topic(s): symbiosis; stroms, Nautiloidea; Systematics: Porifera Mollusca; Stromatoporoidea Cephalopoda; Stratigraphy: Devonian Giv; Geography: Australia, Queensland^The stromatoporoid Clathrocoilon spissa encrusts specimens of Diademoceras obtained from the Middle Devonian (Givetian) Papilo mudstone, Broken River Province and Burdekin Formation, Burdekin Subprovince, north Queensland. Stromatoporoid growth commenced and flourished while nautiloids were in an upright living position. Diademoceras, here described for the first time in Australia, is considered upright benthonic to barely nektobenthonic. [original abstract]^1";
- 3869 s[3866] = "BRUHL D., POHLER S.M.L. (1999).- Tabulate corals from the Moore Creek Limestone (Middle Devonian: Late Eifelian - Early Givetian) in the Tamworth Belt (New South Wales, Australia).- Abhandlungen der Geologischen Bundesanstalt 54: 275-293.- FC&P 28-2, p. 24, ID=1454^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Australia, New South Wales^Tabulate corals from the Middle Devonian (Eifelian - early Givetian) Moore Creek Limestone of the Tamworth - Moore Creek area are re-investigated. Heliolites porosus (Goldfuss 1826), Thamnopora crummeri (Etheridge 1899), Cladopora sp., Alveolites suborbicularis Lamarck 1801, Alveolites sp.nov. aff. hemisphericus (Chernyshev 1937), Syringopora auloporoides de Koninck 1876 and Remesia porteri (Etheridge 1899) are described.^1";
- 3870 s[3867] = "WRIGHT A.J., FLORY R.J. (1980).- A new Early Devonian tabulate coral from the Mount Frome Limestone, near Mudgee, New South Wales.- Proceedings of the Linnean Society of New South Wales 104, 3: 211-219.- FC&P 11-1, p. 52, ID=1780^Topic(s): new

taxa; Tabulata; Systematics: Cnidaria; Tabulata;
 Stratigraphy: Devonian L; Geography: Australia, New South
 Wales^Holacanthopora clarkei sp.nov. is described from late Early
 Devonian beds of the Mount Frome Limestone, near Mudgee, New South
 Wales, Australia. The species and genus are referred here to the
 Micheliniidae (Favositoidea, Tabulata). Difficulties encountered in
 comparing genera of this family, as a result of mode of preservation
 and uncertainty concerning the significance of the various growth
 forms, are discussed.^1";

3871 s[3868] = "POHLER S.M.L. (2001).- Paleogeology, biostratigraphy and
 paleogeography of Favositidae (Tabulata) from the Emsian to Middle
 Devonian Tamworth Group (New South Wales, Australia).- Senckenbergiana
 lethaea [Palaeobiodiversity and Palaeoenvironments] 81, 1: 91-109.-
 FC&P 30-2, p. 25, ID=1579^Topic(s): ecology,
 stratigraphy; Tabulata, Favositida; Systematics: Cnidaria;
 Tabulata; Stratigraphy: Devonian L M; Geography:
 Australia, Tamworth Belt^Different species and species groups of
 the family Favositidae from the Emsian and Middle Devonian limestones
 of the Tamworth Group (N.S.W., Australia) were investigated with regard
 to their paleogeology, biostratigraphy and paleogeography. The Emsian
 Sulcor Limestone Member yielded Favosites sp. aff. F. basalticus
 (Goldfuss), Favosites sp. aff. F. salebrosus Eheridge, Favosites
 stellaris Chernyshev, Squameofavosites nitidus (Chapman), Sq. bryani
 (Jones), Pachyfavosites rariporus Dubatolov, and P. tumulosus Yanet.
 The Middle Devonian Moore Creed Limestone Member yielded Favosites ex
 gr. goldfussi d'Orbigny, exclusively. In the Emsian limestones
 favositids occur in different lithofacies, but mostly in stratified
 biostromes, bedded nodular limestones and Amphipora limestones. In the
 Middle Devonian favositids are found in nodular and lumpy limestones
 which occur at the base and at the top of some successions. A
 relationship between sediment composition and the septal apparatus
 could be detected in F. ex gr. goldfussi. The favositid faunas from
 Tamworth display faunal ties to eastern Australia and various regions
 of Asia. Most striking is the similarity to faunas from the southern
 Tien Shan region. Complex provincial affinities and high diversities
 are displayed by Emsian favositids, whereas Middle Devonian faunas are
 of low diversity and consist of cosmopolitan species.^1";

3872 s[3869] = "PICKETT J.W., RIGBY J.K. (1983).- Sponges from the Early
 Devonian Garra Formation, New South Wales.- Journal of Paleontology 57,
 4: 720-741.- FC&P 13-1, p. 4, ID=6313^Topic(s): ;
 sponges; Systematics: Porifera; Stratigraphy: Devonian
 Lochk Prag; Geography: Australia, New South Wales^Thirteen
 species of fossil sponges from limestones of the Garra Formation of
 late Lochkovan-early Pragian age are described, and their distribution
 within the lower part of the limestone is recorded. The lithistid
 genera Garraspongia and Brianispongia, and the calcisponge
 Radiothalamos are described as new, together with the type species of
 these genera. The new species Devonospongia garrae, Isispongia
 monilifera and Astylospongia tarda are also described. The sponges
 thrived during the deepest-water phase of limestone deposition.^1";

3873 s[3870] = "FAGERSTROM J.A., BRADSHAW M.A. (2001).- Early Devonian reefs
 at Reefton, New Zealand: guilds, origin and paleogeographic
 significance.- Lethaia 35, 1: 35-50.- FC&P 31-1, p. 71,
 ID=1651^Topic(s): reefs, guild structure; reefs; Systematics:
 ; Stratigraphy: Devonian L; Geography: New
 Zealand^Study of 35 systematically collected and 10 semi-random samples
 (about 100 cm² each) from one outcrop of the Lankey Limestone (Emsian)
 near Reefton, New Zealand, indicates that it is a reef framestone built
 by tabulate (4? spp.) and clonal rugose (one sp.) corals, two species
 of stromatoporoids, a few bryozoans (2? spp.) and crinoids. The guild
 structure of the reef community and data on skeletal orientation and
 growth direction further indicate that there was relatively minor
 biostratigraphic alteration of the original community. Skeletons are

either in growth position or tipped, toppled, or even overturned, but they have remained in situ. Other clone-rich Lankey Limestones outcrops in the Reefton area support the notion of an upper shelf reef system and stratigraphic and sedimentologic data suggest that it was located near the Gondwana margin at a paleolatitude of about 35°S. (original abstract). The stromatoporoid species identified are Anostylostroma (now Stictostroma) clarum and Stromatopora hupschii. The first is shown in an outcrop photograph.¹;

3874 s[3871] = "POHLER S.M.L. (1998).- Devonian Carbonate Buildup Facies in an Intra-oceanic Island Arc (Tamworth Belt, New South-Waltes, Australia).- Facies 39, 1: 1-34.- FC&P 27-2, p. 75, ID=3944Topic(s): reefs intra-oceanic; reefs, intra-oceanic; Systematics: ; Stratigraphy: Devonian L M; Geography: Australia, Tamworth Belt^Biohermal and biostromal buildups were investigated in late Early and Middle Devonian carbonate complexes of the Tamworth Belt. The buildup types and subtypes were studied in three regions (Yarramanbully, Sulcor and, Wyaralong') to clarify their paleo-environmental position. Two stages of development are recognized: Incipient bioherms and bioherms. Incipient bioherms are carbonate buildups with organisms which commonly form true bioherms. They dominate the sediment with small growth forms but are not prolific enough to build large bio-frameworks. Small nodular and globular stromatoporoids characterize the incipient bioherms and are interpreted as stunted growth forms. In one location (,Wyaralong') the coarse stromatoporoid calcarenite represents a fore-reef facies, at Sulcor a shallow subtidal setting with moderate water energy can be deduced. The bioherms can be sub-divided into stromatoporoid-, stromatoporoid-Stachyodes-, and stromatoporoid-rugose coral bioherms. Their variable composition probably reflects growth and deposition in different zones of a reef complex and/or different proximity to areas of denudation indicated by high siliciclastic input. In the Tamworth region true bioherms occur only in the Moore Creek Limestone Member (Middle Devonian), and not in older carbonate successions. Biostromes are sub-divided into (1) incipient biostromes with stromatoporoid-heliolitid biostromes and alveolitid biostromes; (2) aggregate biostromes with Amphipora and Stachyodes biostromes; (3) stratified biostromes; (4) mixed aggregate/stratified biostromes. The different types of biostromes are not limited to specific time-intervals, but rather to environmental conditions. (1) Incipient biostromes are characterized by laminar stromatoporoids and tabualte corals. Their forms are interpreted as initial layers of skeletons which were hampered by adverse conditions in growth. The stromatoporoid-heliolitid incipient biostrome (Eifelian Moore Creek Ls. Mbr., Yarramanbully) is characterized by abundance of dislodged laminar, ragged and tabular colonies associated with small globular and nodular heliolitids. An unstable substrate may have caused the growth disruptions. Decreasing grain-size of skeletal debris and increasing mud-content suggests deposition on a bathymetric gradient with deepening to the south. The alveolitid incipient biostrome (Eifelian Morre Creek Ls. Mbr., wyaralong') is composed of nodular limestone with laminar alveolitids, stromatoporoids and Sphaerocodium.¹;

3875 s[3872] = "PICKETT J.W., OCH D.J., LEITCH E.C. (2009).- Devonian marine invertebrate fossils from the Port Macquarie Block, New South Wales.- Proceedings of the Linnean Society of New South Wales 130: 193-217.http:////linneansocietynsw.org.au/recvol.html.- FC&P 36, p. 81, ID=6488Topic(s): taxonomy, stratigraphy, biogeography; paleontology; Systematics: ; Stratigraphy: Devonian Ems - Giv; Geography: Australia, New South Wales^Two assemblages of rugose and tabulate corals, with accessory stromatoporoids and chaetetids, are described from the Touchwood and Mile Road Formations of the Wauchope - Port Macquarie district of northeastern New South Wales. Both assemblages are derived from allochthonous limestone clasts, except that the Mile Road fauna is

accompanied at the same level by branching tabulate corals occurring in the matrix, indicating probable contemporaneity. The fauna from the Touchwood Formation indicates an Early Devonian (Emsian) age. Macrofossils from the Mile Road Formation indicate a broad Middle Devonian, probably Givetian age; conodonts accompanying the coral assemblage yield a precise age in the upper part of the early Givetian varcus Zone. Geographic affinities of the assemblages are typically eastern Australian, so that if terranes are represented in the block, these were not remote. Stratigraphic and structural relationships of the units are discussed. The name Mile Road Formation is formally defined. [listed, and mostly illustrated fossils, are: Chaetetes sp., Coenostroma sp., Endophyllum cf. columna Hill, Acanthophyllum sp., Xystriphyllum cf. mitchelli minus Parker, Phillipsastrea cf. maculosa Hill, Sterictophyllum sp., Favosites salebrosa Etheridge fil., Pachyfavosites sp., Squameofavosites squamuliferus Etheridge fil., Cladopora sp., Thamnopora randsi Jell & Hill, Alveolites sp. A, Alveolites sp. B, Heliolites daintreei group IV Jones & Hill, Spongophyllum sp., Syringopora sp., ?Squameofavosites sp., Heliolites sp., indet. cystiphyllid, indet. large solitary rugosan]^1";

3876 s[3873] = "WEBB G.E. (2000).- The palaeobiogeography of eastern Australian Lower Carboniferous corals.- Historical Biology 15, 1-2: 91-119.- FC&P 31-1, p. 62, ID=1631^Topic(s): biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: Australia E^Eastern Australian Lower Carboniferous (EALC) corals are characterized by high endemism, with endemism indices of 50 in the Tournaisian and 44 in the Viséan. The most closely related coral faunas occur in the Akiyoshi and Kitakami Terranes of Japan. Less robust faunal linkages exist with southeast Asia, south China, northern Siberia and Kazakhstan, suggesting east to north Tethyan linkages on most tectonic reconstructions. Amygdalophyllum appears to have originated in the eastern Australian-Japanese region and then migrated throughout the Palaeotethys during the late Tournaisian and early Viséan. Eastern Australian taxa that lacked such a widespread distribution during the Tournaisian did not spread throughout the Palaeotethys during the Viséan. EALC coral distributions can be explained by a palaeobiogeographical model wherein: 1) shallow-water coral faunas were largely depleted following the Frasnian/Famennian extinction event; 2) dispersal occurred during the late Famennian to early Tournaisian from an oceanic centre to the northeast, in western Panthalassa; 3) eastern Australian coral faunas were isolated from the north by the prevailing southerly current direction and possible coastal upwelling in northernmost Australia and New Guinea, and from the south by cooler high latitudes; 4) endemic taxa arose by vicariance subsequent to geographic isolation. * Sampling of EALC corals is incomplete owing to the restriction of most taxa to shallow carbonate facies, which have very limited geographic and stratigraphic distributions. Hence, EALC coral diversity is probably controlled largely by sample density. Better sampling will be required before coral data can be used to independently constrain EALC palaeolatitude, but the limited incidence of coral-bearing facies may preclude a definitive analysis. * High EALC coral endemism is puzzling in light of the apparently cosmopolitan nature of co-occurring shallow benthos. Hence, either EALC corals were particularly subject to genetic isolation for ecological and/or other reasons, or other EALC invertebrates may prove to have higher levels of endemism than has been assumed. Increased emphasis on detailed reconstruction of phylogenies, and the recognition of homoplasy, in particular, in other EALC benthic invertebrates suggest that they may be less cosmopolitan than is currently accepted. [original abstract]^1";

3877 s[3874] = "WEBB G.E. (1990).- Lower Carboniferous coral fauna of the Rockhampton Group, east-central Queensland.- Mem. Ass. Australas. Palaeontols. 10 [Jell P.A. (ed.): Devonian and Carboniferous coral

studies]: 1-167.- FC&P 20-2, p. 53, ID=2928^Topic(s):taxonomy; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:Carboniferous L; Geography:Australia, Queensland^[...84 coral species are described of which 68 have not been described previously. Included are 3 new genera with type species: Stereodepasophyllum amplexum, Alinkioduncanella crassa, and Dinostrophinx hadros; and 22 new species: Amplexocarinia pumila, Kabakovitchiella? hardingae, Amygdalophyllum archeri, A. minimum, Aphrophyllum edgari, A. julli, Merlewoodia abnormalis, Symplectophyllum densum, S. rosewoodensis, 'siphonodendfon' fasdculiseptaturn, Schoenophyllum dalmaensis, 'Orionastraea' flemingi, Michelinia crassispina, Tumadpora? hillae, Acaciapora jelli, Multithecopora minor, Pseudomemeripora queenslandica, Palaeacis cuneiformis australis, P. cuneiformis granvillensis, P. grandis, P. robusta, and P. serrata. Rockhampton Group corals are grouped into 4 assemblages. Late Tournaisian (Spirifer sol Brachiopod Zone) Assemblage A, in the Gudman Formation, includes small solitary corals and abundant Turnacipora? with rare colonial rugosans. Although not recognized elsewhere in Queensland, it is similar to that of the Rangari Lst., N.S.W. Middle to late Visean (Orthotetes australis, Delepinia aspinosa Brachiopod Zones) Assemblage B, in the Cargoogie Oolite Member, Malchi Formation is a larger fauna of lithostrotionoids, aphrophylloids, and Syringopora. It is recognized in the lower Cannindah Lst. and Washpool Creek Formation. Late Visean (Rhipidomella fortimuscula Brachiopod Zone) Assemblage C, in the Lion Creek Lst., consists of a large fauna of lithostrotionoids, aphrophylloids, and the syringoporoids Multithecopora and Pseudoroemeripora. It is recognized in the upper Cannindah Lst., Liverleigh Lst., Splinter Creek Formation, O'Bil Bil Road Conglomerate, and Mundubbera Sandstone. Late Visean (Marginirugus barringtonensis Brachiopod Zone) Assemblage D, in unnamed limestones on the eastern flank of the Craigilee Anticline, consists of aphrophylloids and Palaeacis and is recognized in the Baywulla and Dakiel Formations and Killala Creek Lst. (fragment of extensive summary)]^1";

3878 s[3875] = "PICKETT J.W. (1994).- Tournaisian corals and conodonts from the Slaughterhouse Creek area, New South Wales, Australia.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 51-67.- FC&P 23-1.1, p. 14, ID=4063^Topic(s):stratigraphy, taxonomy; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Carboniferous Tour; Geography:Australia, New South Wales^A detailed geological map of the Slaughterhouse Creek area, near Gravesend, New South Wales, Australia, is presented, and the Tournaisian and earliest Visean age of the marine formations established using conodonts. A sequence of six informal coral assemblages is described, all of Late Tournaisian age. The new tabulate coral genus Spinuliplena is described, and two new species. The type horizon of the long doubtful genus Cionodendron Benson & Smith has been identified, and most Australian fasciculate species previously referred to Lithostrotion are transferred to it. The cerioid Roemeripora is reported from the Australian Carboniferous for the first time.^1";

3879 s[3876] = "WEBB G.E. (1991).- Late Visean coral-algal bioherms from the Lion Creek Formation of Queensland, Australia.- 11th International Congress on Carboniferous Stratigraphy and Geology, Beijing, China; Compte Rendu 3: 282-295.- FC&P 21-1.1, p. 48, ID=3245^Topic(s):reefs, coral-algal bioherms; reefs; Systematics:Cnidaria algae; Anthozoa; Stratigraphy:Carboniferous Vise; Geography:Australia, Queensland^^1";

3880 s[3877] = "JULL R.K. (1974).- Aphrophyllum and allied Genera of Rugose Corals from Lower Carboniferous (Viséan) Beds in Queensland.- Proc. Roy. Soc. Queensland 85, 1: 1-26.- FC&P 3-2, p. 38,

ID=4952^Topic(s): ; Rugosa, Aphrophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Australia, Queensland^Corals of the genera Aphrophyllum Smith, Aphrophylloides Pickett, Coenaphrodia gen. nov. and Nothaphrophyllum Pickett are described from many localities in the Yarrol Basin of Queensland. With the possible exception of the last genus, all are considered to belong with the Aphrophyllidae, a newly proposed family of rugose corals from Visean beds in Queensland and New South Wales. Amongst the eleven species discussed, the following are newly described: Aphrophyllum diphymorphe, A. medium, A. latevesiculatum, Aphrophylloides variabilis, and Nothaphrophyllum fasciculatum. Correlations of coral-bearing Visean horizons in Queensland are briefly described and it is suggested that the aphrophyllid corals range through the Lower to Upper Visean Orthotetes aspinosa and Delepinea australis zones of the Carboniferous of eastern Australia.^1";

3881 s[3878] = "JULL R.K. (1974).- The Rugose Corals Lithostrotion and Orionastraea from Lower Carboniferous (Visean) Beds in Queensland.- Proc. Roy. Soc. Queensland 85, 5: 57-76.- FC&P 3-2, p. 39, ID=4953^Topic(s): ; Rugosa, Lithostrotion; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Australia, Queensland^Nine species of Lithostrotion and one of Orionastraea are described from Visean beds in the Yarrol Basin and Texas Structural High of Queensland. The fauna is considered to range from the Lower to Upper Visean Orthotetes australis and Delepinea aspinosa zones of eastern Australia. In addition to revision of five previously described species, the following new species are described: Lithostrotion (Siphonodendron) montoense, L. (S.) prolongatum, L. (S.) adjunctum, and L. (S.) textum.^1";

3882 s[3879] = "WEBB G.E. (1989).- Skeletal structure and microstructure in Visean Palaeacis from Queensland.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 199-206.- FC&P 19-1.1, p. 13, ID=2538^Topic(s): microstructures; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Vise; Geography: Australia, Queensland^^1";

3883 s[3880] = "WEBB G.E. (2005).- Quantitative analysis and paleoecology of earliest Mississippian microbial reefs, Gudman Formation, Queensland, Australia; not just post-disaster phenomena.- Journal of Sedimentary Research 75, 5: 877-896.- FC&P 34, p. 92, ID=1348^Topic(s): reefs; reefs; Systematics: Monera; Stratigraphy: Carboniferous L; Geography: Australia, Queensland^Small (> 30m diameter, ~ 9m thick) reefs in the Gudman Formation of Queensland, Australia are the oldest known Mississippian reefs, occurring very near the Devonian-Carboniferous boundary following Late Devonian extinction events. They occur in high-energy, shallow, oolitic grainstones and consist of > 70% microbialite and bound detritus on the basis of point-count analysis. Skeletal organisms, including potential frame-building rugose and tabulate corals, ramose bryozoans, crinoids, and algae, occur in growth position but account for only 4.4% of sampled framework. The microbial framework was syndepositionally rigid on the basis of: (1) vertical and overhanging relief in a high-energy setting, (2) export of framework intraclasts, (3) hard-substrate-encrusting organisms, (4) abundant hard-rock borings, and (5) neptunian dikes. Unusually for Mississippian reefs, stromatolites make up a large part of the framework (~ 32%), but more typical thrombolites are equally abundant. Interfingering of skeletal organisms and microbialites suggests that they grew in well oxygenated, normal marine waters and that microbial biofilms competed effectively with skeletal organisms for available substrate. Abundant and diverse co-occurring skeletal flora and fauna are inconsistent with interpretations of Gudman stromatolites as post-extinction

"disaster taxa". Hence, Gudman reefs are stromatolite-rich examples of a larger class of microbialite-dominated Phanerozoic reefs that occurred with abundant skeletal metazoans in normal marine settings. [original abstract]^1";

- 3884 s[3881] = "WEBB G.E. (1998).- Earliest known Carboniferous shallow-water reefs, Gudman Formation (Tn1b), Queensland, Australia: Implications for Late Devonian reef collapse and recovery.- *Geology* 26, 10: 951-954.- FC&P 27-2, p. 78, ID=3947^Topic(s): reefs, recovery; reefs; Systematics: ; Stratigraphy: Carboniferous Tour; Geography: Australia, Queensland^The Phanerozoic history of reefs extensively has been considered a direct reflection of the history of skeletal reef-building organisms. However, such a relationship does not characterize global mid-Paleozoic reef history. The extinction of most reef-building stromatoporoids and corals at the Frasnian-Famennian boundary correlates with the collapse of North American and European stromatoporoid-dominated reefs, but Western Australian, Russian, and Chinese reefs were much less severely affected until the late Famennian, when algae, calcimicrobes, and nonskeletal microbialites (i.e., stromatolites, thrombolites) declined globally. Additionally, reef recovery was more rapid than previously thought. Small, early Tournaisian (Tn1b) shallow-water reefs in the Gudman Formation of eastern-central Queensland substantially reduce the duration of the "reefless lag time" following Late Devonian reef decline, essentially confining it to the Strunian. Gudman reefs are dominated by microbialite, but contain a diverse, although volumetrically insignificant, skeletal fauna and flora, including large colonial corals, bryozoans, crinoids, brachiopods, and calcareous algae. Hence, mid-Paleozoic reef collapse and recovery reflect an amalgam of more-or-less independent histories of skeletal organisms, calcimicrobes, and nonskeletal microbialites, in response to regional and global environmental parameters, a better understanding of mid-Paleozoic reef history will require detailed local- and regional-scale studies to isolate global from nonglobal signals.^1";
- 3885 s[3882] = "WEBB G.E. (1999).- Youngest Early Carboniferous (Late Viséan) Shallow-Water Patch Reefs in Eastern Australia (Rockhampton Group, Queensland): Combining Quantitative Micro- and Macro-Scale Data.- *Facies* 41, 1: 111-139.- FC&P 28-2, p. 48, ID=4042^Topic(s): reefs, patch reefs; reefs; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Australia, Queensland^Although skeletal organisms have received most of the emphasis in studies on Phanerozoic reef history, the roles of non-skeletal (non-enzymatic) carbonates (e.g., syndimentary cements, automicrite, microbialite, etc.) in reef framework construction are becoming increasingly better understood. One problem in understanding the role of non-enzymatic carbonates in reef construction has been the difficulty in recognizing them in reef facies. whereas skeletal organisms commonly can be recognized and documented in the field, non-enzymatic carbonates may be recognizable only in thin section. This paper describes the application of a new sampling technique that allows the quantitative comparison of skeletal macrofauna and flora with associated non-enzymatic carbonates and other microfaunal/microfloral constituents. The technique involves the point counting of thin sections made from small diameter cores that are systematically recovered from grids and line transects that cover a reasonable area (m²) of reef facies. [part of extensive summary]^1";
- 3886 s[3883] = "PLUSQUELLEC Y., TOURNEUR F. (1992).- Rides septales a organisation de type tetracoralliaire chez Trachypsammia (Tabulate, Permien).- *Lethaia* 25, 4: 429-437.- FC&P 22-2, p. 85, ID=3478^Topic(s): tetracoral septal arrangement; Tabulata, Trachypsammia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: Timor^A rugosan pattern of the septal ridges, formerly described in Kerforneidictyum and Palaeacis, is pointed out in Trachypsammia monoseptata (Permian of Timor) for which

only the 'Median septum' had been observed. *T. monoseptata* exhibits a strong cardinal ridge in dorsal or internal position, just opposite a shorter counter ridge, thus creating a plane of bilateral symmetry. The ridges assumed to be alar can be identified by their proximal ends being in contact with the 'Median septum'. The major ridges (proto- and metaridges) are obvious, the minor ones show only their very proximal ends. *T. monoseptata* could be a calicinal young stage of *T. dendroides*. *T. dendroides* (Permian of Timor) shows a plane of bilateral symmetry, the cardinal ridge is stronger and longer than the others, the counter shorter, the alar ridges can be identified in tranverse sections, major and minor ridges are well developed; the number of ridges is often 32. In *T. xizangensis* (Permian of Tibet) only the bilateral symmetry is known, while there are no data for *T. mediterranea* (Permian of Sicily). The systematic affinities between *Palaeacis* and *Trachypsammia* pointed out on the basis of microstructural data are also supported by the septal ridges pattern. Do *Palaeacis*, *Trachypsammia* and other form a special division of Tabulate corals? That is the question.¹¹;

- 3887 s[3884] = "SORAUF J.E. (1983).- Primary biogenic structures and diagenetic history of *Timorphyllum wanneri* (Rugosa), Permian, Timor, Indonesia.- *Memoirs Association Australasian Palaeontologists* 01 [J. Roberts & P.A. Jell (eds): *Dorothy Hill Jubilee Memoir*]: 275-288.- FC;P 13-1, p. 27, ID=0408Topic(s): microstructures, diagenesis; Rugosa, *Timorphyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: TimorStudy of structures in septa, wall and tabulae within specimens of *Timorphyllum* from Basleo, Timor, indicates that preservation is excellent. Skeletal structures are original rather than relic, as they are formed by present crystal boundaries rather than being inherited from pre-existing crystal fabrics or compositional changes. Scanning electron micrographs of the corals show little or no modification either of the septal trabeculae or of biogenic carbonate generally, and also indicate several generations of cement. Early cementation by coating skeletal calcite with drusy epitaxial calcite took place shortly after burial, and only sporadic and incomplete deposition of blocky cement took place later, perhaps due to insufficient burial to develop the necessary pressure solution to provide sufficient carbonate.11;
- 3888 s[3885] = "FEDOROWSKI J. (1986).- Permian rugose corals from Timor (Remarks on Schoupe & Stacul's collections and publications from 1955 and 1959).- *Palaeontographica* A161 (4-6): 173-226.- FC;P 15-1.2, p. 29, ID=0805Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: TimorThe original thin sections of Schoupe & Stacul (1955, 1959) formed a basis for the reinterpretation of majority of genera and families discussed by those authors. The following new taxa were introduced: *Asserculiniidae* n. fam. with two subfamilies: *Asserculiniinae* n. subfam. and *Duplocariniinae* n. subfam. with *Duplocarina* n.gen. and *D. timorica* n.sp.; *wannerophyllidae* n. fam. with *Productiophyllum* n.gen.; *Lophbillidium* n.subgen. of the genus *Lophophyllidium* Grabau 1928. The ontogeny and morphology of the axial structure make one possible to introduce a new concept of the genus *Verbeekiella* Penecke 1908 and the family *verbeekiellidae* Schoupe & Stacul 1955. The genus *Basleophyllum* Schoupe & Stacul 1959 was transferred to *Polycoeliidae* de Fromental 1861. The generic name *Duplophyllum* Koker 1924 and *Paralleynia* Soshkina 1936 were discussed on a basis of their type species. These type morphologies were compared to those of the species described by Schoupe & Stacul (1959). Some of these species may belong to new, unrelated genera. Formal generic names were not introduced because of incompleteness of the specimens restudied.11;
- 3889 s[3886] = "FEDOROWSKI J. (2004).- Considerations on most Rugosa and *Dividocorallia* from de Groot's (1963) collection.- *Scripta*

Geologica 127: 71-311.- FC&P 33-1, p. 52, ID=1114^Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Timor^Rugose corals reinvestigated herein constitute the main part of the collection described by de Groot(1963). The taxonomy proposed herein differs in several instances from that accepted originally by de Groot. Some changes, such as Petalaxis for Lithostrotionella and Calophyllum instead of Polycoelia, were already introduced in de Groot's unpublished catalogue. Others were introduced in order to match the recent advances in rugose coral systematics. Most systematic changes were based on new microstructural, diagenetic and hystero-ontogenetic studies. These are described in detail for individual species and briefly discussed in the concluding considerations. Trabecular microstructure of septa and its diagenetic alteration was documented for most species. Presence of two kinds of intercorallite walls (partition and dividing walls) was documented on the basis of their difference in microstructure. This was especially important for the genus Petalaxis, allowing proof of a distinction between species representing its nominative subgenus and that distinguished by de Groot as Hillia. A new name Degrootia was proposed for Hillia, is preoccupied by a lepidopteran. Two genera, one new (Arctocorallium gen. nov.), represented by two species, were transferred to the Calyxcorallia (Dividocorallia), the order and subclass not distinguished by de Groot. Both of these species were investigated and documented in particular detail, especially their hystero-ontogeny. The restudied material allowed proof of a distinction between Calyxcorallia and the Rugosa in the insertion of major septa. Also, an uncertain status of minor-like septa that may replace the major septa was demonstrated. Both of these determinations are based on the hystero-ontogeny.^1";

3890 s[3887] = "SORAUF J.E., FREIWALD A. (2002).- Skeletal structure in the rugosan genus Calophyllum from Permian strata of Timor: Comparison with the living deep water coral Lophelia pertusa.- Coral Research Bulletin 7: 191-207. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 34, ID=7104^Topic(s): structures septa; Rugosa Calophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Timor^Skeletal structures within several species of Calophyllum reflect generic microstructure and its diagenesis, and also impact our understanding of diagenetic modification in other Permian corals from Timor. Most of these microstructural features of the septa, axial dark line, stereome coating, arcuate growth fronts (stirne), and tabulae (boden) are well-developed. There has been some controversy regarding their origin, whether biogenic or diagenetic. However, they closely resemble skeletal structures in Lophelia pertusa (collected live) from deep cold waters, here from the Norwegian Shelf in the Atlantic Ocean. This occurrence, along with the nature and timing of microbial infestations in each, indicates the biogenic nature of identical structures in Permian and living corals. The two groups of corals have much in common in their morphology, living environment and nonzooxanthellate nature (apparently), but no phylogenetic relationship between these genera of Paleozoic and modern corals is here postulated. [original summary]^1";

3891 s[3888] = "NIERMANN H.T. (1975).- Polycoeliidae aus dem Oberperm von Basleo auf Timor.- Muenster. Forsch. Geol. Palaeont. 37: 131-225.- FC&P 5-2, p. 9, ID=5431^Topic(s): Rugosa, Polycoeliidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: Timor, Basleo^Describes and illustrates 25 species, including 13 new species and 10 new subspecies.^1";

3892 s[3889] = "SORAUF J.E. (2004).- Permian corals of Timor (Rugosa and Tabulate): history of collection study.- Alcheringa 28, 1: 157-183.- FC&P 33-1, p. 45, ID=7203^Topic(s): research

history; Rugosa Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: Permian; Geography: Timor^The modern history of collection and study of corals in the Permian strata of Timor began in 1911, with a German expedition (J. Wanner, leader) and a Dutch expedition (H. Molengraaff, leader) to collect Permian and Triassic fossils in the colony of Netherlands Timor, and with a survey by the Swiss geologist F. Weber the same year in Portuguese Timor, the eastern portion of the island. Later expeditions led by Jonker (1916) and Brouwer (1937), both of the Netherlands, greatly increased already huge collections of fossils and additionally, understanding of the island's geology. Monographic studies of these coral collections by Gerth (1921), Koker (1924), Schindewolf (1942), Hehenwarter (1951) and Schoupe & Stacul (1955, 1959) have much enhanced the systematic value of these fossil corals, both Rugosa and Tabulata. Locality information and maps containing collecting localities are somewhat scattered (Wanner 1931, Burck 1923, Marez Oyens 1940, Van Bemmelen 1949), but are summarized here. A list of all valid species names (109 Rugosa, 25 Tabulata) is appended to this paper, with type localities and horizon. Serious problems of nomenclature are avoided in this paper by accepting genus names used in Hill (1981), modified by later systematic studies, such as that of Fedorowski (1986), but some unknown number of names in the list of species are to be synonymized, especially since 31 of them are based on a single specimen (e.g. Niermann 1975). The biostratigraphy of these faunas is uncertain, in great part due to the greatest number of corals having been collected from a tectonic melange sequence in the Baun to Basleo structural region, and additionally because of the purchase of huge numbers of fossils from the indigenous people of Timor, with accompanying uncertainties regarding locality and horizon data. The coral fauna of Permian age from Timor needs serious restudy to insure its stratigraphic and palaeontological value, but future study will require new field collection of specimens from relatively complete stratigraphic sequences in the northern & Fatu's belt of outcrops. The huge numbers of individuals of some coral species provide great opportunities for understanding population structure in the faunas. [original abstract]^1";

- 3893 s[3890] = "LAFUSTE J., TOURNEUR F. (1991).- Distribution of the tabulate coral genus *Mirandella Tchudinova* 1986 in the Early Permian.- Occasional Publications ESRI, new series 8B [Nairn A.E.M. & Koroteev V. (eds) - Contributions to Eurasian Geology, papers presented at the International Congress on the Permian System of the world, Perm, Russia, 1991, part 1]: 57-63.- FC&P 22-2, p. 25, ID=3477^Topic(s): microstructures; Tabulata, *Mirandella*; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian Art; Geography: Australia, Tasmania^The genus *Mirandella Tchudinova* 1986 (Tabulate, Cnidaria) is emended and a new species, *M. greeni*, described from the Artinskian of Tasmania. The microstructure of the genus, observed in ultra-thin sections, is very distinctive, with a dark undulating lamina, surrounded by fibers locally arranged in tufts. The presence of a typical reticulate tissue, along with other morphological features, allows the assignment of the genus to the family Pyrgiidae De Fromentel 1861; a microstructural evolution from mostly & lamellar & forms in the Lower Carboniferous to entirely fibrous ones in the Permian can be observed in this family, corroborating a general trend in the Tabulata. The genus *Mirandella* is present in Lower Permian strata of Kamtchatka, Prekolya, Australia, Tasmania and New Zealand. Such a geographical distribution suggests that the genus was well adapted to rather & cold & waters.^1";
- 3894 s[3891] = "RONIEWICZ E., STANLEY G.D.jr, Da COSTA MONTEIRO F., GRANT-MACKIE J.A. (2005).- Late Triassic (Carnian) corals from Timor-Leste (East Timor): their identity, setting and biogeography.- *Alcheringa* 29, 2: 287-303.- FC&P 34, p. 68, ID=1302^Topic(s): ecology, biogeography; Scleractinia;

Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic Carn; Geography: Timor E^Four scleractinian coral taxa are described from limestones within a sandstone-shale sequence correlated with the Late Triassic Babulu Formation, Manatuto township, on the northern coast of Timor-Leste (East Timor). The coral fauna consists of three phaceloid taxa, Paravolzeia timorica gen. et sp.nov., Craspedophyllia ramosa sp.nov., Margarosmia confluens (Muenster), and a generically indeterminate solitary taxon attributed to the family Margarophylliidae. All four corals are related at various taxonomic levels to Carnian faunas from the Dolomites of northern Italy. Previously, only Norian coral faunas were known from the Triassic of Timor. The fauna exhibits both similarities to and differences from Carnian faunas of the Dolomites and helps confirm palaeogeographic affinities with the western Tethys, although during Late Triassic time Timor lay in the distant southeastern portal of the Tethys. Despite isolation from the western Tethys, the presence of two species found also in the Dolomites indicates that larval dispersal occurred between the two areas.^1";

3895 s[3892] = "CHARLTON T.R., BARBER A.J., MCGOWAN A.J., NICOLL R.S., RONIEWICZ E., COOK S.E., BARKHAM S.T., BIRD P.R. (2009).- The Triassic of Timor: Lithostratigraphy, chronostratigraphy and palaeogeography.- Journal of Asian Earth Sciences 36, 4-5: 341-363.- FC&P 36, p. 123, ID=6571^Topic(s): geology; geology; Systematics: ; Stratigraphy: Triassic; Geography: Timor^The palaeontologically rich and lithologically diverse Triassic successions of Timor provide a key stratigraphic and palaeontological link between northwestern Australia and other terranes of former eastern Gondwana (present-day Southeast Asia). Timor is now located in the zone of collision between the northern margin of the Australian continent and island arc terranes bordering the Eurasian plate, with the Triassic successions exposed in a fold-and-thrust belt and an extensive mélangé complex. In the paper embracing results of multidisciplinary geological investigations managed recently in Timor, paleogeographical and palaeoecological conclusions from examination of Carnian corals (found by F. Da Costa Monteiro.) in the Babulu Formation, East Timor, have been included. [abbreviated abstract; the above mentioned coral fauna from Timor was described in two taxonomical publications: Roniewicz et al. (2005) and Roniewicz et Stanley (2009)]^1";

3896 s[3893] = "PICKETT J.W., THOMPSON C.H., MARTIN H.A., KELLEY R.A. (1984).- Late Pleistocene fossils from beneath a high dune near Amity, North Stradbroke Island, Queensland.- Boolaronga Publ., Geol. 167-177.- FC&P 14-1, p. 60, ID=1069^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: Australia, Queensland^The occurrence of a Pleistocene marine fauna dated at 105,000 yr B.P., from south of Amity, North Stradbroke Island, is described. Its coral and molluscan components are listed. The associated fossil plant fragments and spore/pollen so far identified are also given. All components of the fossil assemblages and the morphology of overlying dune and soil profile are used to make some interpretations of the ecological history of the site. A higher sea level of + 3 m, a slightly warmer climatic regime and greater access to oceanic water in the proto-Moreton Bay are indicated. In addition, both geomorphic and soil evidence imply that the dune overlying the coral has been continuously vegetated since soon after its deposition.^1";

3897 s[3894] = "PICKETT J.W. (1981).- A Late Pleistocene coral fauna from Evans Head, N.S.W.- Alcheringa 05: 71-83.- FC&P 11-1, p. 59, ID=6136^Topic(s): reefs, geohistory; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: Australia, New South Wales^An assemblage of hermatypic scleractinian corals occurring landwards of the Pleistocene sandy Inner Barrier system has been referred to the last interglacial period. It comprises at least 20 species, many of which are in growth position,

and is accompanied by a substantial association of molluscs. The richness of the assemblage is indicative of good access of oceanic waters at the time of its formation, so the deposit predates barrier emplacement. The coral occurrences are compared with present-day southern ranges of the scleractinian species (all extant), and the implications for climatic and sea-level conditions in the last interglacial are discussed. A sea-level stand of 4-6 m above that at present obtaining (in accord with Marshall & Thom 1976) and a climatic shift towards a cooler regime equivalent to a minimum of 2° of latitude are concluded. [original summary]^1";

3898 s[3895] = "JOUANNIC C., HOANG C.T., HANTORO W.S., DELINOM R.M. (1988).- Uplift Rate of Coral Reef Terraces in the Area of Kupang, West Timor: Preliminary Results.- Palaeogeography, Palaeoclimatology, Palaeoecology 068: 259-272.- FC&P 18-1, p. 48, ID=2290^Topic(s): neotectonics terraces; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Timor w^A Th/U date of 152,000 years obtained from the prominent fifth step, at 44 m elevation, of a flight of 7 well defined raised reef terraces at Cape Namosain, 5 km west of Kupang, allows inference of a preliminary mean uplift rate of 0.3 mm/yr since the last interglacial. Such a slow uplift rate is supported by the observation of numerous large modern reef platforms and of very limited mid-Holocene emergence - if any - throughout the region. Subject, to confirmation through further dating, this suggests the existence of a more rapid uplift zone in central west Timor, by contrast with the area of Kupang to the west and of northern East Timor and Atauro Island to the east, possibly in relation with the NW-SE seismic tear zone which has been recently pointed out within the subducting plate north of West Timor. One of the main interests in the terraces of Cape Namosain, apart from its neotectonic aspect, resides in the fact that there may be an opportunity to define the 180,000 year old paleo-sea level (terrace VIII of Huon Peninsula): based on the geomorphological interpretation of the series, it could correspond here to the fourth or the sixth terrace. Field investigation and dating in that regard are currently in progress. Another Th/U date of 124,000 years, obtained on the lowest emerged terrace (7 m above low tide) in the southeast of the nearby island of Semau, indicates that this second area has been uplifting little during the last 125,000 years. This, together with the observation of tilts and other structural features, leads to the conclusion that the area to the southwest of Kupang is affected by differential uplifts and block-faulting.^1";

3899 s[3896] = "PICKETT J.W., THOMPSON C.H., KELLEY R.A., ROMAN D. (1985).- Evidence of high sea level during isotope stage 5c in Queensland, Australia.- Quaternary Research 24, 1: 103-114.- FC&P 14-2, p. 17, ID=6693^Topic(s): reefs, sea level changes; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Australia, Queensland^Thirty-nine species of scleractinian corals have been recovered from under a high dune on the western (mainland) side of North Stradbroke Island, eastern Australia. The corals are associated with thin intertidal sediments and their good condition implies burial in situ and preservation in a saturated zone. Most likely this occurred as the coast prograded and a large dune advanced into the littoral zone, burying intertidal sediments and coral. The species assemblage indicates a sheltered environment but one open to the ocean without wide fluctuations in salinity. Three species yielded a mean 230Th/234U age of 105,000 yr B.P. which is significantly younger than the nearest Pleistocene corals at Evans Head, New South Wales. The corals provide evidence of a sea stand near present sea level during isotope stage 5c, which is considerably higher than previously suggested for this period. Their good condition implies that the overlying parabolic dune is of comparable age and formed during that high stand of sea level. Also, the isotope age provides a maximum period for the development of giant podzols in the podzol chronosequences on coastal dunes in southern Queensland. [original

- abstract]^1";
- 3900 s[3897] = "SINCLAIR D.J. (2005).- Non-river flood barium signals in the skeletons of corals from coastal Queensland, Australia.- Earth and Planetary Science Letters 237, 3-4: 354-369.- FC&P 34, p. 103, ID=1367^Topic(s): geochemistry; Anthozoa chemistry; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Australia, Queensland^Two corals from coastal Queensland (Cow and Calf Islands, and Orpheus Island) have been analysed for a suite of trace elements by laser-ablation ICP-MS (LA-ICP-MS). Barium signals in these two corals are `anomalous' in comparison with Ba behaviour seen in other near-shore corals from this region. The two corals display large sharp peaks in spring which do not correlate with markers of river discharge (Y/Ca and fluorescence). This Ba pattern contrasts with `normal` behaviour - characterised here by the patterns previously published for two other coastal Queensland corals (King Reef and Pandora Reef), which display Ba peaks in summer associated with flooding of nearby rivers [see: Sinclair & McCulloch 2004 Corals record low mobile barium concentrations in the Burdekin River during the 1974 flood: evidence for limited Ba supply to rivers? 3x Palaeo 214]. Similarities are observed between the anomalous Ba in the Queensland corals and other published patterns of Ba behaviour in corals from South Africa and the Arabian Sea. This non river-flood Ba behaviour is characterized by large sharp spikes of Ba which are resistant to oxidative cleaning and form a continuous horizon within the corals. Curiously, not all corals from a region display anomalous Ba behaviour despite being in similar environment. The timing of anomalous Ba is consistent within a coral, but may vary from one location to the next. Anomalous Ba spikes are too large to be caused by Ba-rich upwelling, and no single environmental forcing function seems to be able to account for their timing. This combination of observations argues against an exogenous abiotic source for the anomalous Ba signal; instead, it may result from a biological event triggered by a combination of environmental parameters. Three hypotheses are presented, and critically tested against the observations: barite inclusion following phytoplankton blooms, decaying blooms of the blue-green algae *Trichodesmium*, and physiological perturbations associated with coral mass spawning. None of the three hypotheses are fully consistent with all of the observations and it is concluded that no satisfactory explanation currently exists for the anomalous Ba spikes.^1";
- 3901 s[3898] = "EDINGER E.N., BURR G.S., PANDOLFI J.M., ORTIZ J.C. (2006).- Age accuracy and resolution of Quaternary corals used as proxies for sea level.- Earth and Planetary Science Letters 253, 1-2: 37-49.- FC&P 35, p. 97, ID=2421^Topic(s): eustacy; geochemistry Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Quaternary; Geography: Papua New Guinea^The accuracy of global eustatic sea level curves measured from raised Quaternary reefs, using radiometric ages of corals at known height, may be limited by time-averaging, which effects the variation in coral age at given height. Time-averaging was assessed in uplifted Holocene reef sequences from the Huon Peninsula, Papua New Guinea, using radiocarbon dating of coral skeletons in both horizontal transects and vertical sequences. Calibrated δ age ranges varied from 800 to 1060 years along horizontal transects, but weighted mean ages calculated from 15-18 dates per horizon were accurate to a resolution within 154-214 yr. Approximately 40% of the variability in age estimate resulted from internal variability inherent to ^{14}C estimates, and 60% was due to time-averaging. The accuracy of age estimates of sea level change in studies using single dated corals as proxies for sea level is probably within 1000 yr of actual age, but can be resolved to over 250yr if supported by dates from analysis of a statistical population of corals at each stratigraphic interval. The range of time-averaging among reef corals was much less than for shelly benthos. Ecological time-averaging dominated over sedimentological time averaging for reef corals,

- opposite to patterns reported from shelly benthos in siliciclastic environments.¹";
- 3902 s[3899] = "VERON J.E.N., WALLACE C.C. (1984).- Scleractinia of eastern Australia. 5. Family Acroporidae.- Australian Institute of Marine Science Monograph Series 6; 485 pp. ISBN 708119239.- FC&P 14-2, p. 17, ID=6696Topic(s): taxonomy; Scleractinia Acroporidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Australia E¹";
- 3903 s[3900] = "MAXWELL W.G.H. (1973).- Geomorphology of Eastern Queensland in relation to the Great Barrier Reef.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 233-272.- FC&P 3-1, p. 22, ID=4869Topic(s): geology, reefs; geomorphology; Systematics: ; Stratigraphy: Quaternary; Geography: Australia, Queensland¹";
- 3904 s[3901] = "COOK A.G. (1999).- Stromatoporoid palaeoecology and systematics from the Middle Devonian Fanning River Group, north Queensland.- Memoirs of the Queensland Museum 43, 2: 463-551.- FC&P 28-2, p. 36, ID=4032Topic(s): ecology, systematics; Stromatoporoid M; Systematics: Porifera; Stromatoporoida; Stratigraphy: ; Geography: Australia, Queensland¹Thirty-five Stromatoporoid taxa are described from the Givetian lower Fanning River Group, Burdekin Subprovince. Ten faunal communities are recognized based on the study and distribution of Stromatoporoid and selected molluscan taxa and the distribution of tabulate and rugose corals: Burdikenia, Modiomorpha, Stachyodes costulata-Syringopora, Hermatostroma maculatum-Gerronostroma hendersoni, Clathrocoilon spissa-Aulopora, Ferestromatopora heideckeri-Amphipora ramosa-Stringocephalus, Coenostroma-Hermatostroma episcopate, Amphipora pervesiculata, Endophyttum and cephalopod communities. Analysis of Stromatoporoid shape demonstrates the influence of both genetic and ecologic factors. Zonation of skeletal shape, apparent for both biostromal and biohermal complexes, indicates that strong ecologic influences dominated. Substrate type, sedimentation rate and water depth were important controls. Most taxa display a range of shape. Complex overgrowth phenomena between Stromatoporoid taxa, tabulate corals, chaetetids, and algae produced compound skeletons that are most common within nearshore biostroms, and are interpreted to indicate stress imposed by repeated lethal depositional events or by seasonal variations in salinity. Intergrowth of stromatoporoids with tabulate corals Syringoporella sp., and Syringopora sp., a number of rugose corals, and a ?vermetid are documented. Syringoporella sp. is more common in stromatoporoids with irregular skeletal architecture. For Syringoporella sp. an even distribution of corallites within the host, skeletal response to corallite occurrence, and the absence of micritic envelopes suggests a symbiotic relationship with both the coral and the Stromatoporoid accreting at the same rate and maintaining an even growth surface. Six new species of Stromatoporoid are described comprising Gerronostroma hendersoni, Trupetostroma zheni, Euryamphipora merlini, Ferestromatopora heideckeri, Coenostroma budekinense, and Coenostroma wyatti. Biogeographic affinities of the fauna are strongly with the Old World Realm with species level affinities with Guangxi, Poland and Belgium.¹";
- 3905 s[3902] = "WRIGHT A.J., GHENT E.D. (1973).- A metamorphosed coral in an olivine-bearing hornfels from New South Wales.- J. geol. Soc. Australia, 20 (1): 79-84.- FC&P 11-1, p. 52, ID=1781Topic(s): metamorphosed; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: Australia, New South Wales¹A halysitid coral specimen, doubtfully referred to Quepora, was found in a forsterite-phlogopite marble from near Walang, east of Bathurst. * The rocks are probably of hornblende hornfels facies. Some recent reports of

fossils in metamorphic rocks are noted. Alteration of the coral is compared with that seen in less metamorphosed halysitids from elsewhere. Halysitid corals appear to re-crystallize in two stages. First, intertabular and lacunar sparite recrystallize, the former sometimes first developing into 'saw-teeth' (a previously undescribed type of structure); during this phase, walls lose their internal structure. Secondly, tabulae and walls are altered to finely and then coarsely granular calcite. Under certain conditions tabulae are incorporated into recrystallized matrix before the walls.¹;

- 3906 s[3903] = "WRIGHT A.J. (2006).- New genera of Early Devonian calceoloid corals from Australia and France.- *Palaeoworld* 15, 2: 185-193.- FC#038;P 36, p. 70, ID=6470^Topic(s): new taxa; Rugosa Calceolidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L; Geography: Australia, France^Two new Early Devonian genera and species of the family Calceolidae, phylum Cnidaria, are erected; these are *Richtereola disruptus* n.gen., n.sp., from the Emsian (perbonus conodont zone) of the Taemas area, NSW, Australia and from the Emsian Izarne Formation (gronbergi conodont zone) of the Montagne Noire, southern France; and *Savageola unicus* n.gen., n.sp. from the Lochkovian (eurekaensis conodont zone) Mandagery Park Formation at Manildra, NSW, Australia. These taxa are essentially defined on opercular characters; well-preserved opercula are essential for confident generic assignment of calceoloid material. *Savageola* is known only from eastern Australia, but *Richtereola* is known from the Early Devonian of eastern Australia, southern France, South China (where it is represented by *Calceola sandalina naningensis*) and north Vietnam. [original abstract]¹;
- 3907 s[3904] = "HAHN G., PFLUG H.D. (1985).- Polypenartige Organismen aus dem Jung-Präkambrium, Nama-Gruppe von Namibia.- *Geologica et Palaeontologica* 19: 1-13.- FC#038;P 15-1.2, p. 39, ID=0837^Topic(s): problematica; Anthozoa?, Ausiidae; Systematics: Cnidaria; Anthozoa; Stratigraphy: Neoproterozoic; Geography: Namibia^From the Young-Precambrian (Nama-Group) of Namibia 2 polyp-like fossils are described, *Ausia fenestrata* n.g., n.sp. and *Kubisia glabra* n.g., n.sp.; they are grouped with the family Ausiidae n. fam. The first taxon is probably a colonial organism with a large central polyp and many small secondary polyps, whereas the second taxon is a solitary polyp with many tentacles around its terminal oral region.¹;
- 3908 s[3905] = "WOOD R.A., GROTZINGER J.P., DICKSON J.A.D. (2002).- Proterozoic modular biomineralized metazoan from the Nama Group, Namibia.- *Science* 296, 5577: 2383-2386.- FC#038;P 33-1, p. 27, ID=7179^Topic(s): metazoan ?; Systematics: Animalia; Stratigraphy: Neoproterozoic; Geography: Namibia^We describe a Proterozoic, fully biomineralized metazoan from the Omkyk Member (~549 million years before the present) of the northern Nama Group, Namibia. *Namapoikia rietoogensis* gen. et sp.nov. is up to 1 meter in diameter and bears a complex and robust biomineralized skeleton; it probably represents a cnidarian or poriferan. *Namapoikia* encrusts perpendicular to the walls of vertical syndimentary fissures in microbial reefs. This finding implies that large, modular metazoans with biologically controlled mineralization appeared some 15 million years earlier than previously documented. [original abstract]¹;
- 3909 s[3906] = "DEBRENNE F., LAFUSTE J.G. (1979).- *Buschmania roeringi* (Kaeffer & Richter) 1976 a so-called Archaeocyathan and the problem of the Precambrian or Cambrian age of the Nama System (S.W. Africa).- *Geological Magazine* 116, 2: 144-145.- FC#038;P 9-1, p. 50, ID=0296^Topic(s): Archaeocyatha ?; Systematics: Porifera; Archaeocyatha; Stratigraphy: Precambrian ?, Cambrian; Geography: Namibia^Typical inorganic spherulitic structures, the morphology of which are those of gypsum, later pseudomorphed by calcite. Once more the discovery of Archaeocyaths in SW Africa is proved to be a delusion.¹;

- 3910 s[3907] = "PEREJON A., MORENO-EIRIS E. (2006).- Biostratigraphy and paleobiogeography of the archaeocyaths on the southwestern margin of Gondwana.- Zeitschrift der Deutschen Gesellschaft fuer Geowissenschaften 157 [volume in memory of Prof. Franz Lotze]: 611-627.- FC&P 35, p. 44, ID=2322^Topic(s): biostratigraphy, biogeography; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Gondwana SW^The stratigraphic successions analysed with their characteristic archaeocyaths, trilobites, brachiopods, stromatolites, ichnofossils, and small shelly fossils, allow us to establish the paleontological assemblages in each one of the archaeocyathan zones of the Lower Cambrian in the Iberian Peninsula. We also present a correlation proposal between Morocco, Sardinia, France, and Germany.The Lower Cambrian in the Iberian Peninsula is divided into ten archaeocyathan zones, defined by generic assemblages, with reference to trilobite, brachiopod, and stromatolite genera that are found in these successions. The established zones have precise stratigraphical positions and are correlated with the stages published by Russian authors.Zones I, II, and III are assigned to the Lower Ovetian, and correspond to Atdabanian 1 and 2. Zones IV, V, VI, and VII of the Upper Ovetian are equivalent to Atdabanian 3 and 4, and Botomian 1 and 2. Zones VIII and IX of the Lower Marianian are equivalent to Botomian 3. Zones X of the Lower Bilbilian corresponds to Toyonian 1 and 2.^1";
- 3911 s[3908] = "DEBRENNE F. (1975).- Archaeocyatha provenant de blocs erratiques des tillites de Dwyka (Afrique du Sud).- Ann. of South Afr. Mus. 67, 8: 331-361; Capetown.- FC&P 4-2, p. 66, ID=5314^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Africa S^^1";
- 3912 s[3909] = "KAEVER M., RICHTER P. (1976).- Bushmannia roeringi n.gen., n.sp. (Archaeocyatha) aus der Nama-Gruppe Suedwestafrikas.- Paläontologische Zeitschrift 50, 1-2: 27-33.- FC&P 5-2, p. 11, ID=5447^Topic(s): Archaeocyatha ?; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L?; Geography: Namibia^Dans la formation de Bushmann Klippe, attribuée à l'Eocambrien jusqu'à cette découverte, les auteurs décrivent une nouvelle forme rapportée aux Archéocyathes. Depuis 25 ans, des fossiles énigmatiques ont été attribués aux Archéocyathes dans le système de Nama mais les examens ultérieurs par les spécialistes ont jusqu'à maintenant toujours réfuté ces attributions. Dans le cas présent, l'absence de cavité centrale bien définie et de porosité des éléments squelettiques, l'irrégularité des tubes", laissent un très fort doute sur l'appartenance de cette forme aux Archéocyathes. Par contre, elle rappelle les fossiles présentés par le Pr. Sedlak au second Symposium à Paris, dont la position systématique avait prudemment été déclarée incertae sedis. Une comparaison est à envisager.^1";
- 3913 s[3910] = "PARIS F., BOUMENDJEL K., MORZADEC P., PLUSQUELLEC Y. (1997).- Synthèse chronostratigraphique du Devonien de l'Ougarta (Sahara Occidental, Algérie).- Annales de la Societe geologique du Nord 05, 2: 117-121.- FC&P 26-2, p. 60, ID=3738^Topic(s): biostratigraphy; paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Algeria, Ougarta^In the Ougarta area (western Sahara, Algeria) faunas from the Devonian formations of eight sections have been sampled for biostratigraphic purpose. Fossils (graptolites, goniatites) and microfossils (conodonts, chitinozoans, dacroconarids) with a pelagic distribution pattern provide reliable ties with the Devonian chronostratigraphy. Additional data provided by benthic faunas (corals, crinoids, brachiopods, trilobites) are also used to better locate some stage boundaries in this Devonian sequence.^1";
- 3914 s[3911] = "OOSTHUIZEN R.D.F. (1984).- Preliminary Catalogue and Report

on the Biostratigraphy and Palaeogeographic Distribution of the Bokkeveld Fauna.- Trans. geol Soc. S. Africa 87, 2: 125-140.-
 FC&P 14-1, p. 24, ID=6614^Topic(s): collections of fossils; paleontology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian L?M; Geography: Africa S^In the list of fossils, found by himself, author records one genus of rugose and three genera of tabulate corals from the older Paleozoic sediments of the Bokkeveld group of S. Africa. Besides apparently undefined species, the genera Pleurodictyum (tabulate coral) and Zaphrentis (rugose coral) are represented by the species Pleurodictyum bokkeveldense Gevers 1929, and Zaphrentis zebra Schwarz 1909. * Apparently, a specific assignment of forms of the tabulate genera Favosites and Striatopora proved to be impossible.^1";

- 3915 s[3912] = "BIRENHEIDE R., SCHRODER St. (1999).- Neue rugose Korallen-Arten der Gattung Catactotoechus Hill 1954 aus dem Devon der algerischen Sahara (Mittel-Devon/Givetium; Ahanet Becken/Süd-Algerien).- Senckenbergiana lethaea 79, 1: 89-103. [in memoriam Dr. Wolfgang Struve].- FC&P 29-1, p. 55, ID=1435^Topic(s): new taxa; Rugosa, Catactotoechus; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Algeria^Two new rugose coral species, Catactotoechus wendti n.sp. and Catactotoechus angustus n.sp., are described from the middle Givetian (lower varcus Conodont Zone) of the Algerian Sahara (Ahanet Basin). Both species are very closely related to the Catactotoechus known from the Upper Devonian of western Australia.^1";
- 3916 s[3913] = "TOURNEUR F. (1987).- Zemmourella, nouveau genre de Tabule du Devonien moyen du Zemmour Noir (Mauritanie septentrionale).- Geologica et Palaeontologica 21: 51-71.- FC&P 17-1, p. 5, ID=2093^Topic(s): new taxa; Tabulata, Zemmourella; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: Mauritania^We propose the new genus Zemmourella, for the species Z. thamnoporoides (Termier & Termier, 1950) on the base of material from the Middle Devonian of Zemmour Noir in Northern Mauretania. It is a branching Tabulate coral, characterized by the development of calicinal platforms with twelve mural ridges and by the presence of crested convex squamulae; these structures are described for the first time. All these characters allow us to bring this new genus close to the family Pachyporidae and to the subfamily Striatoporinae.^1";
- 3917 s[3914] = "PLUSQUELLEC Y. (1991).- Bourgeonnement chez Saouraepora gigantea et Praemichelinia homofavosa, Tabulata du Devonien d'Algerie.- Geobios 24, 1: 47-57.- FC&P 20-1.1, p. 61, ID=2805^Topic(s): blastogeny; Tabulata, Saouraepora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Algeria^The increase in Saouraepora gigantea (Le Maitre) and in a branching specimen of Praemichelinia homofavosa (Le Maitre), studied by serial acetate peels, is basically of lateral type but a corner pore appears in the preblastic stage and allows to define a new category of increase: lateral increase with apical corner pore. Variations on the basic type are exhibited and they concern the apical corner pore (it is more or less precocious, sometimes divided in two, exceptionally missing), the "cella" (cases of filling up by mural lacuna are described) and the connections of the offset with intramural canals whose existence is rehabilitated.^1";
- 3918 s[3915] = "PLUSQUELLEC Y. (1998).- Pleurodictyidae de l'Emsien superieur des Monts d'Ougarta (Algerie).- Annales de la Societe geologique du Nord 06, 2 ser.: 5-23.- FC&P 27-1, p. 84, ID=3828^Topic(s): taxonomy; Tabulata, Pleurodictyiformes; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Algeria, Ougarta^A precise collection in the well known sections of the Devonian of the Ougarta area (Algeria) allows to give new data about the fauna of Pleurodictyum sensu lato

- previously described by Le Maitre (1952, 1959). Two species, *P. saourense* Le Maitre and *P. rosaceum* Le Maitre, are carefully studied and figured for the first time. Morphological, structural and microstructural data are given. The case of *P. styloporum* sensu Le Maitre 1952 is investigated; the Algerian material does not belong to the American species and may be a new genus. Specimens related to the Armorican species *P. crassum* are identified in Ougarta. A new genus belonging to the Pleurodictyidae and a new species are described: *Pterodictyum lobatum* n.gen., n.sp. Representatives of the genus *Kerforneidictyum* and *Petridictyum* are scarce but the diversity of the Pleurodictyidae during the Upper Emsian in Ougarta is important. The fauna, within the Old World Realm, belongs to the Maghrebo-European area.¹";
- 3919 s[3916] = "KONIGSHOF P., BENSAND M., BIRENHEIDE R., EL-HASSANI A., JANSEN U., PLODOWSKI G., RJIMATI E., SCHINDLER E., WEHRMANN A. (2003).- The Middle Devonian (Givetian) "Gor-al-Hessen" reef-mound (Western Sahara).- *Terra Nostra* 2003, 3: 43-44.- FC&P 33-2, p. 45, ID=1206Topic(s): reefs, mounds; reefs; Systematics: ; Stratigraphy: Devonian Giv; Geography: Sahara W¹";
- 3920 s[3917] = "BOUMENDJEL K., MORZADEC P., PARIS F., PLUSQUELLEC Y. (1997).- Le Devonien de l'Ougarta (Sahara Occidental, Algerie).- *Annales de la Societe geologique du Nord* 05, 2: 73-87.- FC&P 26-2, p. 54, ID=3730Topic(s): ; fossils; Systematics: ; Stratigraphy: Devonian; Geography: Algeria, OugartaThe Devonian sequences cropping out in the Ougarta area (western part of the Algerian Sahara) were studied during a field work realized several years ago. During these investigations eight sections were measured and occasionally abundant faunas were collected. These faunas, including chitinozoans, corals, several brachiopod groups, crinoids, trilobites, and tentaculites are reported on lithological columns corresponding to each section.¹";
- 3921 s[3918] = "BOUMENDJEL K., BRICE D., COPPER P., GOURVENNEC R., JAHNKE H., LARDEUX H., LE MENN J., MELOU M., MORZADEC P., PARIS F., PLUSQUELLEC Y., RACHEBOEUF P., (1997).- Les faunes du Devonien de l'Ougarta (Sahara Occidental, Algerie).- *Annales de la Societe geologique du Nord* 05, 2:, 89-116.- FC&P 26-2, p. 54, ID=3731Topic(s): ; fossils; Systematics: ; Stratigraphy: Devonian; Geography: Algeria, OugartaPalaeontological investigations are carried out on the material collected some years ago in the Devonian outcrops of the Ougarta area, in the western part of the Algerian Sahara. The studied groups include chitinozoans, corals, several brachiopod families, crinoids, trilobites, and tentaculites. The identifications provided by Le Maitre (1952) are discussed and some of them are revised.¹";
- 3922 s[3919] = "PLUSQUELLEC Y., BOUMENDJEL K., MORZADEC P., PARIS F. (1997).- Les faunes du Devonien d'Ougarta dans la paleogeographie des regions Maghrebo-Europeennes.- *Annales de la Societe geologique du Nord* 05, 2: 123-128.- FC&P 26-2, p. 60, ID=3739Topic(s): benthos, geography; paleontology; Systematics: ; Stratigraphy: Devonian Ems; Geography: Algeria, OugartaThe benthic faunas (corals, crinoids, brachiopods and trilobites) identified in the Lower and Middle Devonian formations of the Ougarta area (western Sahara, Algeria) are used in order to depict the timing and the magnitude of fauna migrations through the Rheic Ocean. Our data show the Rheic Ocean had already started its closure phase at the beginning of the Devonian. In upper Emsian time it was no longer wide enough to prevent the migration of benthic organisms. Indeed, by late Emsian, number of genera and species are common both to the Laurussian and Gondwanan margins of the Rheic Ocean. A new paleobiogeographic entity: the Maghrebo-European realm is defined. It includes the more restricted Ibarmahian Domain and North Gondwana Province.¹";
- 3923 s[3920] = "HERBIG H.-G., KUSS J. (1988).- The youngest Carboniferous

- rugose corals from Northern Africa (NE Egypt) - palaeoenvironment and systematics.- N. Jb. Geol. Palaeont. Mh. 1988, 1: 1-22.- FC&P 17-1, p. 22, ID=2126Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Egypt NEThe rugose corals Amygdalophylloides ivanovi, Bothrophyllum pseudoconicum and Pseudozaphrentoides ex. gr. juddi are described from the Carboniferous strata west of the Gulf of Suez (NE Egypt). They indicate an age of middle westphalian C to middle Stephanian B, respectively of middle Moscovian (Podolskian) to Kasimovian and thus are the youngest Carboniferous Rugosa currently known from Northern Africa. According to the microfacies and the associated biota, the corals inhabited shallow subtidal, agitated environment. Palaeobiogeographic connections are discussed.¹;
- 3924 s[3921] = "KORA M., MANSOUR Y. (1991).- Late Carboniferous solitary rugose corals from the western side of the Gulf of Suez, Egypt.- N. Jb. Geol. Palaeont. Mh. 1991: 597-614. [in English, with German summary].- FC&P 20-2, p. 52, ID=2926Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: Egypt, Suez GulfCornute rugose corals from the lower member of the Aheimer Formation in the eastern cliffs of the Northern Galala indicate a late westphalian to Stephanian age and a shallow, quiet normal marine environment for the coral-bearing horizon. Striking faunistic similarities suggest that connections between North Africa, Spain and the Donetz Basin with North America might have continued to the end of the Carboniferous. All identified species belong to the order Stauriida; seventeen are new for Egypt. ¹;
- 3925 s[3922] = "SEMENOFF-TIAN-CHANSKY P. (1972).- Contribution à l'étude des madréporaires simples du Carbonifère du Sahara occidental.- FC&P 1, 2: 7-9.- FC&P 1-2, p. 7, ID=6263Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Sahara W[summary of a paper prepared for "Mémoires du Muséum Nat. Hist. Nat. de Paris" for 1973]¹;
- 3926 s[3923] = "SEMENOFF-TIAN-CHANSKY P. (1974).- Recherches sur les Tétracoralliaires du Carbonifère du Sahara occidental.- Mém. Mus. Nat. Hist. Nat. (série C, Sci. Terre) 30: 316 pp., 76 pls, 4 tabs, 100 figs.- FC&P 3-2, p. 40, ID=6279Topic(s): Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Sahara W[see Semenoff-Tian-Chansky 1972: Contribution à l'étude des madréporaires simples du Carbonifère du Sahara Occidental]¹;
- 3927 s[3924] = "SEMENOFF-TIAN-CHANSKY P., LEMOSQUET Y., PAREYN C., WEYANT M. (1975).- Répartition verticale et spatiale du groupe des Lithostrotionidae du Carbonifère du bassin de Béchar (Sud-Oranais, Algérie).- 3ème Réunion annuelle des Sciences de la Terre, Montpellier, avril 1975.- FC&P 4-1, p. 38, ID=5135Topic(s): distribution; Rugosa, Lithostrotionidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: Algeria, Bechar Basin¹;
- 3928 s[3925] = "LAFUSTE J. (1979).- Microstructure de Cladochonus McCoy, 1847 (Tabulata, Carbonifère).- Geobios 12, 3: 353-363.- FC&P 9-1, p. 45, ID=0282Topic(s): microstructures; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: AlgeriaThe microstructure of two species of Cladochonus from the Algerian Carboniferous, C. crassus (McCoy) and C. cf. tenuicollis McCoy have been studied by ultrathin sections. Their walls consist of : 1. an external fibrous layer, 2. a median layer of undulating lamellae, 3. an internal zone of slender, elongated elements to which the name of "grundulae" is given here. New data are complementing the generic diagnosis of Cladochonus s. str. Some Permian cladochonid forms show different microstructures

- and should, therefore, be shifted to new generic units.¹";
- 3929 s[3926] = "LAFUSTE J. (1983).- Passage des microlamelles aux fibres dans le squelette d'un tabule "micelinimorphe" du Viseen du Sahara Algerien.- Geobios 16, 6: 755-761.- FC&P 13-1, p. 26, ID=0405Topic(s): microstructures; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Vise; Geography: Algeria^The wall of the Tabulate Corals morphologically close to Michelina de Koninck consists of granular median lamina flanked on both sides by sclerenchyme, whose microstructure changes abruptly from a microlamellar to a fibrous type. This requires a revision of the family Micheliniidae, some of whose genera are known to have a lamellar microstructure.¹";
- 3930 s[3927] = "TOURNEUR F., PLUSQUELLEC Y. (1992).- Revision des Tabules carboniferes du Sahara occidental decrits par Stache en 1883.- Geologica et Paleontologica 26: 29-33.- FC&P 21-2, p. 8, ID=3294Topic(s): revision, Stache 1883; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: Sahara w^Two tabulate corals described by Stache (1883) from the Lower Carboniferous (probably Late Tournaisian or Early Visean) of Western Sahara are revised. One of them is an undeterminate Pleurodictyiform; the other one, called "Favosites africana" by Stache, badly preserved, could be assigned with doubt to Michelinia De Konink 1842 sensu lato; we propose to restrict the specific name africana to the holotype only.¹";
- 3931 s[3928] = "MADI A., BOURQUE P.-A. (1996).- Depth-related Ecological Zonation of a Carboniferous Carbonate Ramp: Upper Visean of Bechar Basin, Western Algeria.- Facies 35, 1: 59-80.- FC&P 26-1, p. 89, ID=3658Topic(s): reef facies, ecological zonation; reef facies; Systematics: ; Stratigraphy: Carboniferous; Geography: Algeria^Following the demise of the Stromatoporoid-coral reef community in Late Frasnian time, Lower Carboniferous carbonate shelf profiles possessed a ramp geometry, with major organic buildups represented by mud-rich mounds. Microfacies petrography of the exceptionally well-preserved Upper Visean (Lower Carboniferous) carbonate ramp of the Bechar Basin, Algerian Sahara, may well contribute significantly to our understanding of the paleoecological zonation of Carboniferous non-rimmed platforms, and of the still enigmatic mounds commonly referred to as waulsortian banks or mounds. Facies are grouped into two broad groups: (a) a mound facies group which comprises sponge wackestone-bafflestone, sponge-fenestellid bafflestone-wackestone, crinoid wackestone-packstone, and bedded flanks of intraclastic wackestone-packstone, all four facies composing the actual mud-rich mounds, and (b) a supramound facies group composed of coral-microbial framestone, crinoid packstone-grainstone, algal-foraminiferal grainstone and oolite grainstone. Calcareous algae are important bathymetric indicators and are used to delineate three bathymetric zones based on light penetration: the aphotic zone, which contains no calcareous algae; the dysphotic zone, where there is little ambient light, and which is characterized by the presence of red algae (Fasciella, Ungdarella, Stacheia, Epistacheoides) and absence of green algae; and the euphotic zone, which receives the full spectrum of sunlight, and is characterized by the occurrence of both green algae (Koninckopora, Kamaenella, Kamaena, Palaeoberesella, Calcisphaera, Anthracoporellopsis, Issinella, Exvotahsella) and red algae. Integration of algal zonation, distribution of the other biota, and recurrence of distinct assemblages, enable recognition of seven depth-related benthic assemblages. Together with the physical properties of the facies, the benthic assemblages were used to define seven bathymetric zones, from upper to lower ramp: (1) algal assemblage (upper ramp); (2) crinoid-ramose bryozoan assemblage (mid-ramp); and (3) productid brachiopod assemblage, (4) colonial rugose coral-microbial encruster assemblage, (5) crinoid-fenestellid assemblage, (6) sponge-fenestellid, and (7) sponge assemblage (lower

- ramp). The vertical zonation of the mud-rich mounds and associated facies differ from that reported from the classical Upper Toumaïsan-Lower Visean Waulsortian moundbearing successions.¹¹;
- 3932 s[3929] = "LEGRAND-BLAIN M., ARETZ M., ATIF K. (2010).- Discussion of Carboniferous stratigraphy and depositional environments in the Ahnet Mouydir area (Algerian Sahara) by Wendt et al. (Facies 55, 3: 443-472).- Facies 56, 3: 471-476.- FC&P 36, p. 128, ID=6583Topic(s): stratigraphy, ecology; geology; Systematics: ; Stratigraphy: Carboniferous; Geography: Algeria, SaharaThe attribution of a Bashkirian age to the Berga Limestone and the proposed Late Visean-Serpukhovian hiatus is not supported by the data and discussion presented herein. This also sheds some doubts on the existence of a lower Bashkirian transgression in entire North Africa. Wendt et al. (2009) have questioned the stratigraphic extension of some commonly used groups and organisms, but all data except the three samples containing D. noduliferus of Wendt et al. (2009) point to a Visean-Serpukhovian age. However, the Reggane-Ahnet data in combination to the Spanish data indicate that the first entry of D. noduliferus was possibly during the uppermost (?) Serpukhovian. and thus it is of limited use for defining the base of the Pennsylvanian. This may help to elucidate the confusion at this stratigraphic level, north of the Hoggar as well as on a global perspective. [original conclusions]¹¹;
- 3933 s[3930] = "SCHERER M., WENDT J. (1978).- Diagenese oberpermischer kalkschwamme aus patch-reefs des Djebel Tebega (S. Tunesien).- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 157: 196-202.- FC&P 8-1, p. 50, ID=0212Topic(s): diagenesis; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Permian U; Geography: Tunisia¹¹;
- 3934 s[3931] = "GAUTRET P., RAZGALLAH S. (1987).- Architecture et microstructure des chaetetides du Permien du Jebel Tebaga (Sud-Tunisie).- Annales de Paléontologie (Vert.-Invert.) 73, 2: 59-82.- FC&P 18-1, p. 36, ID=2241Topic(s): structures; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Permian; Geography: Tunisia¹¹;
- 3935 s[3932] = "FLUGEL H.W. (1976).- Numidiaphyllidae, eine neue Familie der Rugosa aus dem Ober-Perm von Sued-Tunis.- N. Jb. Geol. Palaeont. Mh. 1976, 1: 54-64.- FC&P 5-2, p. 8, ID=5424Topic(s): new taxa; Rugosa, Numidiaphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: TunisiaDescribes and illustrates one new genus and one new species in the new family.¹¹;
- 3936 s[3933] = "SENOWBARI-DARYAN B., RIGBY J.K. (1988).- Upper Permian Segmented Sponges from Djebel Tebega, Tunisia.- Facies 19: 171-250.- FC&P 18-1, p. 50, ID=2298Topic(s): monograph; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Permian U; Geography: Tunisia¹¹;
- 3937 s[3934] = "RIGBY J.K., SENOWBARI-DARYAN B. (1996).- Upper Permian inozoid, demosponge, and hexactinellid sponges from Debel Tebaga, Tunisia.- The University of Kansas Paleontological Contributions, New Series 7: 130 pp., 81 pls, 37 figs, 11 tables.- FC&P 25-1, p. 45, ID=3051Topic(s): monograph; Porifera; Systematics: Porifera; Stratigraphy: Permian U; Geography: TunisiaFossil sponge faunas from Upper Permian reefs and inter-reef rocks in the Djebel Tebaga area of southern Tunisia include the most varied and abundant Late Paleozoic inozoid fauna known. The inozoid sponge part of that assemblage, plus minor demosponge and hexactinellid sponges, are described from the numerous localities and collections. The Djebel Tebaga area of southern Tunisia includes the only outcrop of marine Upper Permian strata in the entire African continent and was in the western part of the classic Tethyan belt. The sponges described here were collected, in large part, weathered out from ?????sures of sandy carbonates, marls, and bioclastic limestones

and are commonly associated with moderately large bioherms of which the sponges were the most important reef builders. [...] Seventy species are described of which fifty-four are new. Also included in the description are new examples of the demosponge *Heliospongia finksi* Termier and Termier, 1977a, and a fragmental brachiospongid hexactinellid. * Possible relationships of the Inozoida with the Paleozoic Heteractinida and Sphinctozoa are discussed. The latter are possible stem-groups from which the Inozoida may have developed during the Carboniferous. * The Inozoida were encrusters, frame builders, and bafflers for some of the bioherms in Djebel Tebaga. They produced moderately complicated community sequences, even on a small, hand-sample scale. Such sequences of encrustation, diagenesis, and preservation are described. Many hand samples show at least five generations of encrustation of sphinctozoans, inozoans, sclerosponges and algae. [excerpts from extensive summary]^1";

3938 s[3935] = "FLUGEL E., RIGBY J.K., SENOWBARI-DARYAN B. (1996).- Upper Permian Inozoid Sponges from Djebel Tebaga, Tunisia.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke1 F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???-.- FC&P 26-1, p. 42, ID=3608^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Permian U; Geography: Tunisia, Djebel Tebaga^Inozoid sponges of Upper Permian reefs and inter-reef rocks in the Djebel Tebaga, southern Tunisia, have been investigated with regard to their taxonomy, skeletal microstructure, systematic position, and their relationship to other sponge groups. Based on Permian material from Djebel Tebaga, the new superorder Aspiculata and the new order Inozoida were proposed by Rigby & Senowbari-Daryan (1996) for inozoid sponges without spicules but with a rigid skeleton composed of aragonite or calcite. More than 70 species of inozoid sponges were described from Djebel Tebaga, most of them are new. Most probably the inozoid sponges were derived from the heteractinids during Upper Paleozoic time.^1";

3939 s[3936] = "BEAUVAIS L., NOUIOUAT S. (1993).- Une nouvelle faune de coralliaires jurassiques dans l'Atlas Saharien d'Algerie.- Geobios 26, 3: 291-318.- FC&P 22-2, p. 88, ID=3523^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Algeria, Atlas^This paper contains the description and figuration of fifteen Scleractinian species belonging to fourteen genera. Two species are new. The material comes from three outcrops of the Saharian Atlas of Algeria. Five genera and one species of Calcisponge have been identified too. This fauna belongs to Late Jurassic, however, four species collected at the top of the Hassi M'Guita series, have been found up to day, exclusively in Middle Jurassic.^1";

3940 s[3937] = "LATHUILLIERE B., ALMERAS Y., HUAULT V., BOUTICOURT F., RAHRIJAONA-RAHARISON L.-J. (2002).- Milieux coralliens du Dogger pres de Betioky (Madagascar): la fin d'une exception.- Comptes Rendus Geosciences 334: 1169-1176.- FC&P 33-2, p. 31, ID=1158^Topic(s): non reefal environments; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Madagascar^Corallian outcrops of the Dogger in the Betioky area (Madagascar) have been previously interpreted as barrier reefs or atolls involved in a large carbonate platform. This statement appeared exceptional for these times. A field study demonstrates that, in fact, there are only sparse solitary or colonial corals, whose growth occurred with some difficulty. They developed in meadows strongly marked by terrigenous inputs, in a subsiding context, and during brief episodes favourable to the genesis of ooids.^1";

3941 s[3938] = "PANDEY D.K., FURSICH F.T. (2005).- Jurassic corals from southern Tunisia.- Zitteliana A45: 3-34.- FC&P 34, p. 68, ID=1300^Topic(s): ; Scleractinia; Systematics: Cnidaria;

- Scleractinia; Stratigraphy: Jurassic; Geography: Tunisia
 S^The coral fauna from Middle Jurassic strata of southern Tunisia
 is described and figured, and complements previous records by Beauvais
 (1966a). Most of the corals are from the Lower Callovian Beni Oussid
 Member of the Tatouine Formation. The coral fauna comprises altogether
 18 taxa belonging to 14 genera.^1";
- 3942 s[3939] = "LANG B., STEIGER T. (1985).- Paleontology and diagenesis of
 Upper Jurassic siliceous sponges from the Mazagan Escarpment.-
 Oceanologica Acta, special volume 5: 93-100.- FC&P 16-2, p.
 26, ID=2063^Topic(s): Porifera, Silicispongiae;
 Systematics: Porifera; Stratigraphy: Jurassic U;
 Geography: Mazagan^^1";
- 3943 s[3940] = "ABERHAN M., BUSSERT R., SCHRANK E., HEINRICH W.-D., SCHULTKA
 S. et al. (2002).- Palaeoecology and depositional environments of the
 Tendaguru Beds (Late Jurassic to Early Cretaceous, Tanzania).-
 Mitteilungen aus dem Museum fuer Naturkunde in Berlin,
 Geowissenschaftliche Reihe 5: 19-44.- FC&P 33-2, p. 25,
 ID=1138^Topic(s): paleoecology; Scleractinia; Systematics:
 Cnidaria; Scleractinia; Stratigraphy: Jurassic U, Cretaceous
 L; Geography: Tanzania^[reconstruction of the ecosystem of the
 Tendaguru Beds is given; some Jurassic corals are depicted]^1";
- 3944 s[3941] = "RUSSO A., BOSELLINI F.R., CABDULQADIR M.M., YUSUF S.M.
 (1991).- Palaeoenvironmental analysis and cyclicity of the Mustahil
 Formation (Cretaceous of Central Somalia).- Rivista Italiana di
 Paleontologia e Stratigrafia 96, 4: 487-500.- FC&P 22-1, p.
 43, ID=3302^Topic(s): facies, cyclicity; facies, cyclicity;
 Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous
 Apt / Alb; Geography: Somalia^Lower Cretaceous (Aptian /
 Albian) sediments in Somalia have been investigated and described.
 Among other fossils some corals from a reefal facies had been found and
 determined.^1";
- 3945 s[3942] = "LOSER H. (2008).- Early Cretaceous coral faunas from East
 Africa (Tanzania, Kenya; Late Valanginian-Aptian) and revision of the
 Dietrich collection (Berlin, Germany).- Palaeontographica 285, 1/3:
 23-75, 5 pls.- FC&P 36, p. 93, ID=6508^Topic(s):
 geology; corals, geology; Systematics: Cnidaria; Anthozoa;
 Stratigraphy: Cretaceous L; Geography: Tanzania^The
 extensive vertebrate excavations of the Late Jurassic to Early
 Cretaceous around the Tendaguru hill in Tanzania in the early 20th
 century also yielded significant invertebrate faunas. The corals were
 first described by Dietrich (1926) and his work conformed to a
 remarkably high standard for his time. Since then, progress in
 examination methods and other criteria of coral classification has made
 a modern revision necessary. In addition, the stratigraphy of the coral
 bearing sediments has greatly improved over the past ten years,
 allowing a better palaeobiogeographic analysis. The present paper gives
 an introduction to the research history, discusses the various
 denominations of the lithostratigraphical units exposed in the
 Tendaguru area, and explains the progress of the stratigraphy of these
 units. Using both the original material described by Dietrich, as well
 as collection material that he did not describe, the corals of the
 Cretaceous are described and illustrated using new thin sections.
 Several corals from the Early Cretaceous of Kenya are also included.
 The Jurassic corals from the Tendaguru area have not been examined. In
 total, 15 species from the Late Valanginian to Early Aptian unit and 31
 species from the Late Aptian are described. Two genera described by
 Dietrich that were largely forgotten and many species established by
 him that were not precisely interpreted in later literature are revised
 here. Camptodocis replaces Actinारेopsis Roniewicz, 1968, and
 Metaulastrea corresponds to the concept of Amphiaulastrea Geyer, 1955,
 which is considered a junior synonym of Pleurostylina and should no
 longer be used. Together, these revisions place the Cretaceous corals
 of the Tendaguru area in a modern taxonomic and palaeobiogeographic

- context. [original summary]^1";
- 3946 s[3943] = "JUX U. (1994).- Schizorhabdus libycus Zittel 1877 - a lithistid sponge from the late Maastrichtian of Egypt.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 299-306.- FC&P 23-1.1, p. 22, ID=4087^Topic(s): taxonomy; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: Cretaceous Maas; Geography: Egypt^Schizorhabdus libycus Zittel 1877 is a valid taxon, although the species obviously was characterized both incompletely and incorrectly. The skeleton of the cylindrical sponge is composed of large megacloones which are indicative of affinities to the lithistid suborder Megamorina Zittel 1878. New material, collected in the Sudr Formation (Maastrichtian) offers interesting information on the internal organization, the original appearance and the biotope of this sponge.^1";
- 3947 s[3944] = "CAMOIN G., MAURIN A.-F., JACQUET O. (1987).- Rôle des microorganismes (Bactéries, Cyanobactéries) dans la genèse des mud-mounds. Exemples du Turonien des Jebels Bireno et Mrhila (Tunisie centrale).- 1er Congrès Français de Sédimentologie, Paris: 91-92.- FC&P 17-1, p. 10, ID=2096^Topic(s): ; reefs; Systematics: Monera; Stratigraphy: Cretaceous Tour; Geography: Tunisia^^1";
- 3948 s[3945] = "CAMOIN G. (1989).- Biological communities in Lower Senonian carbonate build-ups from jebel Bou Zer (Central Tunisia).- Proceed. 3rd Symp. Ecol. Palaeocol. Benthic Communities, Catania: 333-372.- FC&P 19-1.1, p. 29, ID=2602^Topic(s): biocoenoses; biocoenoses; Systematics: ; Stratigraphy: Cretaceous L; Geography: Tunisia^^1";
- 3949 s[3946] = "CAMOIN G., BOUJU J.-P., MAURIN A.-F., PERTHUISOT V. (1989).- Relations récifs-diapirs dans le Sénonien de la région de Khenchela (Algérie orientale).- 2ème Congrès Français de Sédimentologie, Paris: 57-58.- FC&P 19-1.1, p. 29, ID=2603^Topic(s): reefs, diapirs; reefs; Systematics: ; Stratigraphy: Cretaceous L; Geography: Algeria E^^1";
- 3950 s[3947] = "CAMOIN G. (1984).- Étude sédimentologique du Cénomanién terminal du Djebel Khechem el Artsouma (Tunisie).- Rapport interne CFP, septembre 1984: 14 pp., 28 pls.- FC&P 14-1, p. 18, ID=6605^Topic(s): sedimentology; sedimentology, ecology; Systematics: ; Stratigraphy: Cretaceous Cen; Geography: Tunisia^[sedimentology and ecology of Upper Cretaceous reef carbonates in Tunisia]^1";
- 3951 s[3948] = "CAMOIN G., JACQUET O., LAPOINTE P. (1985).- Étude sédimentologique du Jebel Krangga (Tunisie centrale).- Rapport interne CFP, 35 pp, 20 pls.- FC&P 14-1, p. 18, ID=6606^Topic(s): sedimentology; sedimentology, ecology; Systematics: ; Stratigraphy: Cretaceous U; Geography: Tunisia^[sedimentology and ecology of Upper Cretaceous reef carbonates in Tunisia]^1";
- 3952 s[3949] = "BERNET-ROLLANDE M.C., MAURIN A.F., JACQUET O., CAMOIN G., LAPOINTE P. (1985).- Sédimentologie du Turonien du Jebel Mrhila Sud (Tunisie).- Rapport interne CFP: 21 pp. [internal report] - FC&P 16-1, p. 15, ID=6755^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Cretaceous Tour; Geography: Tunisia^[internal report of the Compagnie Française des Pétroles]^1";
- 3953 s[3950] = "CAMOIN G. (1985).- Étude sédimentologique du Crétacé supérieur de la région de Khenchela et du Draa ez Zemla (Massif de l'Aurès, Algérie).- Rapport interne CFP: 32 pp. [internal report] - FC&P 16-1, p. 15, ID=6757^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Cretaceous U; Geography: Algeria^[internal report of the Compagnie Française des Pétroles]^1";

- 3954 s[3951] = "SCHUSTER F. (1996).- Paleocene Coral Reefs and Related Facies Associations, Kharga Oasis, Western Desert, Egypt.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 32, ID=3586^Topic(s): coral reefs, post extinction reefs; coral reefs complex; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleocene; Geography: Egypt, Western Desert^The primary objective of this study is to document the development of corals and coral reefs during the early Paleogene in south-western Egypt. Corals have been known from this geological period since the expedition of Gerhard Rohlfs at the end of the last century. The interest in early Paleogene corals is also caused by the Cretaceous / Paleogene boundary event which drastically affected reef building organisms. After a recovery period of several million years, scleractinian corals began to take over the dominant role of reef constructors, a situation which has continued until today. In addition, the sedimentology and paleoecology of the limestones of the Paleocene Abu Tartar Carbonate Platform were studied. An attempt has been made to reconstruct the depositional history of this carbonate platform. The Abu Tartar Plateau is located west of El-Kharga (Kharga Oasis). It is covered by Early to Late Paleocene limestones.^1";
- 3955 s[3952] = "SCHUSTER F. (1996).- Paleoecology of Paleocene and Eocene Corals from the Kharga and Farafra Oases (Western Desert, Egypt) and the Depositional History of the Paleocene Abu Tartar Carbonate Platform, Kharga Oasis.- Tuebinger geowiss. Arb. 31: 96 pp., 48 figs, 2 tabs, 21 pls.- FC&P 26-2, p. 61, ID=3741^Topic(s): coral reefs, ecology, sedimentology; corals, coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleocene Eocene; Geography: Egypt, Western Desert^The primary objectives of this Ph.D. Thesis are to document the development of corals and coral reefs during the early Paleogene in southwestern Egypt. Secondly, the sedimentology and paleoecology of the limestones of the Paleocene Abu Tartar Carbonate Platform were studied. An attempt has been made to reconstruct the depositional history of this carbonate platform. Two study areas were chosen: (1) the Abu Tartar Plateau west of El-Kharga (Kharga Oasis), which is covered by Early to Late Paleocene limestones and (2) the area of Farafra Oasis. Here, corals were found in Early Eocene layers. [...] Five coral species of the Early Eocene are described for the first time from Egypt, one species (*Goniopora farafraensis*) is new. [extracted from extensive summary]^1";
- 3956 s[3953] = "SCHROEDER J.H. (1986).- Diagenetic diversity in Paleocene coral knobs from the Bir Abu El-Husein area, S Egypt.- Reef Diagenesis [Schroeder J. H. et Purser B. H. (eds): Springer Verlag Berlin, Heidelberg]: 132-158.- FC&P 16-1, p. 71, ID=2002^Topic(s): reefs, diagenesis; reefs; Systematics: ; Stratigraphy: Paleocene; Geography: Egypt S^1";
- 3957 s[3954] = "HLADIL J., OTAVA J., GALLE A. (1992).- Oligocene Carbonate Buildups of the Sirt Basin Libya.- Geol. Libya 4: 1401-1420.- FC&P 21-2, p. 56, ID=3355^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Oligocene; Geography: Libya, Sirt Basin^Carbonate buildups formed mostly of scleractinian corals were found in the Oligocene sediments of the Sirt basin north of Al Hufrah oil fields. The buildups form a widespread complex of patch-reefs. Another coral fauna comes from the vicinity of Ar Raqubah oil field, where the corals form an almost continuous horizon; reef bodies are not developed. The main reef builders found in the Oligocene of the Sirt basin are *Stylophora parvistella* Chevalier, *S. thirsiformis* (Michelotti), *Madracis decaphylla* Matheron sensu Chevalier, *Astraeopora decaphylla* Reuss, *Monticulastraea* ex gr. *daedalea* (Reuss), *Athecastraea maradahensis* sp.nov., *Actinacis rollei* Reuss, and *Agathiphyllia gregaria* (Catullo).^1";
- 3958 s[3955] = "CARBONE F., MATTEUCCI R., PIGNATTI J.S., RUSSO A. (1994).-

Facies analysis and biostratigraphy of the Auradu Limestone Formation in the Berbera-Sheikh area, northwestern Somalia.- *Geologica Romana* 29: 213-235.- FC&P 23-2.1, p. 70, ID=4438^Topic(s):

reefs; stratigraphy; reefs; Systematics: ; Stratigraphy: Paleogene; Geography: Somalia^The main stratigraphic and sedimentological features of the Auradu Limestone Formation [Tertiary / Paleogene] in NW Somalia, close to its type area, are outlined. The present study of the depositional and diagenetic characteristics, associated with the investigation of the fossil assemblages and their biostratigraphy and paleoecology, allows to focus on some significant features useful for a better definition of the paleoenvironmental setting and the stratigraphic evolution of the formation in its westernmost outcrop area. Biostratigraphic evidence gathered from the larger foraminiferal assemblages [and coral assemblages] allows a correlation of the lower Paleogene faunal associations of Somalia with the existing peri-Mediterranean biozonations, thus extending their validity to the Horn of Africa, with implications for the dating of neighbouring formations of the Arabic peninsula.^1";

3959 s[3956] = "SCHUSTER F. (2002).- Early Miocene corals and associated sediments of the northwestern Gulf of Suez, Egypt.- *Courier Forschungsinstitut Senckenberg* 239: 57-81.- FC&P 33-2, p. 37, ID=1175^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene L; Geography: Egypt, Suez Gulf^Early Miocene corals from the northwestern Gulf of Suez area (Eastern Desert, Egypt) grew on a shallow epicontinental shelf flooded by the Burdigalian transgression. Acropora layers and isolated massive *Tarbellastraea* colonies associated with abundant corallinacean red algae (rhodolith and marl facies) and green algae (*Halimeda*) lived in a very shallow, lagoonal-like environment. Some small patch reefs were formed. The lack of a suitable substratum and the high sedimentation rate are considered the main reasons for the relatively low diversity (24 species/16 genera) of the Burdigalian coral fauna from this region. Global climatic cooling during this time favoured the development of temperate water carbonates and hindered the formation of more extensive coral reef structures. The described corals most probably were the predecessors of Middle Miocene coral faunas from the Red Sea coast which built large fringing reefs during the Langhian when the sea advanced from the Mediterranean Tethys to the Red Sea. This is shown by the presence of several identical or similar species (e.g., *Tarbellastraea reussiana*, *Favites neglecta*) described from these Langhian reefs. Generally, the described corals show a Mediterranean Tethyan affinity and are comparable to coral faunas from the Aquitaine Basin, central Iran, and Turkey.^1";

3960 s[3957] = "EL SOROGY A.S. (2002).- Paleontology and depositional environments of the Pleistocene coral reefs of the Gulf of Suez, Egypt.- *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 225, 3: 337-371.- FC&P 31-2, p. 48, ID=1700^Topic(s): coral reefs; Scleractinia, reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Egypt, Suez Gulf^The Pleistocene coral reefs at Gebel Zeit and Ras Gemsha (western side of the Gulf of Suez) form terraces of different elevations above the present sea level. The identified 30 species of bryozoans, corals and molluscs are of strongly Indo-Pacific affinity. Many coral specimens show no alteration of their primary microstructure, but a few are affected by early meteoric diagenesis. The differences in Sr, Ca and Mg among coral families and their relation to diagenetic alterations are documented. The reconstructed depositional environments reach from upper reef slope to back-reef and water-depths from 1 to 50 meters.^1";

3961 s[3958] = "BIELY A., CHEVALIER J.P. (1972).- Présence de Scléractiniaux dans le Miocène inférieur de la Tunisie septentrionale.- *Notes du Service Géol. 40 / Trav. de Géol. Tunisienne* 8: 55-70; Tunis.- FC&P 2-2, p. 22,

- ID=4820^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Tunisia^Fourteen species of Corals from the Burdigalian of Béja and Kef area are described. Two of them are new forms (Favites bielyi n.sp. and Palaeoplesiastrea bejaensis n.sp.).^1";
- 3962 s[3959] = "CHEVALIER J.P., HEBRARD L. (1967).- Découverte de Madréporaires dans le Pleistocene supérieur de Mauritanie.- C. R. Congrès Panafricain de Préhistoire: 453-455; Dakar.- FC&P 3-2, p. 32, ID=4915^Topic(s): new records; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene U; Geography: Mauritania^^1";
- 3963 s[3960] = "EL SOROGY A.S., ZIKO A. (1999).- Facies development and environments of Miocene reefal limestone, Wadi Hagul, Cairo-Suez District, Egypt.- N. Jb. Geol. Palaont. Mb. 1999/4: 213-226.- FC&P 28-1, p. 62, ID=4004^Topic(s): reefs, facies ; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Egypt^The reef limestones, of Langhian (Middle Miocene) age; were formed during regressive-transgressive episodes. They were subdivided into four main depositional facies: 1) fore-reef, made up of bioclastic marly limestone with broken skeletons and debris, 2) reef-core, constructed of a framework exclusively of branched colonies of Porites sp. coated by micrite submarine cements, 3) back-reef, consisted of friable limestone, rich in shell hash with flodded Heterostegina praecostata and, 4) beach and nearshore, made up of fossiliferous cross-bedded pebbly sandstone. The complete leaching and alteration of the original aragonitic scleractinian corals microstructure, and the cements into low Mg-calcite mosaic by fresh water in the subaerial environment, is the main diagenetic process which affected the reef. Micrite is the most important constituent in the reef-core sediments (40-70 %) and all over the sequence in general.^1";
- 3964 s[3961] = "CHAIX C., SAINT-MARTIN J.-P. (1980).- La diagenèse dans un récif du Miocène supérieur: un exemple en Oranie (Algérie) - cristallisation, déformation, dissolution des carbonates.- [journal?]: 111-120; Bordeaux, Novembre 1980.- FC&P 13-2, p. 16, ID=6361^Topic(s): reef diagenesis; reef diagenesis; Systematics: ; Stratigraphy: Miocene U; Geography: Algeria^^1";
- 3965 s[3962] = "SAINT-MARTIN J.-P., CHAIX C. (1981).- Sur la paleoécologie des formations récifales du Miocène supérieur d'Oranie occidentale.- Comptes-rendus hebdomadaires des séances de l'Académie des Sciences sér. II, 292: 1341-1343; Paris.- FC&P 13-2, p. 16, ID=6362^Topic(s): reef ecology; reef ecology; Systematics: ; Stratigraphy: Miocene U; Geography: Algeria^^1";
- 3966 s[3963] = "ROUCHY J.-M., CHAIX C., SAINT MARTIN J.-P. (1982).- Importance et implications de l'existence d'un récif corallien messinien sur le flanc sud du Djebel Murdjadjo (Oranie, Algérie).- Comptes-rendus hebdomadaires des séances de l'Académie des Sciences sér. II, 294: 813-816; Paris.- FC&P 13-2, p. 16, ID=6363^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene Mess; Geography: Algeria^^1";
- 3967 s[3964] = "SAINT-MARTIN J.-P., CHAIX C., MOISSETTE P. (1983).- Le Messinien récifal d'Oranie (Algérie): une mise au point.- Comptes-rendus hebdomadaires des séances de l'Académie des Sciences sér. II, 297: 545-547; Paris.- FC&P 13-2, p. 17, ID=6364^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene Mess; Geography: Algeria^^1";
- 3968 s[3965] = "MANCONI R., CUBEDDU T., PRONZATO R. (1999).- African freshwater sponges: Makedia tanensis gen. et sp nov from Lake Tana, Ethiopia.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 361-368.- FC&P 28-2, p. 9, ID=6967^Topic(s): new taxa;

- Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Africa, freshwater^^1";
- 3969 s[3966] = "CAMOIN G. (1985).- Etude sédimentologique du Jebel Bou Zer (Tunisie).- Ra pp. interne CFP, 40 pp. [internal report] - FC&P 16-1, p. 15, ID=6756^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: ???; Geography: Tunisia^[internal report of the Compagnie Pétrolière Française -?]^1";
- 3970 s[3967] = "CAMOIN G. (1989).- Les plates-formes carbonatées du Turonien et du Senonien de Méditerranée centrale (Tunisie, Algérie, Sicile).- Marseille University, unpublished D. Sc. Thesis; 899 pp.- FC&P 19-1.1, p. 29, ID=2601^Topic(s): carbonate platforms; carbonate platforms; Systematics: ; Stratigraphy: Cretaceous Seno - Tur; Geography: Tunisia, Algeria, Sicily^^1";
- 3971 s[3968] = "ABDEL-GAWAD I.G., GAMEIL M. (1995).- Cretaceous and Paleocene Coral Faunas in Egypt and Greece.- Coral Research Bulletin 04: 1-38.- FC&P 25-1, p. 40, ID=3026^Topic(s): taxonomy; Scleractinia, Octocorallia; Systematics: Cnidaria; Scleractinia Octocorallia; Stratigraphy: Cretaceous - Paleogene; Geography: Egypt, Greece^From ten localities in Egypt (Sinai and Western Desert; Albian to Paleocene) and seven localities in Greece (Boeotia and Macedonia; Aptian to Campanian) 75 species in 52 genera of both Scleractinian and Octocorallia are described. Because of the partially poor preservation of the material and the problems of coral systematics in general, half of the species were only determined generically. For this reason it is difficult to consider the relationships to other Cretaceous coral faunas. Only eight species from the Cretaceous in Egypt and 14 species from the Cretaceous in Greece are known from other localities outside these regions.^1";
- 3972 s[3969] = "OLIVER W.A.jr (1980).- Corals in the Malvinokaffric Realm.- Munster. Forsch. Geol. Palaont. 52 [Kl. Oekentorp (ed.): A. von Schoupe jubilee commemorative volume]: 13-27.- FC&P 9-2, p. 14, ID=5974^Topic(s): biogeography, Malvinokaffric Realm; corals biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: Malvinokaffric Realm^Corals are extremely rare in Silurian to Middle Devonian rocks of central and South America and in southern Africa and none are reported from Antarctica, the areas that constituted the Malvinokaffric Realm. Most workers have interpreted the realm as one characterized by cold water; this is in accordance with its high latitude during the Silurian-Devonian and is the most likely explanation of the dearth of corals. It is also noted that the known Malvinokaffric marine shelly faunas are found in shales and siltstones whereas the rich coral faunas of the other realms occur in limestones and calcareous shales. However, in the other realms corals do also occur in shales and siltstones and the inhospitality of the Malvinokaffric sedimentary facies is not an adequate explanation for the scarcity of corals.^1";
- 3973 s[3970] = "CUIF J.-P., GAUTRET P. (1987).- Comparaison des modalités de diagenèse du squelette de Spongiaires carbonatées dans le Trias de Turquie et le Permien de Tunisie.- Geobios 20, 6: 757-774.- FC&P 17-1, p. 40, ID=2160^Topic(s): diagenesis; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Permian Triassic; Geography: Tunisia, Turkey^[Comparison of Triassic and Permian sponges of spherulitic microstructure are made with the living Astrosclera. Minor elements and organic components are measured.]^1";
- 3974 s[3971] = "BALOG S.-J. (1996).- Boring Thallophtes in Some Permian and Triassic Reefs: Bathymetry and Bioerosion.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 41, ID=3606^Topic(s): bioerosion; reefs; Systematics: ;

Stratigraphy: Permian Triassic; Geography: Tunisia, Turkey^Ichnocones of microendoliths in a Permian (Djebel Tebaga, Tunisia) and 2 Triassic reef complexes (Antalya Complex, Turkey and Hoher Goll, Austria / Germany) are identified. The most important boring thallophytes pass the stratigraphic boundary unchanged. Apparently already in the Permian they can be used for bathymetric zonation in the same way as through Mesozoic to Cenozoic till Recent. Different reef builders (different substrates for bioeroders) influenced the composition of trace communities only quantitatively not qualitatively.^1";

- 3975 s[3972] = "FLUGEL H.W. (1997).- Korallen aus dem Perm von S-Tunesien, W-Iran und NW Thailand.- Sitzungsber. Abt. I, 204: 79-109.- FC&P 27-1, p. 69, ID=3811^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian Word; Geography: Tunisia, Iran E, Thailand^Description of Middle Permian (wordian = Murghabian) corals from S-Tunisia: waagenophyllum similis wu 1957?, Calophyllum angustum angustum (Rothpl. 1882), Lophophyllidium sp., Duplophyllum sp., Duplocarina? sp., Amplexocarina cf. geyeri Schoupe & Stacul 1958 (non Heritsch 1933), Gertholites tergeba n.sp. and Dendropora; from the Zagros-Mts, W Iran: Pseudohuangia lapparenti lapparenti Oek., and P. I. spina n.sp.; and from NW Thailand: wentzelloides fontainei minor wu & Zhao 1982?, Multimurinus regularis (Fontaine 1961) and Multimurinus biformis (Fontaine 1961).^1";
- 3976 s[3973] = "DEBRENNE F., DEBRENNE M. (1995).- Archaeocyaths of the Lower Cambrian of Morocco.- Beringeria, special Issue 2 [Morocco'95: The Lower-Middle Cambrian Standard of Gondwana]: 121-145.- FC&P 25-2, p. 61, ID=3161^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco^Archaeocyaths are present in the Lower Cambrian of Morocco from the "Calcaires Supérieurs" to the "Grés terminaux"; [Amouslek and Issafene Formations according to Geyer (1989)]. They were studied from Anti-Atlas, western High Atlas (Ounein) and Jebilet localities. During the Issendalenian and the beginning of Banian, archaeocyath faunas were homogenous without paleogeographic variations. Only one locality belongs to the Upper Banian. Five biostratigraphic zones may be recognized: Issendalenian (ex-Amouslekian) 1) Erismacoscinyathus fasciola-Retecoscinyathus minutus Zone 2) Erismacoscinyathus marocanus Zone (Hupe's zones I-III); Banian (ex-Issafenian): 1) Polystillicidocyathus-Halysicyathus Zone (Hupe IV-V) 2) Paranacyathus-Porocyathellus Zone (Hupe ?VI) 3) Jebiletoscinyathus Zone (Hupe's ?VII). Generic assignments have been revised and new concepts for species reduce their number. Key sections and revised list of moroccan species is established. Paleogeography is outlined for Morocco and Southwestern Europe.^1";
- 3977 s[3974] = "DEBRENNE F., DEBRENNE M., FAURE-MURET A. (1992).- Faunes d'Archeocyathes de l'Anti Atlas occidental (bordures Nord et Sud) et du Haut Atlas occidental. Cambrien inferieur, Maroc.- Geol. mediterr. 17, 3-4: 177-211.- FC&P 22-2, p. 96, ID=3550^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco^^1";
- 3978 s[3975] = "DEBRENNE F. (1992).- Archaeocyatha du Maroc, Essai de synthese.- Geol. mediterr. 17, 3-4: 213-227.- FC&P 22-2, p. 96, ID=3551^Topic(s): taxonomy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco^^1";
- 3979 s[3976] = "DEBRENNE F. (1976).- Drevneyshiye Arkheocyathy Morokko. [les plus anciens Archaeocyathaa du Maroc; en Russe].- Izv. AN SSSR 12: 157-159.- FC&P 6-1, p. 31, ID=5524^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco^^1";

- 3980 s[3977] = "DEBRENNE F. (1977).- Archeocyathes du Jbel Irhoud (Jebilets, Maroc).- Soc. geol. et mineral. Bretagne Bull, ser. C, 7, 2: 93-136.- FC&P 7-1, p. 18, ID=5569^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco^^1";
- 3981 s[3978] = "DEBRENNE F., DEBRENNE M. (1978).- Archaeocyathid fauna of the lowest fossiliferous levels of Tiout (Lower Cambrian, Southern Morocco).- Geol. Mag. 115, 2: 101-119.- FC&P 7-2, p. 14, ID=5605^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco^^1";
- 3982 s[3979] = "KAZMIERCZAK M., SCHRODER St. (1999).- Faziesentwicklung, relative Meeresspiegelschwankungen und die Migration von Korallenfaunen im Mitteldevon des oestlichen Anti-Atlas, Marokko.- Zentralblatt für Geologie und Paläontologie Teil I (7-9): 1177-1188.- FC&P 28-1, p. 66, ID=4008^Topic(s): facies, biogeography; facies biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian M; Geography: Morocco, Anti-Atlas^Paleobiogeographic distribution of rugose corals essentially depends on ocean current systems. Sea level fluctuations can cause migration between formerly isolated realms. The facies analysis of Middle Devonian sequences of the eastern Anti-Atlas (Morocco) reveals at least three T-R-cycles. Linked with the aggradational stacking, shallow marine, coral bearing reefal carbonates appear upon a carbonate ramp. Several immigration-pulses of Eastern American faunal elements into the Moroccan coral faunas are related to these transgressive events. Migration routes apparently are via Western Africa into Central Europe.^1";
- 3983 s[3980] = "TSIEN H.-H., DRICOT E., MOURAVIEFF A.N., BOUCKAERT J. (1973).- Le Frasnien de la coupe de Tailfer.- Serv. Géol. de Belgique, Professional Paper 11.- FC&P 4-1, p. 40, ID=5144^Topic(s): geology; geology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Fra; Geography: Morocco, Tilfer^[etude niveau par niveau de la coupe; listes de coraux]^1";
- 3984 s[3981] = "de BAETS K., KLUG C., PLUSQUELLEC Y. (2010).- Zlichovian faunas with early ammonoids from Morocco and their use for the correlation of the eastern Anti-Atlas and the western Dra Valley.- Bulletin of Geosciences 85, 2: 317-352.- FC&P 36, p. 74, ID=6476^Topic(s): ; paleontology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian Zlich; Geography: Morocco^[The article includes a description of *Michelinia mdaourensis* n.sp. and *Petricidictyum* sp. with a detailed study of morphological variations of *M. mdaourensis* in which two extreme morphotypes are identified (namely *Michelinia*-like morphotype and *Kerforneidictyum*-like morphotype). A mode of growth similar to *Palaeacis snideri* is described. *M. mdaourensis* is a species systematically associated to the "worm" Hicetes.]^1";
- 3985 s[3982] = "COEN-AUBERT M. (2005).- Rugueux fasciculés et solitaires du Givetien supérieur dans le Tafilalt et le Ma'der (Maroc).- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 75: 67-85.- FC&P 33-2, p. 14, ID=1110^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Morocco, Anti-Atlas^Several levels with *Phillipsastrea* have been sampled in the Upper Givetian of the Tafilalt and the Ma'der in Morocco and have been dated by conodonts. *P. weyeri* Coen-Aubert, 2002, *P. tafilaltensis* Coen-Aubert, 2002 and *Acanthophyllum simplex* (Walther, 1929) are present in all the outcrops investigated. They are associated in the Ma'der with *Neotemnophyllum breve* n.sp., *Phillipsastrea hollardi* Coen-Aubert, 2002, *Siphonophrentis laskowae* Wrzolek, 2002 and *S. crassa* n.sp.; the first species is restricted to the Upper Polygnathus varcus Zone whereas the three others occur also in the Upper Klapperina

disparilis Zone. In the Tafilalt, the accompanying fauna in the Upper Klapperina disparilis and Lower Mesotaxis falsiovalis Zones is characterized by Thamnophyllum amessouicum n.sp., Neoacinophyllum bultyncki n.sp., Siphonophrentis wangi n.sp. and Neotemnophyllum sp. The latter three taxa suggest an influence of the Western Yunnan in China. However, the remaining fauna shows affinities with that from the Upper Givetian of Western Europe and Poland.¹¹;

3986 s[3983] = "BELKA Z., BERKOWSKI B. (2005).- Discovery of thermophilic corals in an ancient hydrothermal vent community, Devonian, Morocco.- Acta Geologica Polonica 55, 1: 1-7.- FC&P 33-2, p. 15, ID=1111Topic(s): thermophily; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Morocco, Anti-AtlasLiving corals are remarkably broad in their thermal and bathymetric ranges. But corals that could tolerate abnormally high temperatures (higher than 40°C) are unknown both in the living communities and in the fossil record. Here we report the discovery of small thermophilic rugose corals in the Devonian vent community of southeastern Morocco. These organisms were adapted to conditions prevailing within chimney conduits of a hydrothermal system that developed on the roof of a submarine volcanic high. The coral larvae followed a calice-in-calice settlement and growth strategy to survive the contact with thermal fluids. This adaptation was not related to taxonomy and characteristic of all coral taxa present in the vents. Monospecific coral population was identified in several Emsian vents whereas the coral fauna of the single Givetian vent was more diverse and included four species. The entry of different rugose coral species into the hot vents resulted from atrophic relation to ostracods flourishing in the chimneys.^11";

3987 s[3984] = "BERKOWSKI B. (2006).- Vent and mound rugose coral associations from the Middle Devonian of Hamar Laghdad (Anti-Atlas, Morocco).- Geobios 39, 2: 155-170.- FC&P 34, p. 28, ID=1223Topic(s): vent & mound corals; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: Morocco, Anti-AtlasPeculiar associations of small, solitary, deep-water rugose corals are described from the Middle Devonian buildups situated in the easternmost part of Hamar Laghdad area of southern Morocco. The most of them are monospecific and consist of simplified taxon "Amplexus" florescens but one is polyspecific and composed of specimens belonging to four different species representing three families. These rugosan associations form isolated nest-like aggregations where numerous densely packed specimens are arranged mostly in life position. The polyspecific and two monospecific associations are interpreted as growing in close proximity to venting fields. They reveal a unique "calice-in-calice" recolonization pattern expressed by successive settlement of juvenile specimens in the calice of dead individuals. This pattern was presumably a consequence of selective survival of coral larvae settling in extreme vent habitats. Although, the "calice-in-calice" pattern is common in both, mono- and polyspecific associations, there are differences expressed in the character of larval attachments and various types of the calice fillings. The trophic interaction between corals and ostracods is discussed (Fossil Cnidaria & Porifera 34: 29). Additionally, associations of "Amplexus" florescens, not displaying "calice-in-calice" pattern of growth have been found within the mound where polyspecific association occurs. These are interpreted as growing away from venting fields. Comparisons of Amplexus-type coral faunas with the other North African and European corals allow the classification of these ampleximorph rugosan taxa as characteristic biotic components of the Middle Devonian mound environments influenced by venting activity. Two new genera and species, Weyeraia prima and Vesiculolasma erfoudi, are introduced.^11";

3988 s[3985] = "SCHRODER S., KAZMIERCZAK M. (1999).- The Middle Devonian "coral reef" of Ouhlane (Morocco) - New data on the geology

and rugose coral fauna.- *Geologica et Palaeontologica* 33: 93-115.-
 FC&P 28-2, p. 24, ID=1451^Topic(s): coral reefs,
 ecology, stratigraphy, facies; Rugosa, reefs; Systematics:
 Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography:
 Morocco^From the Middle Devonian locality "Ouhlane"; in
 the E Anti-Atlas of Morocco a rich reefal community is known. leMaitre
 (1947) was the first to publish a detailed paper about those fossil
 faunas (tabulate and rugose corals, stromatoporoids). This outcrop is
 reinvestigated, a columnar section is established and the coral bearing
 horizons are resampled. The stratigraphic division is refined, moreover,
 conodont biozonation of the section reveals a Late Eifelian/Early
 Givetian age. A facies model explains the occurrence of biogenic
 carbonates with hermatypic organisms. 17 taxa of rugose corals are
 described, 9 of them being new records for the locality. All described
 corals derive from the Lower Givetian timorensis-Zone.^1";

3989 s[3986] = "SCHRODER S., WERNER W. (2000).- Eine rugose Stockkoralle der
 Gattung *Phillipsastrea* Roemer 1883 aus dem Devon von Marokko.-
 Mitteilungen der Bayerischen Staatssammlung Paläontologie und
 Historische Geologie, 40: 229-236.- FC&P 30-1, p. 27,
 ID=1538^Topic(s): ; Rugosa, *Phillipsastrea*; Systematics:
 Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography:
 Morocco^From the Devonian of Morocco a new Rugosa of the genus
Phillipsastrea is described. The taxon is characterized by large
 pseudoceroid or thamnasterioid coralites, a variably structured
 dissepimentarium and a rare development of true horse-shoe
 dissepiments. The morphological features point to phylogenetic
 relationships to *Phillipsastreids* of North America.^1";

3990 s[3987] = "COEN-AUBERT M. (2002).- Nouvelles espèces du genre
Phillipsastrea d'Orbigny, 1849 près de la limite Givetien-
 Frasnien dans le Tafilalt et la Ma'ader au Maroc et notes sur des
 types espagnols.- *Coral Research Bulletin* 7: 021-037. [Dieter
 Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser
 & K. Oekentorp (eds)].- FC&P 31-1, p. 59,
 ID=1623^Topic(s): new taxa; Rugosa, *Phillipsastrea*;
 Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian
 Giv/Fra; Geography: Morocco^*Phillipsastrea weyeri* n.sp.,
P. tafilaltensis n.sp. and *P. hollardi* n.sp. have been collected in
 various outcrops of the Tafilalt and the Ma'ader which were dated
 by conodonts. *P. hollardi* has only been observed in the Ma'ader and
 characterizes mostly the Upper *Polygnathus varcus* Zone. It still occurs
 sparsely higher in the Givetian where it is associated with *P. weyeri*
 and *P. tafilaltensis*. These two species are also very abundant in the
 Tafilalt. They are locally accompanied by *Kuangsiastrea pengellyi*
 (Milne-Edwards & Haime, 1852) and more frequently by
Acanthophyllum simplex (Walther, 1929). The fauna with *A. simplex*,
Phillipsastrea tafilaltensis and *P. weyeri* seems to be highly
 characteristic of the Upper Givetian from the Tafilalt and the
 Ma'ader where it mainly occurs in the *Klapperina disparilis* and
 Lower *Mesotaxis falsiovalis* Zone. For comparison, the types of the
 Spanish species *Phillipsastrea torreana* (Milne-Edwards & Haime,
 1851) and *Argutastrea? pradoana* (Haime, 1855) are described and
 figured.^1";

3991 s[3988] = "WEYER D. (2002).- Famennium-Anthozoa aus Marokko. 1.
Czarnockia Rozkowska, 1969 (Rugosa).- *Mitteilungen aus dem Museum für
 Naturkunde in Berlin, Geowissenschaftliche Reihe* 5: 75-92.-
 FC&P 32-1, p. 24, ID=1723^Topic(s): ; Rugosa,
Czarnockia; Systematics: Cnidaria; Rugosa; Stratigraphy:
 Devonian Fam; Geography: Morocco^The new species *Czarnockia
 maroccana* is described from cephalopod limestones of the middle/upper
Clymenia genozone (level with *Gonioclymenia*) in the Tafilalt district
 of the Anti Atlas region. The small collection of seven syntypes
 demonstrates a surprising intraspecific variation visible only after
 intensive serial sectioning of all subtabular and calicular parts of

the skeleton. This is the first record of the rare genus from a second area outside the type occurrence in the Wocklumeria genozone of the Polish Holy Cross Mountains. As a member of the phyletic line Neaxon > Petraia > Famennelasma > Czarnockia, the taxon should be found cosmopolitically in the psychrospheric Cyathaxonia facies of Upper Famennian times. ^1";

- 3992 s[3989] = "PEDDER A.E.H. (1999).- Paleogeographic Implications of a Devonian (Givetian, Lower Varcus Subzone) Rugose Coral Fauna from the Ma'der Basin (Morocco).- Abhandlungen der Geologischen Bundesanstalt 54: 385-434.- FC&P 28-2, p. 19, ID=4015^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Morocco, Ma'der^A probably deep, or moderately deep, photic zone coral fauna of early Givetian age is examined from Jbel Ou Driss. The genera Zonophyllum, Lekanophyllum, Siphonophrentis, Heliophyllum and Spinophyllum are reviewed and the new species Zonophyllum maderense, Z. pegoconus, Lekanophyllum hollardi and Stringophyllum coenaubertae are erected. Otsuka coefficients have been calculated to determine similarities between the genus composition of the Rugosa of the Ma'der basin and those of 15 other regions. Very high OC values are obtained from comparisons with the northern Spain - Pyrenees - Vendee and northern Vosges - Saar - Moravia regions. All these regions were likely situated on the Gondwana side of the Rheic paleo-ocean. A lesser, but nevertheless high OC value between the Ma'der basin and the Rhenohercynian zone indicates that the Rheic paleo-ocean was narrow. Comparison with the Appalachian belt gives a considerably lower OC value, and no more than 17% of the Ma'der basin Rugosa had an Eastern Americas Realm ancestry. In Givetian time, coral migration from the EAR had ceased or was greatly reduced, and transport of coral larvae was likely in a southwest direction through the narrow Rheic paleo-ocean. Similarities decrease eastwards from the Ma'der basin along northern Gondwana to eastern Australia. The Baoshan-Luxi microplate was likely attached or close to Gondwana in Givetian time, at a longitude between the northern Pakistan part of the Indian shield and western Australia. The OC value between the Ma'der basin and the Altay-Sayan collage suggests that the allochthons carrying Givetian Rugosa were not accreted to the Angaran shield in Givetian time, and were likely situated at <40° latitude.^1";
- 3993 s[3990] = "BERKOWSKI B. (2008).- Emsian deep-water Rugosa assemblages of Hamar Laghdad (Devonian, Anti-Atlas, Morocco).- Palaeontographica A284, 1-3: 17-68.- FC&P 36, p. 50, ID=6431^Topic(s): deep water; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems; Geography: Morocco, Anti-Atlas^Four types of assemblages composed of small, mostly undissected, deep-water Rugosa corals, are described from argillaceous sediments of the Amerboh Group (upper Emsian) in the area of Hamar Laghdad (eastern Anti-Atlas, Morocco). During that time the sea-bottom of studied area was extremely diversified due to prior formation of numerous, up to 20-50 in high, closely spaced mud mounds. The formation of mud mounds was caused by earlier hydrothermal activity, which ended temporarily by the end of inversus conodont Zone time. Since that time elevated mud mounds and especially depressed spaces between the mounds were continuously buried by argillaceous sediments of the Amerboh Group. The process of burial has been finished by the end of the Emsian. These extremely diversified bottom morphologies created exclusive environments where exceptional assemblages of deep-water Rugosa corals developed. Four assemblages of Rugosa corals are distinguished from each other not only in species content and richness, but also in different types of life strategies in response to various environmental conditions. The richest assemblage (A) comprising of 15 species belonging to 10 genera, settled directly on the already lithified slopes of mud mounds. Assemblage (B) occurring in the same time, in depressed areas between the mounds, is composed of

nine species belonging to seven genera. Subsequent assemblages, (C) on the slopes, and (D) distanced from the mud mounds, developed within soft marly argillaceous deposits are less diversified and are composed of three species belonging to three genera and two species belonging to two genera respectively. These data show that the slopes of mud mounds acted as isolated "oases" with exclusively favourable environmental conditions for corals, and were surrounded by deep-water environments, unfavourable even for a relatively tolerant Laccophyllid fauna. Four new genera: Erfoudia n.gen., Marocaxon n.gen., Berberia n.gen., Pentacyathus n.gen. and 16 new species: Enterolasma pachytheca n.sp., Sutherlandinia anna n.sp., Boolelasma magnum n.sp., Syringaxon exiguus n.sp., Syringaxon firmipes n.sp., Schindewolfia concors n.sp., Schindewolfia solida n.sp., Schindewolfia tenera n.sp., Catactotoechus instabilis n.sp., Erfoudia eisenmanni n.sp., Marocaxon subcylindricus n.sp., Marocaxon laticalix n.sp., Berberia kesskessi n.sp., Pentacyathus arduus n.sp., Pentacyathus tenuis n.sp., Pentacyathus variabilis n.sp. are described.¹";

- 3994 s[3991] = "BERKOWSKI B. (2004).- Monospecific rugosan assemblage from the Emsian hydrothermal vents of Morocco.- Acta Palaeontologica Polonica 49, 1: 75-84.- FC#038;P 33-1, p. 48, ID=7205^Topic(s): vent #038; mound corals; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems?; Geography: Morocco, Anti-Atlas^Unique monospecific assemblages of small, solitary, undissepimented rugose corals are described from the Devonian deep-sea hydrothermal venting systems of the Hamar Laghdad (Anti-Atlas, Morocco). Assemblages of numerous rugosans (coral meadows) have been found around the outlets of venting channels irregularly forked within the Emsian mud mounds. Majority of rugose corals, which settled around vents, reveal a bizarre pattern of growth called here "calice-in-calice". The phenomenon of "calice-in-calice"; growth is related to selective survival of coral larvae i.e. it is postulated that the larvae, which settle within the calices of extinct individuals were more successful in their development. They probably use empty calices as shelters against the physical (hot or poisoning fluids) or biological (predators) factors. The presence of numerous carapaces of ostracods within the calices of extinct rugosans suggests a strong trophic relation between corals and ostracods, which lived around hydrothermal vents. New genus and species Hamarophyllum belkai is proposed. [original abstract]¹";
- 3995 s[3992] = "BECKER G., KULLMANN J., VOGEL K., WINTER J., ZORN H. (1971).- Beziehungen zwischen morphologischen Merkmalen der Brachiopoden, Ostracoden, rugose Korallen und Sedimentparametern am Beispiel des Mitteldevons der Eifel und Sudmarokkos.- Nachrichten der deutschen geologischen Gesellschaft 9: 126-135.- FC#038;P 6-1, p. 18, ID=0001^Topic(s): morphology, sedimentology; Rugosa; Systematics: Cnidaria Brachiopoda Arthropoda; Rugosa Ostracoda; Stratigraphy: Devonian Eif; Geography: Morocco^Correlation of morphological characteristics with sediment type in rugose corals.¹";
- 3996 s[3993] = "NUBEL H.R., BECKER R.T. (2003).- Ein Phillipsastreen-Biostrom im Ober-Givetium des Maider (Anti-Atlas, Marokko).- Terra Nostra 2003, 5: 120-121.- FC#038;P 32-2, p. 70, ID=1431^Topic(s): reefs Rugosa; reefs, Phillipsastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Giv; Geography: Morocco, Ma#039;ader^Das Givetium und Frasnium war weltweit durch die maximale Ausbreitung von "Riffen"; (Biostrome und Bioherme) verschiedener Gr#233;enordnung und mit unterschiedlichem #246;kologischem Aufbau charakterisiert. Bislang existieren im Devon nur beschr#228;nkte Daten zum Verbreitungsmuster spezifischer Riff-Faziestypen in Zeit und Raum. In diesem Zusammenhang ist ein Vergleich von Riffstrukturen weit getrennter Pal#228;obreiten von besonderem Interesse, um Einfl#228;sse von Pal#228;oklima, Fazies und Plattentektonik auf Riffbauer und -bewohner zu ermitteln. Als erstes

Fallbeispiel wurde ein koloniales Rugosen-Biostrom im NW-Maider des östlichen Anti-Atlas (Süd-Marokko) analysiert. Das Profil Taboumakhlouf-Ost ist schon seit langem mißverständlich unter de Bezeichnung "Höhe 760" bekannt (z.B. Coen-Aubert 2002), wurde allerdings bisher nicht paläoökologisch untersucht. Während vom N-Maider bis zum S-Tafilalt Korallen-Stromatoporen-Kalke aus dem frühen und mittlerem Givetium bekannt sind, ist dies das gröéte in-situ Biostrom aus dem oberen Givetium des gesamten Anti-Atlas. Paläogeographisch handelt es sich um den Übergangsbereich vom Maider-Becken zu einer westlich liegenden Maider-Plattform. [first fragment of extensive (!) summary, or rather full note]^1";

3997 s[3994] = "PLUSQUELLEC Y., FERNANDEZ-MARTINEZ E., MISTIAEN B., TOURNEUR F. (2004).- Révision de *Crenulipora difformis* Le Maitre, 1956, (Tabulata, Dévonien du Nord Gondwana): morphologie, structure et microstructure.- *Revue de Paléontologie* 23, 1: 181-208.- FC&P 34, p. 47, ID=1260^Topic(s): revision; Tabulata, Crenulipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Morocco^A revision of *Crenulipora difformis* Le Maitre, 1956, type species of the genus, is presented and its attribution to a new subfamily of Favositids is proposed. The revision includes the examination of type specimens and numerous topotypes. The geographical and stratigraphical data areas follows: Morocco, Hamar Laghdad, top of the Kess-Kess Formation and basis of Amerboh, Upper Emsian. A revised diagnosis of the genus is given and the type species described herein in detail; its variations are extremely important and unusual in Tabulata. The main features of *C.difformis* are: more or less flat branches, calices bearing from 12 (usual) to only a few rows of spines showing a bilateral or axial symmetry, operculum frequent, wall sinuous in transverse sections, without peripheral thickening, spiny, tabulae numerous or not, very often "forked", some vertical, pores of P1 and P2 type. Microlamellar microstructure. An accurate biometric analysis allows to recognize two opposite forms, one called "weak" and the other "strong" with between a group of "composite" specimens, but no new taxonomic units have been defined. The genus is recorded in Ougarta (Algeria), Armorican Massif (France) and probably in the Cantabrian Mountains (Spain).^1";

3998 s[3995] = "LAFUSTE J., PLUSQUELLEC Y., SOTO F. (1993).- Coexistence de lamelles et de microlamelles dans le sclerenchyme de "Ligulodictyum" Plusquellec 1973 (Tabulata, Devonien du Nord-Gondwana).- *Courier Forschungsinstitut Senckenberg* 164: 329-337. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 21, ID=3468^Topic(s): microstructures; Tabulata, Ligulodictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Gondwana N^The pleurodictymorph genus *Ligulodictyum* Plusquellec 1973, from the late Gedinnian - Early Siegenian of the Armorican massive shows an entirely fibrous microstructure. Specimens -with a very similar morphology - from the Gedinnian of Mauritania (*Pleurodictyum mauretanicum* Le Maitre 1959) Morocco and Spain and from the Siegenian and Upper Emsian of Morocco show trabeculae often embedded in abundant stereoplasm. The microstructure of the stereoplasm, studied by ultra-thin sections with polished sides (LFP), exhibits two types of biocrystals: 1) standard lamellae in the proximal part of the basal plate, and 2) microlamellae with different size and shape in the middle and distal parts. This change of lamellar to microlamellar microstructures is a new finding. In some specimens - especially from Asturias - intercalations of fibrous layers in the microlamellar stereoplasm are described. The discovery of stereoplasm in the mauretanicum group probably will require the splitting of the genus *Ligulodictyum*. The change of lamellar to microlamellar microstructures proves that genera which solely differ by their microstructure, e.g. *Michelinia* and *Turnacipora*,

- may represent evolutionary stages of the same lineage and belong to the same family.¹";
- 3999 s[3996] = "PLUSQUELLEC Y. (1993).- Un Tabule pleurodictyforme "biface" Procterodictyum n.gen. (Emsien du Nord Gondwana).- Geologica et Palaeontologica 27: 103-121.- FC&P 23-1.1, p. 71, ID=4152^Topic(s): new taxa; Tabulata, Procterodictyum; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Gondwana N^A new Pleurodictyum-like [tabulate coral] with corallites both on the proximal side - hypocorallites - and on the distal side - eucorallites and intercalar ones - is described as Procterodictyum n.gen. Two new species are distinguished according to the morphological features of the hypocorallites, P. polentinensis - the type species - is known by numerous specimens but P. asteroides only by one. The new genus shares with Procteria a granular and perforated basal plate, with Pleurodictyum the whole distinctive characteristics of the distal side. The genus seems to be a good index fossil for the middle part of the Lower Emsian, top of dehiscens zone of the North Gondwana shelf (Cantabrian Mountains, Armorican Massif and Western Moroccan Meseta).¹";
- 4000 s[3997] = "HILALI A., LACHKEM H., TOURNEUR F. (2001).- Répartition des tabulés dans les kess-kess emsiens de Hmar Lakhdad (SE d'Erfoud, Tafila<, Maroc).- Geologica et Palaeontologica 35: 53-61.- FC&P 33-1, p. 67, ID=7214^Topic(s): taxonomy, ecology; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems; Geography: Morocco, Anti-Atlas^Four families of tabulate corals are abundant in the Hmar Lakhdad Formation: auloporids, dendroporids and striatoporids are very frequent in the micritic mounds (named "kess-kess"), and favositids are rather common in the argillaceous limestones overlying the mounds. Statistical analysis of tabulate coral distribution shows an evident lateral variation. The western part of the mound range is characterized by a facies with Bainbridgia, the central part by a facies with tubular auloporids and ornate dendroporids, and the eastern part by a facies with tubular auloporids. Striatoporids and auloporids, fairly abundant in the western part, are present in all the kess-kess. Each facies corresponds with a part of the range limited by two normal faults. Tabulate coral distribution was probably controlled by synsedimentary tectonics, affecting the three blocks of Hmar Lakhdad. Building corals are absent and only bacterian structures (microstromatolites) can be observed in all kess-kess. So the mound cementation was probably controlled by bacterian activity. [original abstract]¹";
- 4001 s[3998] = "POTTHAST I., OEKENTORP K. (1987).- Eine Favositiden-Fauna aus dem Emsium / Eifelium des Hamar Laghdad, Tafila< (SE-Marokko).- Muenster. Forsch. Geol. Palaont. 65 [in press; in German, with English summary].- FC&P 16-1, p. 65, ID=1976^Topic(s): taxonomy; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: Morocco, Hamar Laghdad^A Favositidae-fauna from coral-rich Emsian / Eifelian beds of the Hamar Laghdad, SE Morocco, is described. The main representative (about 50%) of the fauna is Favosites (F.) bohemicus; the history of this form is discussed, too. Other species resp. subspecies are Favosites (F.) grandis and Favosites (F.) goldfussi saourensis. Of special interest is the occurrence of Mesofavosites, represented by the new species M. schoupei, in the upper Emsian and lower Eifelian.¹";
- 4002 s[3999] = "MAY A. (2008).- Corals (Anthozoa, Tabulata and Rugosa) and chaetetids (Porifera) from the Devonian of the Semara area (Morocco) at the Museo Geominero (Madrid, Spain), and their biogeographic significance.- Bulletin de l'Institut Scientifique, Rabat, section Sciences de la Terre 30 (2008): 1-12.http:// www.israbat.ac.ma/spip.php?article=67.- FC&P 36, p. 79, ID=6486^Topic(s): ; Tabulata, Rugosa, Chaetetida;

- Systematics: Cnidaria Porifera; Tabulata Rugosa Chaetetida;
 Stratigraphy: Devonian Giv?Fra; Geography: Morocco,
 Semara^The paper describes the three tabulate coral species *Caliapora*
robusta (Pradácová, 1938), *Pachyfavosites tumulosus* Janet, 1965 and
Thamnopora major (Radugin, 1938), the rugose coral *Phillipsastrea* ex
 gr. *irregularis* (Webster & Fenton in Fenton & Fenton, 1924)
 and the chaetetid *Rhaphidopora crinalis* (Schlüter, 1880). The specimens
 are described for the first time from Givetian and probably Frasnian
 strata of Semara area (Morocco, former Spanish Sahara). The material is
 stored in the Museo Geominero in Madrid. The tabulate corals and the
 chaetetid demonstrate close biogeographic relationships to Central and
 Eastern Europe as well as to Western Siberia. The fauna does not show
 any special influence of the Eastern Americas Realm. [original
 abstract]^1";
- 4003 s[4000] = "BRACHERT T.C., BUGGISCH W., FLUGEL E., HUSSNER H.M.,
 JOACHIMSKI M.M., TOURNEUR F., WALLISER O.H., (1992).- Controls of mud
 mound formation: the Early Devonian Kess-Kess carbonates of the Hamar
 Laghdad, Antiatlas, Morocco.- *Geologische Rundschau* 81, 1: 15-44.-
 FC&P 21-2, p. 7, ID=3291^Topic(s): mud mounds; mud
 mounds; Systematics: ; Stratigraphy: Devonian L;
 Geography: Morocco, Anti-Atlas^^1";
- 4004 s[4001] = "BELKA Z. (1998).- Early Devonian Kess-Kess carbonate mud
 mounds of the eastern Anti-Atlas (Morocco), and their relation to
 submarine hydrothermal venting.- *Journ. Sed. Res., Section A:
 Sedimentary Petrology and Processes* 68/3: 368-377.- FC&P
 27-2, p. 70, ID=3940^Topic(s): mud mounds; mud mounds;
 Systematics: ; Stratigraphy: Devonian L; Geography:
 Morocco, Anti-Atlas^Spectacular conical Early devonian carbonate
 buildups up to 55 m high that crop out in the eastern Anti-Atlas of
 southern Morocco are microbially mediated carbonate mud mounds that
 were surfaced by soft-bottom communities dominated by small tabulate
 corals. They formed on the Hamar Laghdad elevation, which was created
 by a submarine volcanic eruption, and were associated with a network of
 synsedimentary radial and tangential faults that originated by uplift
 of the intrusive laccolithic body underlying the Kess-Kess Formation.
 These faults served as conduits for the migration of hydrothermal
 fluids to the sea floor. Most mounds developed over cross-points of
 radial and tangential faults. Vents were episodically active until the
 Famennian, but extensive vent carbonate production occurred only during
 the Emsian. Preliminary geochemical results document that mud-mound
 carbonates and calcite cements in neptunian dikes precipitated from
 brines comprising a mixture of hydrothermal fluids and seawater. In
 addition, carbon isotope compositions ($\delta^{13}C$ as low as -18‰PDB) suggest
 a contribution from thermogenic methane derived presumably from
 underlying basaltic intrusives. Aerobic bacterial oxidation of methane
 is favored as the main process driving carbonate precipitation in, and
 rapid lithification of, the mounds.^1";
- 4005 s[4002] = "PECKMANN J., WALLISER O.H., RIEGEL W., REITNER J. (1999).-
 Signatures of Hydrocarbon Venting in a Middle Devonian Carbonate Mound
 (Bollard Mound) at the Hamar Laghdad (AntiAtlas, Morocco).- *Facies* 40,
 1: 281-296.- FC&P 28-1, p. 67, ID=4009^Topic(s):
 reefs, carbonate mounds; carbonate mounds; Systematics: ;
 Stratigraphy: Devonian M; Geography: Morocco, Hamar
 Laghdad^The Middle Devonian Hollard Mud Mound is situated in the
 eastern Hamar Laghdad, which is a small mountain range in the Tafilalt
 in SE Morocco. In contrast to the well known Lower Devonian Kess-Kess
 mounds, the Hollard Mound is of Middle Devonian age. The facies in the
 core of this mud mound differs from that of the other parts of the
 mound, and exhibits signatures of ancient hydrocarbon venting. The
 carbonate phases of the core facies are derived from the oxidation of
 vent fluids and consist of clotted micrite, a cryptocrystalline
 carbonate associated with spheres of uncertain origin, and a calcitic
 rim cement (rim cement B). These vent carbonates show δ13C values

in the range of -11 to -20 PDB indicating that some of their carbon is derived from isotopically light hydrocarbons. Fossiliferous micrite has been affected by hydrocarbon venting in the proximity of the vent site, which is indicated by intermediate $\delta^{13}\text{C}$ values between vent carbonates and not affected sediments. Bivalves occur in dense populations within the core facies. They form autochthonous shell accumulations and are almost exclusively articulated. It is likely that these bivalves were dependent on chemosynthesis similar to their counterparts at modern vents. The vent deposits also exhibit an unusual prasinophyte assemblage, which might have been linked to the specific nutrient availability at the vent site. The ancient vent site is characterized by an enhanced carbonate precipitation and rapid lithification. The latter is corroborated by the three-dimensional preservation of phytoplankton (prasinophytes and acritarchs) and the occurrence of stromatolite pores. An early phase of carbonate corrosion predating the formation of vent carbonates affected the fossiliferous micrite of the core facies and is thought to be related to a phase of H_2S -rich venting.¹;

- 4006 s[4003] = "GENDROT C. (1973).- Environnements du Dévonien récifal au Maroc.- Notes Mem. Ser. Géol. Maroc 1973, 34, 254: 55-86; Rabat.- FC#038;P 3-1, p. 26, ID=4881Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Devonian; Geography: MoroccoDescription des environnements du Dévonien récifal, au Maroc. * Pour les principaux organismes, quelques critères de reconnaissance sont mis en évidence, accompagnés d'illustrations et suivis d'une interprétation écologique: Stromatoporoïdes non branchus, Amphipores, Stachyodes, Tétracoralliaires, Tabulés (Thamnopores, Favosites, Alvéolites, Heliolites, Auloporidés). * De même pour quelques figures sédimentaires: Stromatolites, laminites, polygones de dessiccation, brèches de tempêtes, traces de fousseurs. Les principaux environnements d'un complexe récifal sont ensuite décrits et figurés.";
- 4007 s[4004] = "SEMENOFF-TIAN-CHANSKY P. (1984).- Microstructure of Siphonodendron (Lithostrotionidae).- Palaeontographica Americana 54: 489-500 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC#038;P 14-2, p. 36, ID=0917Topic(s): microstructures; Rugosa, Lithostrotionidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: AfricaThe microstructure of two species of Siphonodendron is described by the method of ultra-thin sections: S. martini (M.-Edw. & H.) and S. sp. cf. S. dutroii Armstrong, from the Lower Carboniferous of Northern Africa. They represent two types of microstructure observed among species of Siphonodendron. The first, prevailing in the early Viséan, is partly lamellar; the second, widespread in the late Viséan and Serpukhovian, is completely fibrous. In both cases, an internal periodic structure in the wall, which has a correlation with the external growth-ridges, is described.";
- 4008 s[4005] = "SAID I., BERKHLI M., RODRIGUEZ S. (2007).- Preliminary data on the coral distribution in the Viséan from Adarouch Area, Central Meseta (Morocco).- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 353-363.- FC#038;P 35, p. 57, ID=2347Topic(s): distribution; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: Morocco";
- 4009 s[4006] = "SAID I., RODRIGUEZ S. (2007).- A new genus of coral (Rugosa), from the Adarouch Area (Brigantian, NE Central Morocco).- Coloquios de Paleontología 57: 23-35.- FC#038;P 35, p. 57, ID=2348Topic(s): new taxa; Rugosa, Tizraia; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise (Brig); Geography: MoroccoA new genus of rugose coral, Tizraia, has

been recorded in the Tizra and Akerchi formations of the Adarouch area (Brigantian, Central Meseta, Morocco). The new genus is characterized by incomplete, mesa-shaped tabulae, absence of axial structure and presence of well developed lonsdaleoid dissepiments, as well as parricidal increase. It evolved from Diphyphyllum by the development of lonsdaleoid dissepiments. Only the type species, *Tizraia berkhlii* gen. nov. et sp.nov. is included with certainty in the new genus, but an additional species represented by one single specimen is tentatively described under this generic name. *Tizraia* has also been recorded in the Djerada Basin (Eastern Morocco) and may be present in Ireland. It has high biostratigraphic value as an Upper Brigantian (Upper Viséan) index taxon.^1";

4010 s[4007] = "ARETZ M. (2010).- Rugose corals from the upper Viséan (Carboniferous) of the Jerada Massif (NE Morocco): taxonomy, biostratigraphy, facies and palaeobiogeography.- *Paläontologische Zeitschrift* 84, 3: 323-344.- FC&P 36, p. 48, ID=6428^Topic(s): ecology, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Visé; Geography: Morocco NE^The Viséan succession of the Jerada Massif contains a relatively diverse rugose coral fauna, which comprises 12 genera. Only two of these (*Siphonodendron* and *Lithostrotion*) are reported to include more than one species. Most taxa show distinctive facies dependencies. Small solitary corals are found in shaly environments of the Oued Es-Sassi Formation. On the northern flank a coral patch reef formed on an oolitic shoal in the Koudiat Es-Senn Formation. Its core mainly consists of *Lithostrotion vorticale* colonies, whereas in its surroundings literally hundreds of specimens of *Siphonophyllia samsonensis* occur. Associated with these dominant taxa occur colonial and further large solitary taxa (*Palaeosmia*, *Dibunophyllum*). *Tizraia* and *Pareynia* are restricted to microbial-dominated buildup facies. Their presence might be strongly controlled by the development of this buildup type, because further occurrences in Algeria, Morocco, and Belgium are all in the same facies. The coral fauna at Jerada is a typical Late Viséan assemblage for the Western European Province. The Eastern Moroccan Meseta may be an important pathway within the province for the connection between the Central Saharan basins and NW Europe. The biostratigraphic ages of the coral fauna partly contradict ages based on carbonate microfossils: the coral ages are slightly older and typical Brigantian coral taxa are absent.^1";

4011 s[4008] = "ARETZ M., HERBIG H.-G. (2010).- Corals from the Upper Viséan of the southern Azrou-Khenifra Basin (Carboniferous, Central Moroccan Meseta).- *Palaeoworld* 19, 3-4: 294-305.- FC&P 36, p. 49, ID=6430^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Visé; Geography: Morocco, Meseta^This is the first taxonomic treatment of coral faunas from upper Viséan shallow-water limestones of the southern Azrou-Khenifra Basin (eastern central Morocco). Corals recovered during reconnaissance work represent 8 genera and 11 species of rugose corals, 1 heterocoral species, and 3 tabulate coral taxa. The fauna is tentatively attributed to the late Asbian. *Siphonodendron scaleberense* is described from Northern Africa for the first time. Facies differentiations clearly control the coral distribution in the stratotype of the Bou-Rifi Formation near Sidi-Lamine. In the Tabainout Ridge, the massive build-up facies is almost devoid of corals except for specialised forms such as ?*Sutherlandia*. Bioclastic and oncolitic limestone facies below and above the build-up facies contain coral faunas, which differ in their compositions. The fauna of the Azrou-Khenifra Basin is part of the West European-North African faunal province.^1";

4012 s[4009] = "SAID I., RODRIGUEZ S. (2008).- Descripción de los corales aulophyllidos del Viséense y Serpujoviense del área de Adarouch (Marruecos). [in Spanish; with English abstract].- *Coloquios de*

Paleontología 58: 13-40.- **FC#038;P 36**, p. 65, ID=6459^**Topic(s):** /b>; Rugosa Aulophyllidae; **Systematics:** /b>Cnidaria; Rugosa; **Stratigraphy:** /b>Carboniferous Vise - Serp; **Geography:** /b>Morocco^Fourteen species of rugose corals belonging to the family Aulophyllidae from Adarouch (Central Morocco) are described. One species is new, Clisiophyllum macrocolumellatum Said & Rodriguez; six species perhaps correspond to undescribed forms, but the scarcity of material or its poor preservation impede confirm it and we maintain them in open nomenclature. Seven species are previously known and broadly distributed in the Palaeotethys during the Visean and Serpukhovian. [original abstract]^1";

4013 s[4010] = "COZAR P., VACHARD D., SOMERVILLE I.D., BERKHLI M., MEDINA-VAREA P.RODRIGUEZ S., SAID I. (2008).- Late Viséan-Serpukhovian foraminiferans and calcareous algae from the Adarouch region (central Morocco), North Africa.- Geological Journal 43, 4: 463-485.- **FC#038;P 36**, p. 124, ID=6573^**Topic(s):** /b>stratigraphy; forams, algae; **Systematics:** /b>Foraminifera; **Stratigraphy:** /b>Carboniferous Vise - Serp; **Geography:** /b>Morocco^Three Upper Viséan to Serpukhovian limestone formations from the Adarouch region (central Morocco), North Africa, have been dated precisely using foraminiferans and calcareous algae. The lower and middle part of the oldest formation, the Tizra Formation (Fm), is assigned to the latest Asbian (upper Cf6γ Subzone), and its upper part to the Early Brigantian (lower Cf6δ Subzone). The topmost beds of this formation are assigned to the Late Brigantian (upper Cf6δ Subzone). The lower part of the succeeding Mouarhaz Fm is also assigned to the Late Brigantian (upper Cf6δ Subzone). [first part of extensive abstract]^1";

4014 s[4011] = "ARETZ M., HERBIG H.-G. (2008).- Microbial-sponge and microbial-metazoan buildups in the Late Viséan basin-fill sequence of the Jerada Massif (Carboniferous, NE Morocco).- Geological Journal 43, 2-3 [M. Aretz, H.-G. Herbig et I. Somerville (eds): From Platform to Basin, Proceedings of the Carboniferous Conference, Cologne 2006]: 307-336.- **FC#038;P 36**, p. 112, ID=6547^**Topic(s):** /b>reefs, microbial-sponge buildups; reefs; **Systematics:** /b>Monera Porifera; **Stratigraphy:** /b>Carboniferous Vise; **Geography:** /b>Morocco NE^Three distinctive Late Viséan buildup intervals are differentiated on the southern limb of the Jerada Synclinorium. The oldest buildups (BI-1) are preserved as olistoliths in the Oued El Koriche Formation (Fm). They were located on a southern platform prior to reworking. The younger Koudiat Es-Senn Fm contains two autochthonous buildup intervals (BI-2 to BI-3). BI-1 and BI-2 buildups are large microbial-sponge buildups, BI-3 are small microbial-metazoan buildups in the capping bed succession above BI-2. All buildups are characterized by a rigid non-skeletal microbial framework. Growth of the largest BI-2 buildups started in aphotic to dysphotic conditions in a water depth significantly less than 100m and continued into agitated shallow-water. Smaller BI-2 buildups and all BI-3 buildups are encased in grainy shallow-water carbonates. In contrast to a mostly homogeneous microbial-sponge facies below, the uppermost part of the BI-2 buildups and all BI-3 buildups consist of heterogeneous boundstones with differing frame builders. BI-1 to BI-3 buildups represent different stages within a Viséan basin-fill sequence. Carbonate sedimentation ended with the deposition of peritidal oncolitic floatstones below the unconformably overlying Namurian shales. The Jerada buildups have many features commonly associated with 'reefs'. Comparison with contemporaneous buildups shows considerable similarities to buildups from Algeria, the Eastern Moroccan Anti-Atlas and the British Isles. [original abstract]^1";

4015 s[4012] = "FLUGEL E., HERBIG H.-G. (1988).- Microfacies of Carboniferous Limestone Clasts from the Rif Paleozoic (Morocco): A Contribution to the Paleogeography of the Western Mediterranean Carboniferous Paleotethys.- Facies 19: 271-300.- **FC#038;P 18-2**,

p. 43, ID=2499^Topic(s): carbonates microfacies; Systematics: ; Stratigraphy: Carboniferous; Geography: Morocco, Rif^Post-lower Serpukhovian conglomerates with abundant limestone clasts are intercalated within the Carboniferous flysch succession of the Ghomarides (internal zone of the Rif, northern Morocco). They are restricted to two ghomaridic nappes (Beni Hozmar, Akaili; Fig. 1). No limestone-bearing conglomerates are known from the third nappe (Kuhdiat Tizian). 83.4% of the limestone clasts derived from shallow-shelf environments and adjoining proximal slope environments of late Visean (V3b γ) to early Serpukhovian (Namurian E1-E2) age. Microfacies types of the inner shelf lagoon and of restricted shelf environments dominate. They indicate a complicated mosaic facies pattern (Fig. 2). 16.6% of the limestone clasts derived from distal slope environments and deep, open marine environments. They are of unknown age except for one Upper Devonian pebble from around the transition do IIa / doIIβ. All are supposedly of late Middle Devonian and Late Devonian age. Their sedimentology as well as the age and the microfacies of the limestone clasts indicate that the conglomerates of the Ghomarides are homologous to the Marbella Formation of the Malaguides (Betic Cordillera, Southern Spain). The conglomerate of Binifaillet (Minorca, Balearic Islands) is also similar. The source area of the conglomerates was the not any more existent Betico-Rifean Block south of the Malaguide-Ghomaride flysch trough. Owing to their facies development in Devonian and Carboniferous times, the nappes of the Ghomarides and the Malaguides can be arranged in a successively more distal position towards the source: nappe of Beni Hozmar - nappe of Kuhdiat Tizian - nappe of Akaili + Malaguides (Fig. 4). Minorca, which received its flysch sediments from the north, seems to be influenced only episodically by conglomerate inputs from the south. [fragment of extensive summary]^1";

4016 s[4013] = "CHANTON-GUVENC N., MORIN P. (1973).- Phénomènes récifaux dans le chaînon calcaire viséen de Tabainout (SE du massif hercynien central du Maroc).- Notes Serv. Géol. Maroc 34, 254: 87-91.- FC&P 3-1, p. 23, ID=4878^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Carboniferous Vise; Geography: Morocco^Mise en évidence, au sein de ce puissant épaississement calcaire, de plusieurs pinacles récifaux morphologiquement analogues à ceux, classiques du Dévonien d'Hamer-el-Khadad (Hamar-Laghdad), mais moins dégagés. La microfaune recueillie depuis la base jusqu'au sommet des calcaires du Tabainout est caractéristique du V3c sup. de Belgique; les algues y sont abondantes et variées.^1";

4017 s[4014] = "STEVENS C.H. (1975).- New Permian waagenophyllidae (rugose corals) from North Africa.- Journal of Paleontology 49, 4: 706-709.- FC&P 4-2, p. 62, ID=5295^Topic(s): new taxa; Rugosa, waagenophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Africa N^Two new species of Pavastephyllum Minato & Kato 1965 [P. (Thomasiphyllum) stehlii and P. (Sakamotosawanelia) tunesium] from the Permian of southern Tunisia are the first waagenophyllid corals described from Africa. This is the southwesternmost locality that has yielded corals typical of the Tethyan province, and extends the geographic range of these corals considerably. Although the two species are new, they show affinities with corals described from Iran and, especially, the northern Pamirs, USSR.^1";

4018 s[4015] = "MARTIN-GARIN B., LATHUILLIERE B., GEISTER J., CHELLAI E.H., HUAULT V., OURIBANE M. (2004).- Les associations coralliennes du Jurassique supérieur, une clef de lecture pour la géologie des récifs: exemple du cap Ghir, Haut-Atlas atlantique, Maroc.- Deuxieme colloque sur le Jurassique marocain (CJM2), Marrakech (Maroc), 21-22 avril 2004, 76-77. [abstract?] - FC&P 34, p. 86, ID=1330^Topic(s): coral reefs, geology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Morocco^^1";

- 4019 s[4016] = "MARTIN-GARIN B., LATHUILIERE B., GEISTER J., EL HASSAN CHELLAI, HUAULT V. (2007).- Geology, facies model and coral associations of the Late Jurassic reef complex at Cape Ghir (Atlantic High Atlas, Morocco).- Comptes Rendues de Geosciences 339, 1: 65-74.- FC&P 35, p. 98, ID=2424Topic(s): coral reefs, geology, ecology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: Morocco^A quantitative study of the Upper Jurassic coral associations of Cape Ghir (Atlantic High Atlas, Morocco) revealed highly diverse coral assemblages characterizing three reef environments, each of them dominated by one of the following genera: Dimorpharea, Microsolena, and Styliina. A fourth assemblage is characterized by nerinean gastropods and stromatoporoids. Combined GPS surveys, 3D representation, and facies distribution studies permitted to understand the geometry of this coral reef within a particular tectonic setting. The reef became installed on top of a tilted block of Jurassic age subsequently folded into an east-west-trending anticline near the village of Tighert, exhibiting a 5 to 10° northward dip of its northern flank near the lighthouse of Cape Ghir. We suggest that the different fossil assemblages encountered in the field belong to one and the same fossil reef tract (within a unique facies model). The previously reported hypothesis of two successive reef horizons representing different biochrons is abandoned.^1";
- 4020 s[4017] = "BEAUVAIS L. (1980).- Les Calcaires du Lias du Maroc.- Annales de Paléontologie, Invertébrés 66, 1: 21-36.- FC&P 9-2, p. 12, ID=5855Topic(s): ; Porifera calcaires; Systematics: Porifera; Calcaires; Stratigraphy: Jurassic L; Geography: Morocco^A^1";
- 4021 s[4018] = "BEAUVAIS L. (1986).- Monographie des Madreporaires du Jurassique inferieur du Maroc.- Palaeontographica A194, 1-3: 1-68.- FC&P 16-1, p. 66, ID=1978Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic L; Geography: Morocco^A Les Madreporaires du Lias du Maroc recoltés dans les zones récifales et subrécifales des Haut-Plateaux et du Moyen Atlas font l'objet d'une monographie qui renferme la description de 69 espèces dont quarante sont nouvelles. Ces espèces sont réparties en 43 genres connus et 11 genres nouveaux. Les 10 genres qui sont déjà présents dans le Trias ne se poursuivent pas au-delà du Domerien et les vingt-cinq genres auparavant connus dans le Dogger, le Malm et même le Crétacé apparaissent soit au Lias moyen, soit au Lias supérieur, mais aucun ne se rencontre au-dessous du Pliensbachien. Cette répartition des genres a permis de subdiviser le Lias du Maroc en trois biozones basées sur les scleractiniaux. [first part of extensive summary]^1";
- 4022 s[4019] = "BREDE R., HAUPTMANN M., HERBIG H.-G. (1989).- Ellipsoidastraea hemisphaerica n.sp. (Scleractinia) from the Middle Jurassic of the central High Atlas (Morocco).- Paläontologische Zeitschrift 63, 1/2: 6-14.- FC&P 18-2, p. 38, ID=2488Topic(s): ; Scleractinia, Ellipsoidastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: Morocco, High Atlas^A Ellipsoidastraea hemisphaerica n.sp. is a solitary cupulate scleractinian (Archaeofungiina) occurring in lower Middle Jurassic, probably Bajocian strata at the southern rim of the central High Atlas north of Errachidia. The strata are dated by the lituolid foraminifer Timidonella sarda Bassoulet, Chabrier & Fourcade 1976. Ellipsoidastraea hemisphaerica n.sp. belongs to a rare genus known up to now only from Toarcian strata of western Algeria and northern Morocco. It is distinguished from the other species of that genus by its proportions. At the type locality, the coral occurs in a lagoonal setting in a coral-sponge / spongiomorphid biostrome and in overlying oolitic limestones.^1";
- 4023 s[4020] = "BEAUVAIS L. (1978).- Un nouveau genre de Madreporaires

- ahermatypiques et un nouveau mode de bourgeonnement: *Cardiastraea cristata* nov. gen., nov. sp. du Lias du Maroc.- *Geobios* 11, 1: 85-89.- **FC&P 8-1**, p. 12, ID=5606^**Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic L; Geography: Morocco^^1"**;
- 4024 **s[4021]** = "SAMSON P. (1973).- Un gisement plombo-zincifère en milieu récifal: Touissit (Maroc Oriental).- *Notes Serv. Géol. Maroc Rabat* 242: 133 pp.- **FC&P 3-1**, p. 28, ID=4891^**Topic(s): reefs mineralization Pb-Zn; reefs, Pb-Zn mineralization; Systematics: algae; Stratigraphy: Jurassic Aal - Baj; Geography: Morocco^Ce gisement appartient à l'important district stratoïde plombo-zincifère de la région Sud d'Oujda (40km), Maroc. Le gisement de Touissit est interstratifié dans une série dolomitique aaléno-bajocienne, transgressive sur un paléorelief primaire. Cette série est assimilée à un complexe récifal biostromal à base de boues organiques d'origine vraisemblablement algale.^1"**;
- 4025 **s[4022]** = "Du DRESNAY R. (1977).- Le milieu récifal fossile du Jurassique inférieur (Lias) dans la domaine des chaînes atlasiques du Maroc.- *Bureau Recherches Géologiques et Minières Memoir* 89: 296-312 [*Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975*].- **FC&P 6-1**, p. 29, ID=0090^**Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Jurassic L; Geography: Morocco^^1"**;
- 4026 **s[4023]** = "MARTIN-GARIN B., LATHUILLIERE B., GEISTER J., CHELLAI E.H., HUAULT V. (2007).- *Geology, facies model and coral associations of the Late Jurassic reef complex at cape Ghir (Atlantic High Atlas, Morocco)*.- *Comptes Rendus Geosciences* 339, 1: 65-74.- **FC&P 34**, p. 86, ID=1331^**Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: Morocco, Atlas^A quantitative study of the Upper Jurassic coral associations of Cape Ghir (Atlantic High Atlas, Morocco) revealed highly diverse coral assemblages characterizing three reef environments, each of them dominated by one of the following genera: *Dimorpharea*, *Microsolena*, and *Stylina*. A fourth assemblage is characterized by nerinean gastropods and stromatoporoids. Combined GPS surveys, 3D representation, and facies distribution studies permitted to understand the geometry of this coral reef within a particular tectonic setting. The reef became installed on top of a tilted block of Jurassic age subsequently folded into an east-west-trending anticline near the village of Tighert, exhibiting a 5 to 10° northward dip of its northern flank near the lighthouse of Cape Ghir. We suggest that the different fossil assemblages encountered in the field belong to one and the same fossil reef tract (within a unique facies model). The previously reported hypothesis of two successive reef horizons representing different biochrons is abandoned.^1"**;
- 4027 **s[4024]** = "AIT ADDI A., EL HANBALI M., BIBIER C. (1999).- *Les bioconstructions du Bajocien-Bathonien du Haut-Atlas marocain (Nord d'Errachidia-Boudenib): sédimentogenèse et contexte paléogéographique*.- *Géologie Méditerranéenne* 25, 1: 43-53.- **FC&P 29-1**, p. ???, ID=1471^**Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Jurassic M; Geography: Morocco^^1"**;
- 4028 **s[4025]** = "BARRAKAD A., CAIA J. (1973).- *Exemples d'amas calaminaires [?] en milieu subrécifal en bordure d'un socle paléozoïque (région de Mougueur, Haut Atlas oriental)*.- *Notes Serv. Géol. Maroc Rabat* 1973, 34, 254: 151-156.- **FC&P 3-1**, p. 22, ID=4874^**Topic(s): reefs, Zn-Pb minerals; reefs; Systematics: ; Stratigraphy: Jurassic Sine; Geography: Morocco^Des minéralisations plombo-zincifères sont connues dans les calcaires subrécifaux sinémuriens autour du socle paléozoïque de Mougueur, dans le Haut Atlas oriental. * Parmi ces minéralisations, il existe des amas de smithsonite à proximité, soit de paléokarsts minéralisés en plomb, soit de cassures stériles. * Ces amas sont constitués en majeure partie**

par de la smithsonite à faciès rubané. L'étude minéralogique a montré qu'il existait une smithsonite microcristalline déposée dans un premier stade. Des phénomènes de recristallisation ont ensuite provoqué la formation de smithsonite cristalline, hydrozincite et hémimorphite. L'hypothèse d'une origine primaire et non supergène de la smithsonite microcristalline est avancée.¹;

- 4029 s[4026] = "ROLLEY J.P. (1973).- Sur quelques paléoreliefs récifaux du Lias de l'Atlas de Beni-Mellal (Maroc).- Notes Serv. Géol. Maroc Rabat 34, 254: 113-120.- FCP 3-1, p. 27, ID=4889Topic(s):reefs geomorphology; reefs, geomorphology; Systematics:; Stratigraphy:Jurassic L; Geography:Morocco, AtlasLe Lias de l'Atlas de Beni-Mellal présente, dans la région d'El-Ksiba-Foum-el-Anseur, un certain nombre de structures récifales, restes d'une ancienne plate-forme de grande extension latérale. Bien que l'édification de cette plate-forme cessa au Domérien supérieur, celle-ci est demeurée en relief pendant le Toarcien formant un vaste paléorelief récifal.¹;
- 4030 s[4027] = "MONBARON M., BRECHBUHLER Y.-A., JOSSEN J.-A., SCHAER J.-P., SEPTFONTAINE M. (1984).- Evénements récifaux et faciès associés dans le Jurassique du Haut Atlas marocain.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 13.1-13.22.- FCP 13-1, p. 11, ID=6326Topic(s):reefs facies; reefs, facies; Systematics:; Stratigraphy:Jurassic; Geography:Morocco, AtlasLe Haut Atlas central et oriental est un des principaux segments de la chaîne atlasique. Il s'étend en gros de Marrakech jusqu'à l'ouest oranais et à la Méditerranée. Au Maroc il se caractérise par une subsidence sous-marine importante durant le Lias et une partie du Jurassique moyen, affectant un golfe assez largement ouvert vers la Téthys. Les sédiments carbonates de cette époque sont riches en épisodes d'origine ou d'environnement récifal(e), dont on présentera quelques exemples ci-après. [fragment of an introduction]¹;
- 4031 s[4028] = "HERBIG H.-G. (1986).- Lithostratigraphisch-fazielle Untersuchungen im marinen Alttertiär südlich des zentralen Hohen Atlas (Marokko).- Berliner geowissenschaftliche Abhandlungen A066: 343-380.- FCP 16-2, p. 26, ID=2060Topic(s):reefs; geology, reefs; Systematics:; Stratigraphy:Paleogene; Geography:Morocco[lithostratigraphy and facies in the marine Lower Tertiary of southern Morocco; includes description of oyster biostromes and mudmounds constructed by bryozoans and coralline algae with additional Poritids (figured on plate) and Chaetetids]¹;
- 4032 s[4029] = "LACHKHEM H., EL HAMZAOUI O. (1996).- The reef outcrop (Later Miocene) of Aghram Amallal (South-East of Fes; Morocco): paleontology, palaeoecology and tectono-sedimentary control.- Sedimentary Basins of Morocco. Les Bassins Sédimentaires au Maroc. Selected papers from the 13th Conference in Marrakech, Morocco, March 1996. Africa Geoscience Review 5 (1-2): 135-144.- FCP 25-1, p. 53, ID=3066Topic(s):reefs, patch reefs; reefs; Systematics:; Stratigraphy:Miocene U; Geography:MoroccoThe reef outcrop of Aghram Amallal (South-East of Fes) belongs to the reef formations of the south side of the South Rifan Corridor. It is presented like a horizontally allongated lense (approximately 60m length; 3 to 6m thickness). The bioconstruction is almost exclusively assured by the Tarbellastraea genera. The developed colonial morphologies are varied and their spatiotemporal distribution has allowed to establish morphological zonations. The study of different distinguished morphological zonations, the investigation of the accompanying fauna and flora as well as the analysis of the inter and intracolony sediment let appear a rhythmicity of the bioconstruction and the sedimentation. This rhythmicity is summoned by two ®ressive sequences that are separated by a positive fluctuation of the sea level. The environmental conditions seem to

characterize a "back reef" set, and permit to assimilate the studied reef to a "Patch" that would integrate itself to an important marine platform. This later would develop in front of E1 Aderj faults.^1";

- 4033 s[4030] = "EL HAMZAOUI O., LACKHEM H. (1996).- Analyse paleoecologique des affleurements recifaux du Miocene terminal a Boumeriem (region de Tazouta; Sud-Est de Fes; Maroc).- Notes et Mem. Serv. geol. Maroc 387: 45-56.- FC&P 27-1, p. 114, ID=3873^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Miocene U; Geography: Morocco^The reef outcrops of Boumeriem (north east of Tazouta) belong to the later Miocene reef formations of the South Rifan Trench. They are represented in the form of more or less elongated lenses, and display a vertical repartition on three successive levels. The reef constructions are essentially built by Porites and Tarbellastraea; Palaeoplesiastraea is much less abundant. The developed colonial morphologies, whether they are massive or branched, are very much varied. The spatio-temporal distribution of these different types of colonies has allowed to establish morphological zonations into these reef outcrops. The study of the different distinguished morphological zonations, the analysis of the intercolonial sediment and the examination of the accompanying fauna and flora allow to make a certain number of paleoecological deductions. Generally, the environmental conditions seem to characterize a "back reef"environment frequently situated near the "reef crest". The analysis of the vertical succession of the different sets let appear the clearly rhythmic character of the reef construction and of the sediment. This kind of rhythm is summoned by four "regressive" sequences, having each a few meters and all tend to be sandy. The reappearance, at the end of each of these sequences, of the reef conditions would display a positive fluctuation of sea level.^1";
- 4034 s[4031] = "EL HAMZAOUI O., LACKHEM H. (1996).- L'affleurement recifal (Miocene terminal) d'Aghram Amalla1 (Sud-Est de Fes; Maroc): paleoecologie et controle tectono-sedimentaire.- Communicationes Geologicas 82: 131-140.- FC&P 27-1, p. 115, ID=3874^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene U; Geography: Morocco^^1";
- 4035 s[4032] = "EL HAMZAOUI O., LACKHEM H. (1996).- Les affleurements recifaux du Miocene Terminal dans la region de Tazouta (sud-est de Fes): analyse paleoecologique et cadre paleogeographique.- Mines, Geol. & Energie 55: 31-38.- FC&P 27-1, p. 115, ID=3875^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene U; Geography: Morocco^^1";
- 4036 s[4033] = "WEYER D. (1978).- Zwei neue Rugosa - Genera aus dem marokkanischen und thuringischen Devon.- Jahrbuch Geol. 9/10: 289-345.- FC&P 9-1, p. 33, ID=0256^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: Morocco, Germany Thuringia^Two new genera, Neaxonella (Metriophyllidae) and Thecaxon (Thecaxonidae), are described and their relationships discussed.^1";
- 4037 s[4034] = "ABOUSSALAM Z.S. (2004).- Das Taghanic-Event im h"oheren Mittel- Devon von West-Europa und Marokko.- M"unstersche Forschungen zur Geologie und Pal"aoentologie 97: 139pp, 33 figs, 6pls.- FC&P 32-2, p. 69, ID=1428^Topic(s): reefs, events; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Morocco, Europe W^This paper [Thesis] deals with investigation on the development and decline of reefs. The Taghanic Event is discussed. Tabulate corals are mentioned.^1";
- 4038 s[4035] = "FERNANDEZ-MARTINEZ E. (1999).- First comparison between Devonian Tabulate coral fauna from Ouhilane (Tafilalt, Morocco) and the Cantabrian Mountains.- Errachidia meeting, abstract-book; SDS-FGCP 421: 18-20 [Feist R., Talent J. & Bernard O. (eds)]. [abstract] - FC&P 28-2, p. 16, ID=1458^Topic(s): ; Tabulata;

Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: Morocco, Spain^The tabulate coral faunas of the Moniello-Santa Lucia Formations (upper Emsian-lower Eifelian, Cantabrian Mountains, NW Spain) and the "recif coralligene de Ouilhalane" (Tafilalt, Morocco, assigned by le Maitre 1947, to the Eifelian) are compared in a quest for increased understanding of relationships among the various Devonian outcrops in Morocco, and between provinces of the Maghrebo-European realm. The Devonian of the Asturian-Leonese Domain, in the Cantabrian Mountains (NW Spain) is characterized by alternation of detrital and carbonate units, principally with benthic fauna, deposited on a shallow marine platform. Reef episodes of differing importance were developed in some of the carbonate successions. The first of these, upper Emsian in age, is not very important but some genera of tabulate corals (especially Crenulopora and Schlueterichonus) simply paleobiogeographic affinity of this region with north Africa (Fernandez-Martinez & Tourneur, 1995). Gondwana biogeographic patterns. [first part and conclusion of extensive summary]^1";

4039 s[4036] = "OEKENTORP K., TONG-DZUY THANH (1996).- Remarks on the genera Striatoporella and "Riphaeolites" (Devonian Tabulata).- N. Jb. Geol. Palaont, Mh. 1996, 5: 293-308.- FC&P 25-1, p. 36, ID=3021^Topic(s): taxonomy; Tabulata, Striatoporella; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Ems Eif; Geography: Morocco, Spain^Restudy of Mesofavosites schoupeei Potthast & Oekentorp 1988 (Emsian-Eifelian boundary in SE Morocco) and of Pachyfavosites pseudoseptatus Oekentorp 1975 (Emsian of Asturias/N Spain) shows that M. schoupeei has to be assigned to Striatoporella Rukhin 1938 because of the typical growth form, the peripheral thickenings of the walls and the development of spines, P. pseudoseptatus has been assigned to Pachyfavosites on the basis of its strikingly thick walls. Diagenetic processes may result in secondary microstructures, for example the arrangement of carbonate fibers. Therefore, wall thickness is useless as a diagnostic feature. In this view, P. pseudoseptatus corresponds very well with other representatives of the genus Riphaeolites.^1";

4040 s[4037] = "GALLE A., MAREK L., VANNIER J., RACHEBOEUF P.R., REGNAULT S. (1994).- Assemblage epibenthique a hyolithes, tabule Epizoaire et ostracode Beyrichiacea du Devonien inferieur du Maroc et d'Espagne.- Revue de Paleobiologie 13, 2: 411-425. [in French, with English abstract].- FC&P 24-2, p. 86, ID=4581^Topic(s): Tabulata, pseudoplantic; biocoenoses; Systematics: ; Stratigraphy: Devonian L; Geography: Morocco, Spain^Several Lower Devonian localities of Morocco (Middle Atlas and coastal Meseta) yielded for the first time a hyolithid (Pterygotheca sp.), an orthothecid (Orthotheca sp. A), an epizoan tabulate coral Hyostragulum ometanum n.sp. and a beyrichiacean ostracode (Gibba kandarensis n.sp.) together with rare bivalves, cephalopod shells, abundant brachiopods and dacryoconarids. Only the hyolithids, the new tabulate coral and the new ostracode species are described herein. Specific commensal relationships between the hyolithid Pterygotheca sp. and the epizoan tabulate coral Hyostragulum ometanum n.sp. are demonstrated and compared with similar cases from Bohemia and the Armoricaian Massif (France). From a palaeobiogeographical point of view, the genus Hyostragulum appears as a typical north-Gondwanan genus. The genus Orthotheca occurs in both Morocco (Orthotheca sp. A) and southern Spain (Orthotheca sp. B) like the dimorphic beyrichiacean ostracode Gibba kandarensis n.sp. These new data confirm the close faunal affinities previously described between North Africa and southwestern Europa during the Lower Devonian. A lower Emsian age is proposed for the fossiliferous beds of Spain and Morocco.^1";

4041 s[4038] = "PLUSQUELLEC Y., TOURNEUR F., LAFUSTE J. (1993).- Saouraepora nouveau genre de Micheliniidae (Tabulata), du Devonien du Nord Gondwana

et du Carbonifere d'Amérique du Nord.- Palaeontographica A227, 1-3: 1-86.- **FC#038;P 23-2.1**, p. 47, ID=3521**Topic(s):** new taxa; Tabulata, Saouraepora; **Systematics:** Cnidaria; Tabulata; **Stratigraphy:** Devonian, Carboniferous; **Geography:** Gondwana, America **The revision of the holotype and topotypes of Dendropora (= Trachypora ?) gigantea Le Maitre 1952, brings new data on the structure, the increase (lateral increase with apical corner pore) and the microstructure of this tabulate coral. The new genus Saouraepora - type species D. gigantea - is erected for branching corallum with strongly thickened peripheral zone where corallites are perpendicular to the surface, tabulae complete, incomplete and convex, rounded calices with granular intercalicinal platform, wall composed of upwards divergent lamellae, median dark lamina only in axial zone and inner peripheral zone of branch. Several species in open nomenclature and a new species - S. armoricana - are described from Lower and Middle Devonian; Holacanthopora irregularis Le Maitre 1957 is assigned to Saouraepora. The genus is represented in the Carboniferous by Pachypora oklahomensis Snider 1915. The variability of the genus is important, and brief review is given; its affinities with Praemichelinia are undoubtedly established and possible relationship with P. homofavosa are suggested; this interesting ramose species is described in appendix. Between branching coralla the microstructure of the wall prevents confusion with Parastriatopora (microlamellar) and evolves from it. Biographic data show that Saouraepora evolves in the North-Gondwana shelf during Lower and Middle Devonian and migrates to North-America during Upper Devonian or Lower Carboniferous. In this area the genus is located East of the Transcontinental arch.**

4042 **s[4039]** = "WELLS J.W. (1982).- Fossil corals from the Midway Atoll.- US Geol. Surv. prof. Pap. 680-G: 1-7; Washington.- **FC#038;P 11-2**, p. 44, ID=1876**Topic(s):** corals; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** fossil; **Geography:** Midway Atoll **Fossil corals were recovered from the cores and cuttings of the two drill holes made in Midway atoll in 1956. Reef-building scleractinian corals were relatively continuous from near the surface to a depth of 1,143 ft. Above 494 ft, six species representing five genera were recognized, all identical with the living Hawaiian reef fauna; the age range was Pliocene to Holocene. At and below 494 ft was a poorly preserved surface reef fauna of Miocene age, represented by 10 genera and 13 species; this fauna was unlike that of similar age found in the drill holes at Bikini and Enewetak (formerly Eniwetok).**

4043 **s[4040]** = "MORI K. (1976).- A new Recent Sclerosponge from Ngargol, Palau Islands and its fossil representatives.- Bulletin Tohoku Univ. Sci. Dept., ser. 2 (geol.), 46, 1: 1-9.- **FC#038;P 5-2**, p. 13, ID=5458**Topic(s):** Spongiae, Sclerospongiae; **Systematics:** Porifera; Sclerospongiae; **Stratigraphy:** living & fossil; **Geography:** Palau Isls **The new genus and species Tabulospongia horiguchii is described. It has a calcitic skeleton like that of a ceriod tabulate coral. Siliceous megascleres and microscleres are also part of the skeleton. The surface is marked by stellate grooves of the excurrent system. Acanthochaetetes wellsi Hartman and Goreau is removed from the genus Acanthochaetetes because, unlike the fossil forms, it contains spicules and is placed in the new genus. Mori believes that the presence of polyps in stromatoporoids is indicated by the presence of oolites within the skeleton of a Parallelostroma typicum from Gotland. The argument used is that a filter feeder could not survive in an environment of this sort because it lacks sufficient ability to remove the obstacles from the living tissue of the skeleton. The fact that the stromatoporoid could survive in the oolites environment may prove that it had polyps with tentacles like other coelenterates because only the tentacles, possibly with nematocysts could remove ooids falling down continuously on the skeleton by wave action. He concludes that the stromatoporoids may**

- be hydrozoans or a phylum intermediate between the Porifera and the Coelenterata.^1";
- 4044 s[4041] = "STEVENS C.H. (1983).- Corals from a dismembered late Paleozoic paleo-Pacific plateau.- *Geology* 11: 603-606.- FC&P 13-1, p. 41, ID=0482^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: Paleo-Pacific^^1";
- 4045 s[4042] = "STEVENS C.H. (1975).- Occurrence and dispersal of boreal massive Rugosa in the Early Permian.- *Pacific Geology* 10: 33-42.- FC&P 6-2, p. 16, ID=0135^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: Pacific^^1";
- 4046 s[4043] = "CAMPBELL J.D. (1974).- Heterastridium (Hydrozoa) from Norian Sequences in New Caledonia and New Zealand.- *Journal royal Soc. New Zeal.* 1974, 4, 4: 447-455.- FC&P 4-2, p. 51, ID=5233^Topic(s): stratigraphy; Hydrozoa, Heterastridium; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Triassic Nor; Geography: New Caledonia, New Zealand^Globular bodies with vermicularly-sculptured surfaces and cellular internal structure, identified as the hydrozoan Heterastridium conglobatum Reuss, are found in late Triassic rocks of New Caledonia in a Monotis shellbed on l'Ile Hugon. Less well-preserved specimens, identified as H. cf. conglobatum and H. sp., occur in rocks of the Richmond Group in Nelson and the Taringatura Group in Southland, New Zealand. These occurrences seem to demonstrate the presence of the Suessi zone in New Caledonia and New Zealand Upper Norian sequences. ^1";
- 4047 s[4044] = "STANLEY G.D.jr (2004).- Triassic reefs of North America and the Tethys: outposts in the ancient Pacific.- Tenth International Coral Reef Symposium, June 28-July 2, 2004, Okinawa, Japan. Abstracts, p. 142. [abstract] - FC&P 34, p. 91, ID=1341^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic; Geography: Pacific^^1";
- 4048 s[4045] = "BEAUVAIS L. (1985).- Climatic significance of Corals.- *I.G.C.P. 171, Special Paper 15 (Jurassic climate of western Pacific area)*.- FC&P 15-1.2, p. 14, ID=0898^Topic(s): paleoclimates; Anthozoa ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Pacific w^^1";
- 4049 s[4046] = "BEAUVAIS L. (1989).- Jurassic corals from the circum Pacific area.- *Mem. Ass. Australas. Palaeontols* 8 [Jell P. A. & Pickett J. W. (eds): *Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)*]: 291-302.- FC&P 19-1.1, p. 14, ID=2547^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Circum-Pacific^^1";
- 4050 s[4047] = "BEAUVAIS L. (1993).- Corals of the Circum-Pacific Region.- G.E.G. Westermann (ed.): *The Jurassic of the Circum-Pacific. Part V: Biogeography*: 324-327; New York (Cambridge University Press).- FC&P 23-1.1, p. 8, ID=4049^Topic(s): taxonomy, biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic; Geography: Circum-Pacific^Circum-Pacific Jurassic corals were poorly known until recently. Only two monographs on Japan existed, by Yabe and Sugiyama (1935) on the stromatoporoids and by Eguchi (1951) on the Scleractinia. Rare and insignificant coral occurrences were reported from Indonesia by Tobler (1923) and van Bemmelen (1949). * In the past decade, numerous Jurassic corals have been collected in Canada (T. P. Poulton), western Mexico (T. E. Stump), northern Chile (P. Prinz), the Philippines, western Thailand, and Sarawak (H. Fontaine), Sakhalin and Koryakia (E. V. Krasnov), and Sumatra and Japan (L. Beauvais). Studies of these faunas have contributed to the dating of the source rocks (Lias and Dogger for Canada, Dogger for northern Chile, Dogger and Malm for western Mexico, Sumatra, Sarawak, Japan, and Sakhalin) and to

- paleogeography (Beauvais and Stump 1976; Krasnov 1983; Beauvais, Bernet-Rolland, and Maurin 1985, 1987).^1";
- 4051 s[4048] = "STILWELL J.D. (1997).- Tectonic and palaeobiogeographic significance of the Chatham Islands, South Pacific, Late Cretaceous fauna.- Palaeogeography, Palaeoclimatology, Palaeoecology 136: 97-119.- FC&P 27-1, p. 97, ID=3847^Topic(s): biogeography; paleontology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous U; Geography: Pacific S, Chatham Isls^[From the Late Cretaceous (Campanian - Maastrichtian) of Pitt Island E New Zealand about 60 macroinvertebrates are reported, among them some corals. The fauna is a tectonically controlled facies fauna with origins relating to divergent plate motions.]^1";
- 4052 s[4049] = "IBA Y., SANO SHINICHI (2007).- Mid-Cretaceous step-wise demise of the carbonate platform biota in the Northwest Pacific and establishment of the North Pacific biotic province.- Palaeogeography, Palaeoclimatology, Palaeoecology 245, 3-4: 462-482.- FC&P 35, p. 108, ID=2439^Topic(s): extinctions, biogeography; extinctions, biogeography; Systematics: ; Stratigraphy: Cretaceous M; Geography: Pacific NW^The global spatiotemporal distribution of the Cretaceous carbonate platform biota, which is characterized by "tropical" Mesogean (= Cretaceous Tethys) taxa, is an important aspect of Earth's paleobiogeography. All available records of this biota in the Northwest Pacific (Japan and Sakhalin Island) are summarized in order to elucidate its stratigraphic distribution patterns and faunal changes, with special attention given to the biota of the Late Aptian-Early Albian. This carbonate platform biota flourished from the Berriasian to Early Albian interval in the Northwest Pacific, indicating that the Northwest Pacific clearly belonged to the Tethyan biotic realm at that time. A step-wise demise of the carbonate platform biota transpired in the latest Aptian to middle Albian interval. Mesogean key taxa (rudists and dasycladacean algae), some Mesogean indicators (hermatypic corals and stromatoporoids) and nerineacean gastropods disappeared at the Late Aptian to Early Albian transition. Following this event, other Mesogean indicators (orbitolinid foraminifers and calcareous red algae) and coated grains disappeared at the Early to middle Albian transition. There is no record of carbonate platform biota in the Northwest Pacific during the long interval between the Middle Albian and Paleocene. The step-wise demise of the carbonate platform biota in the latest Aptian-middle Albian interval strongly implies a "vicariance event", which separated the North Pacific from the Tethyan biotic realm and established the North Pacific biotic province.^1";
- 4053 s[4050] = "GROTSCH J., FLUGEL E. (1992).- Facies of sunken Early Cretaceous atoll reefs and their capping Late Albian drowning succession (Northwestern Pacific).- Facies 27: 153-174.- FC&P 22-1, p. 52, ID=3425^Topic(s): reefs, submerged atolls; reefs; Systematics: ; Stratigraphy: Cretaceous; Geography: Pacific NW^Since first described in detail by Hamilton (1956), the causes and timing of the drowning of several hundred guyots in the northwestern Pacific is a puzzling question. Thus, the northwestern Pacific is one of the key areas in deciphering the demise of flat-topped platforms throughout the Earth's history. Based on older palaeontological data and the newly found shallow-water benthic foraminifera, the atoll reefs probably had a major period of vertical aggradation during the Barremian and the Aptian into the Late Albian depending on the stage of atoll development (type of guyot). New sedimentologic and stratigraphic data suggest a strong fall in sea level, leading to karstification and the formation of lowstand fringing reefs, prior to an even rapid rise of greater amplitude in the Late Albian Rotalipora appenninica zone ultimately causing drowning. After climate relaxation, a sea level rise led to the final formation of small barrier reefs, rimming the top of many guyots in the Japanese Group, the Wake Group and the Mid Pacific Mountains.

They can be interpreted as "give-up" structures indicating final shallow-water carbonate production on top of the atoll during drowning. The facies of the syn- and post-drowning sediments on the guyot tops are strikingly similar even when vast distances apart. This and the biostratigraphic data suggest a synchronous drowning of many seamounts investigated up to now. Biotic composition and facies of the final Albian reefs are very similar to Albian caprinid-dominated reefs in the Caribbean region, indicating comparable environmental controls. In the case of the northwestern Pacific guyots, the simultaneous demise of reefs could be due to a short-term cooling event in the Late Albian, connected with a strong regressive-transgressive cycle with an amplitude of about 180m. This event is also known from the Tethys and the Atlantic. Climatic disturbances triggering short-term cooling and including a high amplitude regressive-transgressive sea level cycle, might be responsible not only for the Late Albian event, but also perhaps for other reef drownings throughout the Earth's history.¹¹;

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s[4051] = "ROUGERIE F., FAGERSTROM J.A. (1994).- Cretaceous history of Pacific Basin guyot reefs: a reappraisal based on geothermal endo-upwelling.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 112: 239-260.- **FC#038**;P 24-1, p. 91, ID=4527^Topic(s): reefs, guyot reefs; reefs, guyot reefs; Systematics: ; Stratigraphy: Cretaceous; Geography: Pacific^The mid-Cretaceous histories (origin, growth, death) of algal rudist stromatoporoid reef communities located on many Pacific Basin guyots are complex and controversial. These shallow water, tropical communities originated on volcanic edifices extruded during the Barremian - Albian [interval], grew upward during edifice subsidence / transgression throughout the Aptian, Albian and Cenomanian and several of them died almost synchronously near the Cenomanian / Turonian boundary. During their periods of origin and growth, we postulate that the reef ecosystems received dissolved oxygen by wave surge and nutrients by geothermal endo-upwelling. By this process oceanic waters of intermediate depth (approx. 500-1500m) were: (a) drawn into the weathered and fractured volcanic summit and lower part of the older reef and driven upward through the porous framework by the remnant geothermal gradient of the volcanic foundation and (b) emerged at the reef surface to support the high metabolism of the living community. * The death of most of the reefs near the Cenomanian Turonian boundary approximately coincides with the most intense oceanic anoxic event (OAE) in Pacific Ocean history. During this OAE the chemistry of the endo-upwelled fluids arriving at the reef surface changed from nutrient / oxygen-rich to dysoxic-anoxic toxic, and killed the community. Additionally, the combination of foundation subsidence and global transgression reduced aeration of interstitial reef waters by wave turbulence. The post-mortem history of the guyot summits consisted of: (a) drowning to prevent revival of the reef communities, (b) deposition of Turonian-Cenozoic fossiliferous pelagic -sediments in the former atoll lagoons and dead reef debris and (c) minor erosion (submarine; karstification?) of the dead reef frameworks.¹¹;

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s[4052] = "CONSOLI C.P., PISERA A., STILWELL J.D. (2009).- Siliceous Sponges of the Takatika Grit (Cretaceous-Paleogene), Chatham Islands, South Pacific.- *Journal of Paleontology* 83, 5: 811-819.- **FC#038**;P 36, p. 29, ID=6391^Topic(s): taxonomy; siliceous sponges; Systematics: Porifera; Stratigraphy: Cretaceous - Paleogene; Geography: Pacific S^Siliceous sponges are rare in the Cretaceous-Paleogene record, with only a handful of published accounts from the Southern Hemisphere. Various preserved siliceous sponges, both Hexactinellida and Demospongiae, have been recovered from the Takatika Grit (Campanian-Danian), Chatham Islands, New Zealand. Hexactinellid sponges are represented by the Euretidae *Eoretrochone australis* n.gen. and sp., *Pararete* sp., and Euretid gen. and sp. indet., *Auloplax?* sp. (Dactylocalycidae) and *Tretodictyiid* gen. and sp. indet., as well as by loose hexactines and fragments of dictyonal

- skeletons. Demosponges are represented only by loose spicules typical of Astrophorida, and perhaps lithistids. These fossils represent the first account of sponges of this age from the New Zealand region of the southwest Pacific. [original abstract]^1";
- 4056 s[4053] = "CHEVALIER J.P., COUDRAY J., GONORD H. (1971).- Sur la présence de Coraux dans l'Eocène C de Nouvelle Calédonie.- C. R. Acad. Sci. Paris 272, sér. D: 1972-1974.- FC&P 1-2, p. 20, ID=4232^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: New Caledonia^Présence des genres *Platygyra* et *Dendrophyllia*. ^1";
- 4057 s[4054] = "LOPEZ-PEREZ R.A. (2005).- The Cenozoic hermatypic corals in the eastern Pacific: History of research.- Earth-Science Reviews 72, 1-2: 67-87.- FC&P 34, p. 64, ID=1291^Topic(s): coral reefs, geohistory; Scleractinia, reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: Pacific E^Studies of hermatypic corals in the eastern Pacific have mainly focused on recent species, and relatively few of these works have studied fossil corals. The purpose of the present contribution is to provide a comprehensive synthesis on Cenozoic hermatypic coral studies that will serve: a) to identify gaps in our understanding about the Cenozoic evolution of eastern Pacific hermatypic fauna, and b) to be used as a baseline for future work in the region. Our knowledge regarding the eastern Pacific fossil coral fauna has increased gradually since 1864. A total of 151 coral species including synonyms have been recorded in the region. The species richness increases from Paleocene to Oligocene followed by a loss of species towards the Pleistocene, though to some extent biodiversity estimates are affected by sampling intensity. Fossil bearing units are spatially restricted to Washington-Seattle, south and central California, Gulf of California and Chiapas, and there is a lack of outcrops in western Mexico and Central America. In general, fossil coral studies have been sporadic, incidental in nature, and restricted to species descriptions, faunal lists and geographic affinities. The relative lack and nature of the hermatypic fossil studies in the region have directly affected our understanding about the origin of the modern eastern Pacific coral fauna and its evolutionary history. Studies regarding taxonomy and systematics, and detailed spatio-temporal community dynamics, are essential for understanding the evolution of the fauna.^1";
- 4058 s[4055] = "CHEVALIER J.P. (1977).- Etude des coraux fossiles recoltés dans le forage DSDP 76 en mer profonde dans les Tuamotu du Nord.- Bulletin de la Société géologique de France, 7 ser., 18: 1307-1313.- FC&P 7-1, p. 8, ID=0084^Topic(s): Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: Tuamotu Isls^Ce forage effectué sur une longueur de 27m à une profondeur de 4.590m sous le niveau de la mer, a traversé des turbidités rapportées au Pléistocène ou au Pliocène, peut-être à l'Eocène, renfermant des coraux hermatypiques dont certains ne sont pas représentés actuellement dans les Tuamotu.^1";
- 4059 s[4056] = "SALLER A.H. (1986).- Radial calcite in Lower Miocene strata, subsurface Enewetak Atoll.- Journal of Sedimentary Petrology 56, 6: 743-762.- FC&P 16-1, p. 73, ID=2011^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: Stratigraphy: Miocene L; Geography: Enewetak Atoll^Petrographic and stable isotopic data are consistent with precipitation of radial calcite in its present form directly from seawater. Precipitation of radial calcite after aragonite dissolution indicates precipitation distinctly after deposition, probably in a burial environment. Dissolution of aragonite by deep marine water is suggested by: 1) abundant marine cement associated with aragonite dissolution; 2) a lack of meteoric cements associated with aragonite dissolution; and 3) no evidence of subaerial exposure in Lower Miocene strata between 400 and 819 m. Modern Pacific Ocean water

is undersaturated with respect to aragonite at depths where aragonite dissolution is observed (375–850 m). Tidal fluctuations and temperature profiles indicate that Lower Miocene strata containing radiaxial cementation are interpreted as having occurred in seawater (undersaturated with respect to aragonite) circulating through the atoll. Variations in magnesium concentration in Enewetak radiaxial calcite may be the result of original heterogeneity or differential loss of magnesium during later diagenesis in seawater. The first alternative is preferred. Precipitation of radiaxial calcite at different rates (at different degrees of saturation) could cause variable magnesium concentrations. More deeply buried radiaxial calcite may have precipitated more slowly in deeper, less supersaturated water, resulting in lower magnesium concentrations. Likewise, slower rates of precipitation may have resulted in organic infestations and lower magnesium concentrations in inclusions-rich bands. Enewetak radiaxial calcites suggest that two factors might be critical to development of radiaxial fabric: 1) precipitation at fluctuating rates, and 2) formation in waters undersaturated with respect to aragonite. [SECOND PART OF EXTENSIVE SUMMARY]^1";

4060 s[4057] = "HOPLEY D. (1974).- Investigations of sea level changes along the Great Barrier Reef coastline.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 551-562.- FC&P 4-1, p. 19, ID=5047^Topic(s): eustacy; Systematics: Stratigraphy: Neogene; Geography: Australia, Great Barrier Reef^^1";

4061 s[4058] = "CHEVALIER J.P., REPELLIN P. (1978).- Observations préliminaires sur la pétrographie et la paléontologie du sondage ECHO II (Atoll Fangataufa, Polynésie Française).- C. R. somm. S. G. F. 2: 67-68.- FC&P 8-1, p. 13, ID=5675^Topic(s): geology, fossils; petrography, paleontology; Systematics: Stratigraphy: Neogene?; Geography: Polynesia French^[présence dans les niveaux pleistocènes de Favites sp. et de Leptoria phrygia devenus rares actuellement en Polynésie]^1";

4062 s[4059] = "VERON J.E.N. (2008).- A reef in time: The Great Barrier Reef from Beginning to End.- The Belknap Press of Harvard University Press, 304 pp. ISBN 9780674034976.- FC&P 36, p. 122, ID=6567^Topic(s): reefs, geohistory; reefs; Systematics: Stratigraphy: Neogene; Geography: Australia, Great Barrier Reef^Like many coral specialists [8230;] J.E.N. Veron thought Australia's Great Barrier Reef was impervious to climate change. 34; Owned by a prosperous country and accorded the protection it deserves, it would surely not go the way of the Amazon rain forest or the parklands of Africa, but would endure forever. That is what I thought once, but I think it no longer. 34; This book is Veron's Silent Spring for the world's coral reefs. * Veron presents the geological history of the reef, the biology of coral reef ecosystems, and a primer on what we know about climate change. He concludes that the Great Barrier Reef and, indeed, most coral reefs will be dead from mass bleaching and irreversible acidification within the coming century unless greenhouse gas emissions are curbed. If we don't have the political will to confront the plight of the world's reefs, he argues, current processes already in motion will become unstoppable, bringing on a mass extinction the world has not seen for 65 million years.^1";

4063 s[4060] = "COUDRAY J., MASSIEUX M. (1974).- Premières données d'une étude des Algues calcaires de la série quaternaire traversée par le sondage Ténia (Cote Sud-Ouest de la Nouvelle-Calédonie).- C. R. somm. S. G. F. 2, suppl. 16, 2 : 36-37.- FC&P 3-2, p. 32, ID=4916^Topic(s): reefs; Algae; Systematics: algae; Stratigraphy: Pliocene Quaternary; Geography: New Caledonia^Un forage, réalisé en Baie de Saint-Vincent à 600m. en arrière du récif barrière longeant la côte SW de Nouvelle-Calédonie,

- fait l'objet d'études sédimentologiques et paléontologiques. Ici l'examen systématique des Algues calcaires livre des renseignements.¹";
- 4064 s[4061] = "COUDRAY J., CUSSEY R. (1973).- Analyse des conditions de dépôt de la série récifale plio-quaternaire traversée par le sondage Ténia (cote Sud Ouest de la Nouvelle Calédonie).- C. R. Acad. Sci. Paris 277, série D, 19: 1977-1980.- FC;P 3-1, p. 15, ID=4845^Topic(s): reefs, sedimentology; reefs; Systematics: ; Stratigraphy: Pliocene Quaternary; Geography: New Caledonia^A partir de l'étude sédimentologique d'un sondage en carottage continu, est effectuée une reconstitution de l'histoire des dépôts dans une aire récifale. Est essentiellement traitée ici la sédimentogenèse, première partie d'une étude plus complète dont la seconde partie sera la diagénèse.¹";
- 4065 s[4062] = "DUBOIS J., LAUNAY J., RECY Y. (1973).- Les mouvements verticaux en Nouvelle Calédonie et aux îles Loyauté, et l'interprétation de certains d'entre eux dans l'optique de la tectonique des plaques.- Cahiers ORSTOM, sér. Géologie 5, 1: 3-24.- FC;P 3-1, p. 16, ID=4847^Topic(s): reefs, plate tectonics; reefs; Systematics: ; Stratigraphy: Pliocene Quaternary; Geography: New Caledonia^Les mouvements verticaux mio-plio-quaternaires de la région Nouvelle Calédonie-Loyauté sont analysés du point de vue de leurs amplitudes et de leurs vitesses. Les phénomènes à l'origine de ces mouvements sont répertoriés et des modèles proposés. Un bombement de la lithosphère de la plaque australienne avant son plongement sous la plaque océanique Pacifique, au niveau de la fosse des Nouvelles Hébrides, semble être responsable de la surrection au Quaternaire des atolls coralliens surélevés formant les îles Loyauté. Il y a concordance entre les faits géologiques et géomorphologiques observés sur le terrain et les mouvements verticaux calculés en fonction du déplacement de la plaque australienne sur le bombement théorique établi à partir des paramètres connus de la lithosphère de la région. La présence probable d'un bombement de lithosphère avant son plongement est un trait structural qui semble devoir être rencontré avant toutes les zones de subduction.¹";
- 4066 s[4063] = "DUGAS F. (1973).- Les faciès littoraux du Pléistocène à l'Actuel de la Baie de Saint-Vincent.- ORSTOM, Centre de Nouméa, Section Géologie: 14 pp., 3 figs, 4 tabl.- FC;P 4-1, p. 22, ID=5071^Topic(s): sedimentology, littoral facies; sedimentology; Systematics: ; Stratigraphy: Pleistocene Recent; Geography: New Caledonia^^1";
- 4067 s[4064] = "KOBALUK D.R., LYSENKO M.A. (1987).- Impact of two sequential Pacific hurricanes on sub-rubble cryptic corals: the possible role of cryptic organisms in maintenance of coral reef communities.- Journal of Paleontology 61, 4: 663-675.- FC;P 16-2, p. 29, ID=2072^Topic(s): reefs cryptic corals, hurricane impact; reefs, cryptic corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Pacific^The hermatypic scleractinian cryptic coral biota living under mobile rubble in the reef flat and back reef zones of a Fijian fringing reef was surveyed in detail in August of 1984; only 138 days later the reef was struck by the first of two sequential hurricanes (57 days apart). The sample areas were re-studied in August 1985, thereby providing the first detailed census of pre- and post-hurricane cryptic reef coral populations, and allowing an assessment of hurricane impact on these populations. The 61 cryptic species (60 corals and Millepora) show 88 percent commonality with the intertidal and shallow subtidal reef surface coral population (68 species), and therefore are a good representation of the surface biota. A major effect of the hurricanes was a reduction of almost 50 percent in the number of boulders sheltering cryptic coral. However, among boulders that retained coral through the storms, there was only a five percent reduction in the mean number of corals per boulder, signifying that damage to the surviving

population was minor. The composition of the surviving cryptic coral population is essentially unchanged from its pre-hurricane state (there are differences in absolute abundances), and the relative importance of the species does not show marked change in most cases. Coral morphologies show little change in their absolute and relative percent abundances after the hurricanes. In contrast to what is normally seen in reef surface habitats, therefore, coral colony form did not appear to be an important determinant in survivability for those living under boulders; primary selection by the storms seems to have been on boulder form rather than cryptic coral form. Cryptic sub-rubble populations may function as a preserve for elements of the pre-hurricane reef surface community. For example, delicately-branching forms that are commonly devastated in reef surface habitats during hurricanes may, in some cases, be preserved in great numbers under boulders or in other cryptic habitats. This provides a "recruitment pool" that can greatly accelerate their recovery and re-establishment on the post-hurricane reef surface, and dampen the potentially severe community dislocations arising from intense competition for space in "instantaneous" new reef substrate.¹¹;

- 4068 s[4065] = "SCHOLZ J., CUSI M.A.V. (1991).- Paleoecologic implications of modern coral and bryozoan communities from southern Leyte, Philippines.- Mitteilungen des Geologisch-Palaeontologischen Institutes der Universitaet Hamburg 71: 405-431.- FC&P 24-2, p. 80, ID=4560Topic(s): ecology; coral bryozoan biocoenoses; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Philippines, Leyte^As part of a broader study encompassing the paleologic significance of Recent Bryozoa in different Philippine ecosystems, we have observed an association of corals and bryozoans in Southern Leyte in the central part of the archipelago. This association is non-reefal since strong currents combined with migrating sand waves form an abrasive environment. Moreover, typhoons are frequently encountered in the study area. Since framebuilding is widely suppressed, the hermatypic coral association shows a lowered diversity and is dominated by pioneering, high energy resistant species. However, the bryozoans exhibit high diversity with a dominance of spot form zoaria and sheets formed by species which have a low competitive ability. The abrasion results in the total lack of zoaria of the runner-type. Encrusting bryozoan species turned out to react most sensitive to certain abiotic parameters which affect the biological interactions. They apparently can be better utilized in paleologic studies than erect species. The species *Parasmittina soulesi* (Bryozoa, Ascophora) is newly described.¹¹;
- 4069 s[4066] = "TRIBBLE G.W., SANSONE F.J., SMITH S.V. (1990).- Stoichiometric modeling of carbon diagenesis within a coral reef framework.- Geochimica et Cosmochimica Acta 54: 2439-2449.- FC&P 24-2, p. 80, ID=4562Topic(s): reefs, C diagenesis; carbon diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: USA, Hawaii^Water sampled from the interior framework of Checker Reef, Oahu, Hawaii, indicates that the aerobic and anaerobic oxidation of organic matter dominates diagenesis within the reef framework. Reef interstitial water chemistry shows clear deviations from surface seawater: oxygen is depleted while dissolved inorganic carbon, H⁺, inorganic nutrients, sulfide, and methane concentrations are elevated. Dissolved calcium is also elevated in most interstitial waters, indicating net dissolution of calcium carbonates. A mass-balance model used to determine the extent to which major biogeochemical reactions occur reveals that sulfate reduction is the predominant anaerobic process.¹¹;
- 4070 s[4067] = "PILLAI C.S.G., SCHEER G. (1973).- Bemerkungen ueber einige Riffkorallen von Samoa und Hawaii.- Zool. Jb. Syst. 100: 466-476.- FC&P 3-2, p. 35, ID=4924Topic(s): hermatypic, collection of fossils; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Samoa,

- Hawaii^The Hessisches Landesmuseum Darmstadt got two coral collections: one from Tutuila, Samoa, collected 1967 by Dr D.K. Hofmann and handed over by the Museum fuer Naturkunde Freiburg i. Br.; the other from Kaneohe Bay, Oahu, Hawaii, collected 1968 and transferred by Prof. Dr. L. Franzisket, Landesmuseum fuer Naturkunde Muenster i. W. * Altogether 33 specimens were presented, belonging to 27 species from 15 genera (22 species from Samoa, 7 from Hawaii). The corals were treated systematically and supplied with notes about geographical distribution.^1";
- 4071 s[4068] = "VERON J.E.N. (1974).- Southern geographical limits to the distribution of Great Barrier Reef hermatypic corals.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 465-473.- FC&P 4-1, p. 17, ID=5005^Topic(s): hermatypic; corals hermatypic; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4072 s[4069] = "MORTON J. (1974).- The coral reefs of the British Solomon Islands; a comparative study of their composition and ecology.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 31-53.- FC&P 4-1, p. 17, ID=5009^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: British Solomon Isls^^1";
- 4073 s[4070] = "GRIGG R.W. (1974).- Distribution and abundance of precious corals in Hawaii.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 235-240.- FC&P 4-1, p. 18, ID=5022^Topic(s): Anthozoa precious corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: USA, Hawaii^^1";
- 4074 s[4071] = "GUILCHER A. (1974).- Coral reefs of the New Hebrides, Melanesia, with particular reference to open-sea, not fringing, reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 523-535.- FC&P 4-1, p. 19, ID=5045^Topic(s): reefs, open sea reefs; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Melanesia, New Hebrides^^1";
- 4075 s[4072] = "CHEVALIER J.P. (1978).- Les Coraux des îles Marquises.- Cahiers du Pacifique 21: 243-283.- FC&P 8-1, p. 13, ID=5673^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Marquises Isls^[la faune corallienne comprend 26 espèces (24 Scléactiniaires, 2 Hydrocoralliaires) groupées en 17 genres parmi lesquels dominant Millepora, Pocillopora et Porites; sa répartition, ses affinités et les facteurs conditionnant l'établissement des organismes récifaux sont envisagés; hypothèses sur la pauvreté de cette faune]^1";
- 4076 s[4073] = "CHEVALIER J.P. (1978).- Aperçu sur la faune corallienne de la Polynésie Française.- Bulletin Soc. Etudes océaniques 205, 17: 353-366.- FC&P 8-1, p. 13, ID=5674^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Polynesia French^[exposé des principaux caractères de la faune; différences entre îles hautes et îles basses, peuplement des lagons; tableau synoptique de différenciation des principaux genres représentés en Polynésie]^1";
- 4077 s[4074] = "SALVAT B., VERGONZANNE G., GALZIN R., RICHARD G., CHEVALIER J.P., RICARD M., RENAUD-MORNANT J. (1979).- Consequences écologiques des activités d'extraction de sable corallien dans le lagon de Moorea (îles de la Société, Polynésie Française).- Cahiers de l'Indo-Pacifique I, 1: 83-126.- FC&P 8-1, p. 13, ID=5677^Topic(s): reefs ecology; reefs ecology; Systematics:

- Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Polynesia French^[influence de dragages sur le peuplement des coraux]^1";
- 4078 s[4075] = "CHEVALIER J.P. (1980).- Faune corallienne de l'île Tubuai (Australes).- Cahiers de l'Indo-Pacifique 2: 55-68.- FC&P 9-2, p. 12, ID=5857^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Tubuai Isl.^1";
- 4079 s[4076] = "MATHER P., BENNETT I. (eds) (1984).- A Coral reef handbook : a guide to the fauna, flora and geology of Heron Island and adjacent reefs and cays.- The Australian Coral Reef Society; a reviewed edition; 144 pp. ISBN 909377049.- FC&P 14-2, p. 17, ID=6694^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Australia, Heron Isl^[world-of-books.com/?id=ILOSAQAIAAJ promotes a free download of an updated edition of this book of 1993, edited by Surrey Beatty & Sons, 264 pp]^1";
- 4080 s[4077] = "GEISTER J. (1985).- Recent coral reefs of the Colombian Pacific coast.- FC&P 14, 2: 20.- FC&P 14-2, p. 20, ID=6698^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia, Pacific^The coral reefs of the Colombian Pacific coast are poorly known, but a small group of scientists from the Universidad del Valle at Cali is studying the systematics, biogeography, reef ecology and associated fauna of the corals under the coordination of Henry von Prael. [initial part of a short note]^1";
- 4081 s[4078] = "PRAHL H.von, GUHL F., GROGL M. (1978).- Crustaceos decapodos comensales del coral Pocillopora damicornis L. en la Isla de Gorgona, Colombia.- An. Inst. Inv. mar. Punta de Betin 10: 81-93. title?.- FC&P 14-2, p. 20, ID=6699^Topic(s): coral-crustacean symbiosis; crustacean - coral symbiosis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia, Isla Gorgona^1";
- 4082 s[4079] = "PRAHL H.von (1981).- Notas sistematicas sobre los corales hermatipicos de la Isla de Gorgona, Colombia.- Dep. de Biologia, Univ. de los Andes, Inf. Tecnico.- FC&P 14-2, p. 20, ID=6701^Topic(s): hermatypic, taxonomy; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia, Isla Gorgona^1";
- 4083 s[4080] = "GLYNN P.W., PRAHL H.von, GUHL F. (1982).- Coral reefs of Gorgona Island, Colombia, with special reference to corallivores and their influence on community structure and reef development.- An. Inst. Inv. mar. Punta de Betin 12: 185-214. title?.- FC&P 14-2, p. 21, ID=6702^Topic(s): coral reefs, corallivores; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia, Isla Gorgona^1";
- 4084 s[4081] = "PRAHL H.von (1982).- Las formaciones de postulas coralinas por el cangrejo Hapalocarcinus marsupialis Stimpson (Crustacea: Decapoda) en Gorgona, Colombia.- An. Inst. Inv. mar. Punta de Betin 12: 97-103. title?.- FC&P 14-2, p. 21, ID=6703^Topic(s): coral-crustacean symbiosis; crustacean - coral symbiosis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia, Isla Gorgona^1";
- 4085 s[4082] = "PRAHL H.von (1983).- Blanqueo masivo y muerte de corales en la Isla de Gorgona, Pacifico colombiano.- Cespedesia 45-46: 125-130.- FC&P 14-2, p. 21, ID=6705^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia, Isla Gorgona^1";
- 4086 s[4083] = "PRAHL H.von (1985).- Blanqueo masivo y muerte de corales hermatipicos en el Pacifico colombiano atribuidos al fenómeno "El Nino" 1982-1983.- Boletin ERFEN 12.- FC&P 14-2, p. 21, ID=6707^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Colombia,

- Pacific^1";
- 4087 s[4084] = "KLEEMANN K.H. (1980).- Boring bivalves and their host corals from the Great Barrier Reef.- J. moll. Stud. 46: 13-54.- FC&P 15-2, p. 7, ID=6735^Topic(s): coral-borers; coral-borers; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^1";
- 4088 s[4085] = "BAIKOV A.A. (2004).- Duration of the lateral paragenetic reef-evaporite system formation.- Lithology and Mineral Resources 39, 2: 135-144.- FC&P 33-1, p. 80, ID=7228^Topic(s): reefs, evaporites; reefs, evaporites; Systematics: ; Stratigraphy: ; Geography: ^Duration of the functioning of elements of the lateral paragenetic reef-evaporite systems in Cambrian and Late Jurassic has been calculated. Discrepancy between total durations of the vertical growth of barrier reefs and evaporite formation varies by a factor of 3-50. Neither barrier reefs were growing up nor salt was deposited in halogenic basins for enormous time spans. Specific features of the reef-evaporite system should be taken into account in the estimation of ore potential (in particular, presence of sulfides of Pb, Zn, and other metals) in barrier-reef massifs. [original abstract]^1";
- 4089 s[4086] = "OPRESKO D.M. (2005).- New genera and species of antipatharian corals (Cnidaria: Anthozoa) from the North Pacific.- Zoologische Mededelingen 79, 2: 129-165.http://www.repository.naturalis.nl/record/210737.- FC&P 34, p. 99, ID=1364^Topic(s): systematics; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Pacific N^New taxa of deep water antipatharian corals of the North Pacific are described. Represented in the family Schizopathidae are: Bathypathes seculata sp.nov.; Umbellapathes gen. nov.; U. helioanthes sp.nov.; U.bipinnata sp.nov.; Dendrobathypathes boutillieri sp.nov.; D. fragilis sp.nov.; Dendropathes gen. nov.; Dendropathes bacotaylorae sp.nov.; and Lillipathes wingi sp.nov. Represented in the family Cladopathidae are Chrysopathes gracilis sp.nov. and Heliopathes pacifica sp.nov.^1";
- 4090 s[4087] = "WORHEIDE G., REITNER J., GAUTRET P. (1996).- Biocalcification Processes in Three Coralline Sponges from the Lizard Island Section (Great Barrier Reef, Australia): The Stromatoporoid Astrosclera, the Chaetetid Spirastrella (Acanthochaetetes) and the Sphinctozoid Vaceletia (Demospongiae).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke l F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 31, ID=3583^Topic(s): biocalcification; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^The main biocalcification events in the phylogenetically distinct taxa Astrosclera, Spirastrella (Acanthochaetetes) and Vaceletia are described. Each taxon constructs its secondary calcareous skeleton in its own highly specialized way and provides therefore insight in the biocalcification processes of ancient reef constructors like stromatoporoids, chaetetids, and sphinctozoans.^1";
- 4091 s[4088] = "REITNER J., WORHEIDE G., LANGE R, THIEL V. (1997).- Biomineralization of calcified skeletons in three Pacific coralline demosponges - an approach to the evolution of basal skeletons.- Courier Forschungsinstitut Senckenberg 201: 371-383.- FC&P 27-2, p. 69, ID=3939^Topic(s): mineralization; biomineralization; Systematics: Porifera; Corallina; Stratigraphy: Recent; Geography: Pacific^Biomineralization of calcareous basal skeletons in coralline sponges is a strongly phylogenetically convergent character. However, the basic mineralization process is ancestral and exhibits similarities with mineralization processes seen in bacterial biofilms and organomineralization via controlled taphonomy. The main biocalcification events in the phylogenetically

distinct taxa *Vaceletia* sp., *Astrosclera willeyana*, and *Spirastrella* (*Acanthochaetetes*) *wellsi* are discussed. *Vaceletia*, a demosponge with a thalamid basal skeleton, exhibits the most ancestral way to build a calcareous skeleton via controlled taphonomy. Archaeocyathids exhibit the same skeleton-forming mode as seen in *Vaceletia*. The stromatoporoid *Astrosclera willeyana* forms intracellularly egg-shaped aragonitic aster in a first step which grow together via an epitactical process. This mode of calcification is realized in many late Permian and Triassic coralline sponges with different phylogenetic origins. The chaetetid *S.* (*Acanthochaetetes*) *wellsi*, phylogenetically the most evolved coralline sponge taxon, forms its unique calcitic skeleton in extracellular acidic organic mucilages in the presence of collagen. In all cases the mineralization is controlled by acidic matrix proteins.¹;

- 4092 s[4089] = "WORHEIDE G., GAUTRET P., REITNER J., BOHM F., JOACHIMSKI M.M., THIEL V., MICHAELIS W., MASSAULT M., (1997).- Basal skeletal formation, role and preservation of intracrystalline organic matrices, and isotopic record in the coralline sponge *Astrosclera willeyana* Lister 1900.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 355-374.- FC&P 26-2, p. 20, ID=3696Topic(s): skeletogenesis; Porifera, Demospongiae, *Astrosclera*; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^A specimen of the coralline demosponge *Astrosclera willeyana* Lister with a 14C-age of approximately 400 years was collected in a small cave at Ribbon Reef No. 10 in the Northern Great Barrier Reef. Composition and transformations of organic matrices, intimately linked to the Sr-aragonitic biominerals of the calcified skeleton, were examined by biochemical analyses. The matrices participate in the biomineralization process as long as the spherulites are growing and even during extracellular growth stages. Chromatographic analyses and biochemical characterization (molecular weight, amino acid, and monosaccharide composition) of the organic matrix from different growth layers of the skeleton show a stable composition of the insoluble organic matrix (IOM), but changing composition of the soluble organic matrix (SOM). The SOM in young skeletal parts exhibits high concentrations of aspartic and glutamic acid, which strongly decrease in the older parts of the skeleton. [first fragment of extensive summary]^1";
- 4093 s[4090] = "AYLING A.L. (1982).- A redescription of *Astrosclera willeyana* Lister 1900 (Caratoporellida, Demospongiae), a new record from the Great Barrier Reef.- Memoirs of the National Museum Victoria (Australia) 43: 99-103.- FC&P 12-1, p. 46, ID=6193Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^A1";
- 4094 s[4091] = "HIROHITO (1974).- Some hydrozoans of the Bonin Islands.- Biological Laboratory Imperial Household: 53 pp., 20 figs, 1 pl.- FC&P 4-2, p. 46, ID=5212Topic(s): taxonomy; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Ogasawara Isles^[study of 29 species]^1";
- 4095 s[4092] = "SCHORMIKOV E.I. (1980).- Tubeous life form of the coral *Astreopora myriophthalma* (Lam.) from off-shore Island Niuafou.- Biologiya korallovykh rifov [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 176-182, 4 figs.- FC&P 10-1, p. 62, ID=6034Topic(s): growth forms; Hydrozoa, *Astreopora*; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Niuafou^The article describes specific tubeous life form of the complex community of sponges, hydroids, algae and other organisms. The article contains the author's thoughts on forming the coral reef near new volcanic island.^1";
- 4096 s[4093] = "ZIBROWIUS H. (1981).- Associations of Hydrocorallia Stylasterina with gall-inhabiting Copepoda Siphonostomatoidea from the south-west Pacific. Part I. On the stylasterine hosts, including two

- new species, *Stylaster papuensis* and *Crypthelia cryptotrema*.- *Bijdragen tot de Dierkunde* 51, 2: 268-286.- FC&P 11-1, p. 27, ID=1751^Topic(s): hydrocorallina-copepoda association; Hydrozoa, Hydrocorallina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Pacific SW^^1";
- 4097 s[4094] = "VERSEVELDT J. (1978).- Alcyonarians (Coelenterata: Octocorallia) from some Micronesian islands.- *Zoologische Mededelingen* 053, 5: 49-55.- FC&P 15-2, p. 40, ID=0731^Topic(s): new taxa; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Pacific, Micronesia^Three new species of alcyonacean octocorals, belonging to the family Alcyoniidae, are described, viz., *Sarcophyton birkelandi*, *Sinularia frondosa*, and *Sinularia gaweli*. (Original summary).^1";
- 4098 s[4095] = "VERSEVELDT J., TURSCH A. (1979).- Octocorallia from the Bismarck Sea.- *Zoologische Mededelingen* 054, 11: 133-148.- FC&P 15-2, p. 40, ID=0733^Topic(s): new taxa; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Bismarck Sea^In the years 1975-77 co-operators of the King Leopold III Biological Station at Laing Island, northern coast of Papua-New Guinea, collected a number of octocorals belonging to the orders Stolonifera and Alcyonacea. The more than eighty species include seven new species: *Lobophytum cryptocormum*, *Sinularia sobolifera*, *Xenia actuosa*, and *Xenia mucosa*. They are described in this paper.^1";
- 4099 s[4096] = "OFWEGEN L.P.van (1996).- Octocorallia from the Bismarck Sea (part II).- *Zoologische Mededelingen* 70, 13: 207-215.- FC&P 26-2, p. 73, ID=3756^Topic(s): taxonomy; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Bismarck Sea^A list of species of Alcyonacea from the Bismarck Sea is presented and one new species, *Sinularia verseveldti*, is described and figured.^1";
- 4100 s[4097] = "TIXIER-DURIVault A. (1974).- Les Octocoralliaires des Gambier.- *Cahiers du Pacifique* 2, 18: 629-630.- FC&P 4-1, p. 25, ID=5080^Topic(s): ; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Gambier Isls^^1";
- 4101 s[4098] = "VERSEVELDT J. (1975).- Octocorallia from New Caledonia.- *Zoologische Mededelingen* 048, 12: 95-122.- FC&P 4-2, p. 49, ID=5226^Topic(s): ; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: New Caledonia^Study of the Alcyonacea collected by several biologists.^1";
- 4102 s[4099] = "SIEG J., ZIBROWIUS H. (1989).- Association of a tube inhabiting Tanaidacean, *Bifida scleractinicola* gen. nov., sp.nov., with bathyal scleractinians off New Caledonia (Crustacea Tainadacea - Cnidaria Scleractinia).- *Mesogee* 48: 189-199.- FC&P 20-2, p. 66, ID=2961^Topic(s): scleractinian, crustacean symbiosis; scleractinian, crustacean symbiosis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: New Caledonia^Four species of solitary scleractinian corals were found to be the hosts of one species of tube inhabiting tanaidacean off southeastern New Caledonia (3 stations, depth 570-860 m). The tube is attached to the outer side of the coral skeleton, its distal end being near the calicular edge or bending over the edge into the calice. This position suggests that the tanaidacean needs to keep close to the polyp tissues for feeding. It also suggests immunity to the defense reactions of the cnidarian host. The coral surface beneath the tube is altered: superficially eroded or forming a very shallow groove, and of a chalky white aspect that contrasts with the normally lustrous and shiny surface. The erosion caused by the tanaidacean is thought to be chemical. The new tanaidacean - scleractinian association closely resembles that between the tubicolous polychaete *Lumbrineris flabellicola* and various scleractinian species. * The tanaidacean *Bifida scleractinioides* gen.nov., sp.nov., is placed in the family

- Anathruridae, subfamily Leptognathiinae, based on peraeopodal structure and armament. Within the subfamily Bifida gen.nov. is characterized by at least four cleft (bifid) terminal spines on the MX 1. Peraeopodal setation indicates a probable closer relationship to Pseudoparatanais. ^1";
- 4103 s[4100] = "CAIRNS S.D. (1991).- A Revision of the Ahermatypic Scleractinia of the Galapagos and Cocos Islands.- Smithsonian Contributions to Zoology 504; 44 pp.- FC&P 21-2, p. 39, ID=3325^Topic(s): ahermatypic, revision; Scleractinia, Ahermatypic; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Galapagos Isls, Cocos Isls^A systematic revision of ahermatypic Scleractinia of the Galapagos and Cocos Islands is given. A total of 44 species in 28 genera are described and illustrated. One genus and nine species are described as new.^1";
- 4104 s[4101] = "FOIDART J. (1970).- Rapport scientifique de l''Expédition belge à la Grande Barrière d''Australie en 1967 - Madrépores I. Etude morphologique et systématique comparée de *Goniastrea retiformis* (Lam.) et *Goniastrea parvistella* (Dana).- Annales de la Soc. Roy. Zool. de Belgique 100: 85-114.- FC&P 2-1, p. 11, ID=4706^Topic(s): taxonomy; Scleractinia, *Goniastrea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^Samples of *Goniastrea retiformis* and *Goniastrea parvistella* from Australian Great Barrier are revised and new morphological and systematical investigations made. These 2 species, generally synonymous, are well distinguished by proper features of endotheca, ornamentation of septa and microstructure of skeleton, all characters not enough taken into consideration in previous studies for the definition of the 2 species considered.^1";
- 4105 s[4102] = "FOIDART J. (1970).- Rapport scientifique de l''Expédition belge à la Grande Barrière d''Australie en 1967 - Madrépores II. Variations morphologiques intracoloniaires et altérations du squelette coralliaire.- Annales de la Soc. Roy. Zool. de Belgique 100: 115-128.- FC&P 2-1, p. 12, ID=4707^Topic(s): morphology, variability; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^Morphological variations into one and the same corallum could be the result of a) peculiar localization of calyx, b) perturbations due to other organisms as molluscs, cirripeds and so on… c) post-mortem changes of cnidarian skeleton. The modifications observed at the periphery of colonial forms affected principally the calyx shape and its own skeletal structures; the same effects are noticed in the case of destroying organisms; post-mortem processes could make specific characters less apparent or even completely rub them out.^1";
- 4106 s[4103] = "FOIDART J. (1971).- Rapport scientifique de l''Expédition belge à la Grande Barrière d''Australie en 1967 - Madrépores III. Etude de *Goniastrea* sp.- Annales de la Soc. Roy. Zool. de Belgique 101: 293-516.- FC&P 2-1, p. 12, ID=4708^Topic(s): taxonomy; Scleractinia, *Goniastrea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^Detailed description of one *Goniastrea* from Australian Great Barrier. This sample reminds us at the same time, *Goniastrea mantonae* Crossland and *Favites seychellensis* (M.-E. & H.) being nevertheless distinct from each of them. No specific name proposed here.^1";
- 4107 s[4104] = "GLYNN P.W. (1974).- Rolling stones among the Scleractinia: mobile corallith communities in the Gulf of Panama.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 183-198.- FC&P 4-1, p. 18, ID=5018^Topic(s): automobility; Scleractinia; Systematics: Cnidaria;

- Scleractinia; Stratigraphy: Recent; Geography: Panama Gulf^^1";
- 4108 s[4105] = "CHEVALIER J.P. (1974).- Aperçu sur les Scléactiniaires des îles Gambier.- Cahiers du Pacifique 8, 2: 615-627.- FC&P 4-1, p. 22, ID=5067^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Gambier Isls^Etude de la répartition des Scléactiniaires dans les différentes zones récifales. Sur la pente externe du récif barrière, les coraux sont peu abondants et disparaissent complètement entre 30 et 40 mètres. La faune du lagon est beaucoup plus riche. Comparaisons avec les autres îles récifales des Tuamotu. * Les Scléactiniaires jouent un rôle essentiel dans le peuplement des récifs et du lagon quoique sur la pente extérieure du récif barrière, on observe un faible recouvrement du substratum par ces organismes. Dans cette publication, est donné un aperçu sur leur répartition dans les différentes zones récifales: récif barrière, récifs frangeants, pinacles et fond du lagon. L'étude systématique des espèces sera présentée dans un Mémoire sur les Scléactiniaires de Polynésie Française.^1";
- 4109 s[4106] = "FOIDART J. (1973).- Rapport scientifique de l'Expédition Belge à la Grande Barrière d'Australie en 1967. Madrépores IV. Etude morphologique des espèces méandroides du genre Goniastrea.- Annales de la Soc. Roy. Zool. de Belgique 103, 4: 329-371.- FC&P 4-1, p. 23, ID=5072^Topic(s): taxonomy; Scleractinia, Goniastrea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^La présente note décrit de manière détaillée les spécimens méandroides du genre Goniastrea de notre collection ainsi que les holotypes de Goniastrea pectinata (Ehr.) et Goniastrea benhami Vaughan. * Elle résulte d'observations morphologiques et biométriques approfondies portant sur les paramètres essentiels du squelette. * Elle est complétée par un essai d'étude statistique testant l'homogénéité de l'ensemble des échantillons.^1";
- 4110 s[4107] = "CHEVALIER J.P. (1975).- Les Scléactiniaires de la Mélanésie française (2ème partie).- Editions Fondation Singer Polignac, vol. 7: 407 pp., 255 figs, tableaux, 42 pls; Paris.- FC&P 4-2, p. 45, ID=5207^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Melanesia French^[étude systématique des Faviidae, Trachyphyllidae, Merulinidae, Mussidae, Pectiniidae]^1";
- 4111 s[4108] = "PATZOLD J. (1984).- Growth rhythms recorded in stable isotopes and density bands in the reef coral Porites lobata (Cebu, Philippines).- Coral Reefs 03, 2: 87-90.- FC&P 14-1, p. 21, ID=6609^Topic(s): skeletal growth, stable isotopes; growth mode, Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Philippines^Growth rhythms in the reef coral Porites lobata are revealed by X-radiography and stable carbon and oxygen isotopic analysis. High density increments were deposited during warm temperatures in summer and low density increments during winter. The seasonal temperature variations are reflected in the oxygen isotope ratios. The coral carbonate shows a constant depletion in 18O of -2.7% relative to calcite in equilibrium with the ambient seawater. The mean annual growth rate of the specimen studied was 1.3±0.3 cm/year. [original abstract]^1";
- 4112 s[4109] = "CANTERA J. (1983).- Distribution des peuplements de scléactiniaires sur un récif frangeant de l'île de Gorgona (Côte Pacifique de Colombie).- Tethys 11, 1: 25-31.- FC&P 14-2, p. 21, ID=6704^Topic(s): reef corals biocoenoses; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Colombia, Isla Gorgona^^1";
- 4113 s[4110] = "CHEVALIER J.P. (1979).- La faune corallienne (Scleractiniaires et Hydrocoralliaires) de la Polynésie Française.- Cahiers de l'Indo-Pacifique 1: 129-151.- FC&P 9-1, p.

- 17, ID=5772^Topic(s): ; Scleractinia, Hydrocorallina;
Systematics: Cnidaria; Scleractinia Hydrozoa; Stratigraphy:
Recent; Geography: Polynesia French^1";
- 4114 s[4111] = "KUHLMANN D.H.H., CHEVALIER J.P. (1986).- Les coraux
(Scleractiniaires et Hydrocoralliaires) de l'atoll de Takapoto,
iles Tuamotu: aspects ecologiques.- Marine ecology 7, 1: 75-104.-
FC&P 15-2, p. 38, ID=0726^Topic(s): ecology;
Scleractinia, Hydrozoa; Systematics: Cnidaria; Scleractinia
Hydrozoa; Stratigraphy: Recent; Geography: Pacific,
Tuamotu^Recent publications on the coral community of the Tuamotu
archipelago have dealt with the Mururoa and Taiaro atolls, with
virtually no information available on Takapoto. Consequently the reefs
of this atoll were studied using SCUBA to a depth of 70 m and in
different biotopes such as patch reefs of the lagoon, and external or
protected slopes. A description of the various coral communities is
given; specific diversity, ecological valence, community composition,
percent coverage, and constructive potential is discussed in relation
to abiotic factors.^1";
- 4115 s[4112] = "SAUNDERS W.B., THAYER C.W. (1987).- A cryptic intertidal
brachiopod / sclerosponge community in Palau, West Caroline
Islands.- Geological Society of America Abstracts with Programs 19, 7:
829.- FC&P 17-1, p. 42, ID=2165^Topic(s): cryptic
habitats; Sclerospongiae; Systematics: Porifera; Sclerospongiae;
Stratigraphy: Recent; Geography: Pacific, Caroline
Islands^Acanthochaetetes and Astrosclera occur in cavities^1";
- 4116 s[4113] = "HARTMAN W.D., GOREAU T.F. (1975).- A Pacific Tabulate
Sponge, living representative of a new order of sclerosponges.-
Postilla 167: 21 pp., 15 figs; Peabody Museum, Yale University.-
FC&P 4-2, p. 66, ID=5316^Topic(s): ; Porifera
Sclerospongiae; Systematics: Porifera; Sclerospongiae;
Stratigraphy: Recent; Geography: Pacific, Guam^A new
sclerosponge, Acanthochaetetes wellsi, with a calcitic skeleton made up
of contiguous vertical tabulate calicles ornamented within by vertical
rows of irregular clumps of spines is described from cryptic habitats
on reefs in western Pacific region. A lamellar microstructure
characterizes the calicle walls and spines. Increase in number of
calicles occurs as intramural offsets. An epitheca with growth lines
surrounds the entire sponge. * Living tissue is restricted to the space
above the outermost tabulae and a thin layer lying above the calcareous
skeleton. Siliceous spicules of two kinds, tylostyles and modified
spirasters, are distributed in the living tissue but are not
incorporated into the calcitic skeleton. Star shaped groups of exhalant
canals converge upon central oscules on the sponge surface and leave
astrophoral patterns impressed into the calcareous skeleton below. * A
new order, the Tabulospongida, of the class Sclerospongiae is proposed
to receive the new Pacific species together with its Jurassic and
Cretaceous forebears. Despite suggestive similarities between
acanthochaetetids and favositids, a phylogenetic relationship between
these two groups is considered unlikely on the basis of present
evidence. * Sampling site: reefs of Rongerik Atoll, Guam.^1";
- 4117 s[4114] = "VACELET J., CUIF J.-P., GAUTRET P., MASSOT M., RICHER de
FORGES B., ZIBROWIUS H. (1992).- Un spongiaire sphinctozoaire colonial
apparente aux constructeurs de récifs Triassiques dans le bathyal de
Nouvelle-Calédonie.- Comptes Rendus, Académie des Sciences Paris 314,
ser. III: 379-385.- FC&P 21-2, p. 48, ID=3343^Topic(s):
bathyal; Porifera, Sphinctozoa; Systematics: Porifera;
Sphinctozoa; Stratigraphy: Recent; Geography: New
Caledonia^A new living sphinctozoan of colonial form has been dredged
from bathyal depths off New Caledonia. Its form gives it the potential
to make reef-like mounds like the Triassic sphinctozoan to which it is
compared. Its exhalant openings appear to be covered by a cuticle.
Carbon-14 dating suggests a growth rate of 11mm/100 yrs.^1";
- 4118 s[4115] = "WORHEIDE G., REITNER J. (1996).-'Living fossil&

sphinctozoan coralline sponge colonies in shallow water caves of the Osprey Reef (Coral Sea) and the Astrolabe Reefs (Fiji Islands).- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 31, ID=3582^Topic(s): cavity dwellers; Porifera, Sphinctozoa, Corallina; Systematics: Porifera; Sphinctozoa Corallina; Stratigraphy: Recent; Geography: Fiji Isls^Three new types of a Recent colonial sphinctozoan coralline sponge are presented. All types show close relationships to Vaceletia crypta, a non colonial form from Indo-Pacific reef caves. The first two types were discovered in shallow water reef caves of the Osprey Reef, which is located on the northern Queensland Plateau in the Coral Sea. The sponges are common in these caves. The third type of a colonial sphinctozoan was found only at three localities at the North Astrolabe Reef and Great Astrolabe Reef of the Fiji Islands. The third type shows similarities with a previously described deep water variation of Vaceletia from New Caledonia.^1";

4119 s[4116] = "PAYRI C.E. (1995).- Production carbonatee de quelques algues calcifiees sur un recif corallien de Polynesie francaise.- Bulletin de la Societe geologique de France 166, 1: 77-84.- FC&P 24-1, p. 90, ID=4525^Topic(s): calcification rate; Algae calcareous; Systematics: algae; Stratigraphy: Recent; Geography: Polynesia French, Moorea^On the northwestern part of Moorea Island, calcification rates for 8 benthic species (Halimeda opuntia var hederacea, H. opuntia var. opuntia, H. incrassata f. ovata, H. discoidea, Amphiroa fragilissima, Porolithon onkodes, Hydrolithon reinboldii and Padina tennis) were estimated using the total alkalinity method during 24 hours cycles, spread in the course of a year. The daily calcification rate vary largely within the taxa. Halimeda play a major role in the carbonate budget and particularly in the sediment deposition. The hourly rates vary over a 24-hours-cycle with a decrease during the night period. Moreover, the calcification measurements spread in the course of the year exhibit a strong seasonally in the carbonate production. Lastly, the annual inorganic carbon budget shown that these species play an essential role in the balance of the reef calcification rates.^1";

4120 s[4117] = "DENIZOT M. (1972).- Sur le rôle constructeur des algues en Polynésie Française.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 497-505.- FC&P 2-2, p. 13, ID=4779^Topic(s): bioconstructors; Algae reefs; Systematics: algae; Stratigraphy: Recent; Geography: Polynesia French^1";

4121 s[4118] = "CRIBB A.B. (1973).- The Algae of the Great Barrier Reefs.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 47-75.- FC&P 3-2, p. 36, ID=4930^Topic(s): ; Algae; Systematics: algae; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^1";

4122 s[4119] = "REITNER J., GAUTRET P., MARIN F., NEUWEILER F. (1995).- Automicrites in a modern marine microbialite. Formation model via organic matrices (Lizard Island, Great Barrier Reef, Australia).- Bulletin de l'Institut oceanographique, Monaco, special volume 14, 2: 237-263.- FC&P 25-1, p. 31, ID=3007^Topic(s): reefs microbialites; reefs, microbialites; Systematics: Monera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^Within shallow water caves of fringing reefs of Lizard Island (Great Barrier Reef) indurated microbialites were observed. These microbialites are formed under dark conditions and therefore no phototrophic organisms are present. The microbialites are composed of microcrystalline high-Mg calcites (12-15 mol% MgCO₃). They

exhibit mean values of $\delta^{13}\text{C} +3.5$ and $\delta^{18}\text{O} - 1$ which are close to seawater equilibrium. Two main types of microbialites are observed, a thrombolitic one with relatively high net growth and a hardground type with reduced growth rates. They are associated with a filterfeeding sessile benthic community which is dominated by coralline sponges. The high-Mg calcitic micrite is mainly formed in place (automicrite = organominerals). The accumulation of fine-grained biodebris provides only 15% of the total rock volume. Following types of automicrites are recognized: a. mineralized microbes, b. spherical peloids, c. micrite formed in microcavities, d. micrite formed within thrombolitic structures, e. micrite formed within hardgrounds, and f. micrite (micropeloidal) formed by decaying tissues (via ammonification). All studied automicrites exhibit high amounts of Asp- and Glurich macromolecules (soluble matrices) which are regarded as responsible for crystal nucleation. The observed modern automicrites and the related products are a key to understand the formation of widely distributed fossil microbial buildups (mud mounds).

- 4123 s[4120] = "REITNER J. (1993).- Modern cryptic microbialite / metazoan facies of the Lizard Island Section (Great Barrier Reef; Australia). Formation and concepts.- Facies 29: pp?.- FC&P 22-2, p. 92, ID=3541^Topic(s): reefs cryptic microbialites; reefs, cryptic facies; Systematics: Monera Animalia; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^From shallow water caves of fringing reefs related to continental islands of the Lizard Island Section thrombolitic micritic microbialites were observed. The microbialites exhibit always a light decreasing facies succession. The succession starts with a corallgal community and ends with light independent microbial biofilms and benthos (coralline sponges etc.). The sessile mineralized benthos community is constructed of crustose foraminifera, serpulids, thecidean brachiopods, bryozoans, and coralline sponges. The observed benthic community is very similar to those one observed in cryptic habitats of Aptian and Albian reefs of northern Spain. For longtime studies of the microbialite formation and growth rates of coralline sponges the specimens were stained in vivo, within their natural habitat with histochemical fluorochromes and nonfluorescent agents. Main results are a very slow growth of the microbialite and associated sponges (50-100 $\mu\text{m}/\text{y}$). Only few calcifying microbes are participators during microbialite formation. Calcifying acidic organic macromolecules are mainly responsible for microbialite formation by cementing detrital material. Fe/Mn-bacterial biofilms are responsible for strong corrosion of the microbialite. Beside the corrosive activity of the Fe/Mn-bacterial biofilms boring sponges (Aka, Cliona) are the main destructors. Geochemically the observed microbialites are composed of mainly high-Mg calcites and exhibit high positive $\delta^{13}\text{C}$ (+3 to +4) values."
- 4124 s[4121] = "SALVAT B. (1972).- Distribution des mollusques sur les récifs extérieurs de l'atoll de Fangataufa (Tuamotu, Polynésie). Radiales quantitatives - Biomasses.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 373-378.- FC&P 2-2, p. 13, ID=4777^Topic(s): reef molluscs distribution; reef mollusks; Systematics: Mollusca; Stratigraphy: Recent; Geography: Polynesia French, Tuamotu"
- 4125 s[4122] = "BASILE L.L., CUFFEY R.J., KOSICH D.E. (1984).- Sclerosponges, Pharetronids and Sphinctozoans (Relict cryptic hard-bodied Porifera) in the modern reefs of Enewetak Atoll.- Journal of Paleontology 58, 3: 636-650.- FC&P 13-2, p. 57, ID=0604^Topic(s): ecology, actuopaleontology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Enewetak Atoll^Several sclerosponge and related

species occur sparingly within modern reefs of Enewetak (formerly Eniwetok) Atoll in the central Pacific Ocean. Ranging over 4-35m depths, the sclerosponges occupy both the outer reef wall and lagoonal coral knolls at Enewetak. The species encountered are described as seen in standard paleontologic preparations; these forms can thus be readily compared with various important fossil groups. The sclerosponge *Acanthochaetetes wellsi* is of finely tubular construction, the sclerosponge *Astrosclera willeyana* is densely labyrinthine, the celetia crypta consists of successively stacked hemispherical shells. [original summary]^1";

4126 s[4123] = "CONWAY K.W., KRAUTTER M., BARRIE J.V., NEUWEILER M. (2001).- Hexactinellid Sponge Reefs on the Canadian Continental Shelf: A Unique "Living Fossil".- *Geoscience Canada* 28, 2: 71-78.- FC&P 30-2, p. 34, ID=1602^Topic(s): reefs, ecology; Porifera reefs; Systematics: Porifera; Stratigraphy: Recent; Geography: Canada^Globally unique hexactinellid (siliceous) sponge reefs, found in deep (200m), glacially scoured troughs of the western Canadian continental shelf, have been explored by a manned submersible. Submersible observation and geophysical data allow examination of the physical and biological processes that have shaped the sponge reefs, which began to form about 9 thousand years (k.y.) ago. The mounds (bioherms) and sheet-like accumulations (biostromes) cover a low-angle, non-depositional, iceberg-scoured seafloor, relict since the deglaciation of the region. Biohermal structures are up to 19 m in height, and are covered with hexactinosan sponges up to 1.5 m tall, creating a benthic habitat that discontinuously covers roughly 700 km². Similar to extinct siliceous sponge reefs, mud mounds, and reef mounds that were widespread during the Mesozoic, the modern reefs are like a "living fossil" and provide a unique modern analogue. Fishing activities, especially trawling or bottom dragging, have damaged the slow-growing reefs in some areas.^1";

4127 s[4124] = "KRAUTTER M., CONWAY K.W., BARRIE J.V., NEUWEILER M. (2001).- Discovery of a "Living Dinosaur": Globally Unique Modern Hexactinellid Sponge Reefs off British Columbia, Canada.- *Facies* 44, 1: 265-282.- FC&P 30-2, p. 36, ID=1604^Topic(s): reefs; Porifera reefs; Systematics: Porifera; Stratigraphy: Recent; Geography: Canada W^Globally unique hexactinellid sponge reefs occur on the continental shelf off British Columbia, Canada. They cover about 425 km² of seafloor on the continental shelf off British Columbia (Canada) in water depths between 165 and 240 metres and occur on a low-angle deep shelf, iceberg scoured seafloor, characterized by very low sedimentation rates and very stable environmental conditions. The sponge bioherms are up to 19 metres high with steep flanks, whereas the biostromes are 2-10 metres thick and many kilometres wide. They all consist of dense populations of only seven hexactinellid species. Three of them, all hexactinosan species (*Aphrocallistes vastus*, *Heterochone calyx*, *Farrea occa*) are the main frambuilders, composing a true rigid framework of sponge skeletons encased in a organic rich matrix of modern clay baffled by the sponges. Growth rates of hexactinosan sponges range in the order of 0-7 centimetres per year. The base of the oldest sponge reefs date from approximately 9000 years b.p. Different invertebrate and fish faunas occupy the reefs than occur on adjacent seafloor areas and some species appear to use the sponge reef complex structures as refugia where they can hide. Sidescan sonar data and direct observation by manned submersible clearly show that large areas of sponge reefs have been heavily damaged by seafloor trawling in the past decade. These unique extant siliceous sponge reefs can be used as a modern analogue for a better understanding and interpretation of fossil siliceous sponge reefs, known from many ages and many locations world wide.^1";

4128 s[4125] = "SOEST R.W.M.van, DESQUEYROUX-FAUNDEZ R., WRIGHT A.D., KONIG G.M. (1996).- *Cymbastela hooperi* sp.nov. (Halichondrida: Axinellidae)

from the Great Barrier Reef, Australia.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 103-108.- FC;P 25-2, p. 30, ID=3109Topic(s): new taxa; Porifera Cymbastela; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier ReefCymbastela hooperi sp.nov. is described from the Great Barrier Reef, Australia. This species belongs to the recently erected genus of stalked sponges, Cymbastela Hooper & Bergquist, 1992. The new species is the eighth member of this Australasian genus. Cymbastela hooperi sp.nov. is distinguished from other Cymbastela species, by its unique growth form (stalkless and flattened on substrate), its yellow to brown colour, its loose skeletal morphology, the often telescope spicule shape and its chemistry. The new species produces a large number of structurally related diterpene isonitrile derivatives which demonstrate significant in vitro antimalarial activity. One of these compounds, di-isocyano-adociane, is also found in Amphimedon terpenensis Fromont, 1993. In addition both species present similar skeletal characters and spicule size. Considering this, a new combination is proposed: Cymbastela terpenensis (from Amphimedon). [original abstract]¹;

- 4129 s[4126] = "THIEL V., REITNER J., MICHAELIS W. (1996).- Biogeochemistry of Modern Porifera and Microbialites from Lizard Island (Great Barrier Reef, Australia) and Fossil Analogues.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC;P 26-1, p. 30, ID=3579Topic(s): microbialites; Porifera, microbialites; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier ReefOrganic geochemical techniques were applied to study the lipid content of living reef organisms and rock samples from different carbonate facies. The characterization of individual organic compounds ("biomarkers") yields information on the biology and paleontology of microbially derived carbonate rocks, sponges and sponge-microbiota communities on a molecular level.¹;

4130 s[4127] = "LEVI C., LABOUTE P., BARGIBANT G., MENU J-L., BATTERSHILL C., BERGQUIST P., BOROJEVIC R., DEBITUS C., FROMONT J., HOOPER J., KELLY-BORGES M., VACELET J., WILKINSON C., (1998).- Sponges of the New Caledonian lagoon.- ORSTOM, Paris. 214 pp. [book] - FC;P 27-2, p. 65, ID=3932Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: New Caledonia¹;

4131 s[4128] = "PULITZER-FINALI G. (1982).- Some new or little-known sponges from the Great Barrier Reef of Australia.- Bolletino Mus. Inst. Biol. Univ. Genova 48-49 (1980-1): 87-141.- FC;P 12-2, p. 40, ID=6235Topic(s): monograph; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef[Thirty-six species are described, mostly with illustrations of specimens and spicules. Twenty-seven of these are new, and nine are little known. The following genera are represented (those marked * contain new species: Leucetta, Sycon, Cinachyra*, Cliona, Didiscus (unnamed), Acanthella*, Auletta*, Phakellia*, Batzella*, Dictyonella*, Arenochalina, Mycale*, Neofibularia, Kerasemna* gen. n., Echinoclathria*, Cladocroce*, Gellius* (possibly a Microxina), Gelliodes*, Amphimedon*, Callyspongia*, Siphonochalina*, Arenosclera* gen n., Xesto-spongia*, Carteriospongia*, Ircinia*, Euryspongia*, Dendrilla, Pseudoceratina*. * The material was collected and made available to the author by staff of the Heron Island Research Station. Unfortunately, no proviso was apparently made for depositing the type material in a museum in Australia, as is customary with other groups of the Australian fauna. All type material is now deposited in the Museum of Natural History of Genoa, Italy, with register numbers given in the

- publication. It is hoped that such a regrettable mistake will not be repeated.]^1";
- 4132 s[4129] = "BAKUS G.J., NISHIYAMA G.K. (1999).- Sponge distribution and coral reef community structure off Mactan Island, Cebu, Philippines.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 45-51.- FC&P 28-2, p. 7, ID=6935^Topic(s): reefs, ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Philippines^^1";
- 4133 s[4130] = "BURJA A.M., WEBSTER N.S., MURPHY P.T., HILL R.T. (1999).- Microbial Symbionts of Great Barrier Reef Sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 63-77.- FC&P 28-2, p. 7, ID=6938^Topic(s): microbial symbionts; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4134 s[4131] = "FUERST J.A., WEBB R.I., GARSON M.J., HARDY L., REISWIG H.M. (1999).- Membrane-bounded nuclear bodies in a diverse range of microbial symbionts of Great Barrier Reef sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 193-204.- FC&P 28-2, p. 8, ID=6951^Topic(s): microbial symbionts; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4135 s[4132] = "HOOPER J.N.A., LIST-ARMITAGE S.E., KENNEDY J.A., COOK S.D., VALENTINE C.A. (1999).- Sponges of the Low Isles, Great Barrier Reef: an important scientific site, or a case of mistaken identity?.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 249-262.- FC&P 28-2, p. 8, ID=6956^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4136 s[4133] = "HOOPER J.N.A., KENNEDY J.A., LIST-ARMITAGE S.E., COOK S.D., QUINN R. (1999).- Biodiversity, species composition and distribution of marine sponges in northeast Australia.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 263-274.- FC&P 28-2, p. 8, ID=6957^Topic(s): biodiversity, ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4137 s[4134] = "ROBERTS D.E., CUMMINS S.P., DAVIS A.R., PANGWAY C. (1999).- Evidence for symbiotic algae in sponges from temperate coastal reefs in New South Wales, Australia.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 493-498.- FC&P 28-2, p. 9, ID=6980^Topic(s): symbiotic algae; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4138 s[4135] = "FAUBEL A. (1984).- On the abundance and activity pattern of zoobenthos inhabiting a tropical reef area, Cebu, Philippines.- Coral Reefs ??, 3/4: 205-213.- FC&P 15-1.2, p. 9, ID=0845^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Philippines, Cebu^^1";
- 4139 s[4136] = "SUZUKI Y., IRYU Y., INAGAKI S., YAMADA T., AIZAWA S., BUDD D.A. (2006).- Origin of atoll dolomites distinguished by geochemistry and crystal chemistry: Kita-daito-jima, northern Philippine Sea.- Sedimentary Geology 183, 3-4: 181-202.- FC&P 34, p. 106, ID=1374^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Recent; Geography: Philippine Sea^Kita-daito-jima is a carbonate island located at the northwestern region of the Philippine Sea (25°55.6'-57.6'N, 131°16.9'-19.8'E). Dolomites extend from the island surface to a depth of 100m below the ground surface (mbgs). Strontium isotope

stratigraphy indicates that subsurface Units C1 (0-49.7 mbgs) and C2 (49.7-103.4 mbgs) were dolomitized at 5.5 Ma and 2.0 Ma, respectively, and that island-surface dolomites are products of dolomitization at 1.6-2.0 Ma. X-ray diffraction analysis indicates that the island-surface and borehole dolomites comprise variable mixtures of four and three dolomite crystal phases, respectively. Each of these phases is distinguished by a different Ca and Mg content. Three textural types can be recognized in the Kita-daito-jima dolomites, fabric-preserving crystalline nonmimetic (CNM), crystalline mimetic (CM), and fabric-preserving microcrystalline (MS). CNM dolomites contain more calcian phases, whereas MS dolomites commonly are richer in more stoichiometric phases. Backscattered electron images indicate that calcian dolomite phases were precipitated earlier than the more stoichiometric dolomite phases and that there is no significant hiatus between the phases, although they are diachronous. Both the island surface and borehole cores dolomites show linear relationships between whole-rock $\delta^{18}O$ composition and Mg contents and between whole-rock trace element concentrations (Sr and Na) and Mg contents. These covariances result from phase mixing, not stoichiometric effects. Deconvolution of whole-rock isotopic and elemental compositions based on the relative abundance of phases reveals that each phase has a distinct chemical and isotopic composition. Oxygen isotopic compositions of the island surface and borehole dolomites suggest that all dolomite phases formed in seawater and that dolomitization primarily occurred during glacio-eustatic sea-level lowstands and cooler ocean temperatures.¹;

- 4140 s[4137] = "GROBE H., WILLKOMM H., WEFER G. (1985).- Internal structure of the double reef of north Bohol and the Olango reef flat (Philippines).- Philippine Scientist 22: 83-94.- FC&P 16-1, p. 69, ID=1988Topic(s):reefs, structures; reefs; Systematics: ; Stratigraphy: Recent; Geography: Philippines^^1";
- 4141 s[4138] = "LIDICKY R., FUETTERER D. (1985).- Mineralogy and Component distribution of Recent Carbonate Sediments of the Olango Reef Flat, Camotes Sea, Philippines.- Philippine Scientist 22: 119-132.- FC&P 16-1, p. 69, ID=1990Topic(s):reefs, carbonates; reefs; Systematics: ; Stratigraphy: Recent; Geography: Philippines^^1";
- 4142 s[4139] = "MERGNER H. (1985).- Initial recolonization of Funafuti Atoll coral reefs devastated by hurricane "Bebe".- Atoll Research Bulletin 284: 1-19.- FC&P 16-1, p. 69, ID=1991Topic(s):reefs, recovery; reefs; Systematics: ; Stratigraphy: Recent; Geography: Funafuti Atoll^^1";
- 4143 s[4140] = "WERNER F., WEFER C. (1985).- Sedimentation in Channels of the Reef Area off Northwest Bohol (Philippines) as studied with high-resolution seismic and side-scan sonar.- Philippine Scientist 22: 95-111.- FC&P 16-1, p. 71, ID=2004Topic(s):reefs sedimentology; reefs, sedimentology; Systematics: ; Stratigraphy: Recent; Geography: Philippines^^1";
- 4144 s[4141] = "SCHOLZ J. (1986).- Sea level data from the Quaternary fringing reefs and barrier reefs of Cebu (Philippines).- Philippine Scientist 23: 50-57.- FC&P 16-2, p. 27, ID=2066Topic(s):reefs, eustacy, stratigraphy; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Philippines^^1";
- 4145 s[4142] = "GAGAN M.K., JOHNSON D.P., CARTER R.M. (1988).- The Cyclone Winifred Storm Bed, Central Great Barrier Reef Shelf, Australia.- Journal of sedimentary Petrology 58, 5: 845-856.- FC&P 18-2, p. 44, ID=2500Topic(s):sedimentology, storm beds; sedimentology; Systematics: ; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^Shelf sediments were collected immediately before (8-20 January 1986), immediately after (9-10 February 1986) and one year after (27 February 1987) cyclone

winifred crossed the central Great Barrier Reef shelf on 1 February 1986. The storm produced a normally graded, mixed terrigenous-carbonate storm bed more than 11 cm thick, covering an area at least 1,200 km², and extending more than 30 km offshore to water depths greater than 40 m. The storm layer encompasses two lithologically distinct shelf-parallel facies belts. The nearshore (0-25 m depth) storm bed is 3-11 cm thick, thins offshore, and grades upward from medium sand to silty clay. Offshore (25-43 m depth) the storm bed thickens to more than 11 cm and consists of normally graded, well sorted, relict quartz and skeletal, gravelly sands capped by thin mud veneer. The cross-shelf distributions of grain size, mineralogy, carbonate content, and carbon isotope ratios were very similar before and after winifred, suggesting the storm bed did not result from offshore-directed storm currents, rather, in situ resuspension and settling of the shelf sand with shoreward transport of mud. In contrast to storm sedimentation models which predict thinning and fining offshore, winifred created a layer that becomes thicker and coarser grained in deeper water in response to cross-shelf substrate changes. After one year the winifred storm layer was well preserved nearshore (<20 m water depth), but completely bioturbated offshore (>30 m water depth) below fairweather wave base. Preservation may not be a matter of insulating the layer from physical reworking below fairweather wave base but of burying it where rates of sediment accumulation outpace bioturbation. The effects of storms similar in size to winifred may be well concealed in ancient shelf sequences subject to rapid biological remixing of storm layers.¹¹;

- 4146 s[4143] = "SCHONBERGER G. (1989).- Die rezenten Riffe der Pangasinan-Halbinsel (N-Luzon) Philippinen. Entwicklung, Verbreitung, Aufbau und Fazieszonierung von Terrassenriffen und Rampenriffen und ihre Beziehung zum Saumriff.- Documenta Naturae 48: 150 pp., 7 pls, 31 figs, 12 tab.- FC&P 19-1.1, p. 20, ID=2573^Topic(s): reefs, morphology, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Philippines, Luzon^^1";
- 4147 s[4144] = "TUDHOPE W. (1989).- Shallowing-Upwards Sedimentation in a Coral Reef Lagoon, Great Barrier Reef of Australia.- Journal of sedimentary Petrology 59, 6: 1036-1051.- FC&P 19-1.1, p. 59, ID=2681^Topic(s): reef complexes, sedimentation; reef complex, sedimentation; Systematics: ; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^Sediments in the 5-25 m deep lagoon of Davies Reefs, a typical mid-shelf reef in the Central Great Barrier Reef, are described, based on data gleaned from 19 soft sediment cores (75 mm diameter, up to 7.5 m penetration), 22 surface sediment samples and air lift surveys. The Holocene sediment pile, which averages 5-10 m thickness, is entirely skeletal in origin and has a very poorly sorted, coral gravel-rich base which grades up into poorly sorted muddy sands with infaunal molluscan gravel. These muddy sands (mainly derived from the reef rim as opposed to being produced in situ on the lagoon floor) have been intensely bioturbated by callianassid shrimps, leaving the infaunal molluscan gravel patently distributed and the bivalves disarticulated and preferentially oriented subhorizontally, concave-up. There are no vestiges of primary depositional sedimentary structures such as bedding or cross-bedding. Radiocarbon dating suggests that significant accumulation of muddy-sand in the center of the lagoon did not begin until about 2,500-3,000 yr BP; and that sediment accumulation rates have increased through time from an average of 1.4 mm / yr between 2,400 and 640 yr BP, to 3.4 mm / yr over the past 640 years. Interpreting these data, the coral gravel-rich base to the sediment pile represents a period of prolific coral growth across the top of Davies Reef Platform following flooding by the Holocene transgression but before the outer reef rim caught up with sea level to form a lagoon. When the rim did reach sea-level (about 3,000-4,000 yr BR?), it started to shed large quantities of mud and sand grade sediment into the center of the reef platform and this, combined with decreased water circulation, led to the demise of coral

growth in the newly formed lagoon. As the area of reef rim at sea level increased, so too did the supply of sediment to the lagoon, which explains the observed increase in sediment accumulation rate through time. Using previously published data to aid speculation into the future development of the lagoon, a shallowing-upwards model for reef lagoon sedimentation is developed. In this model, a complete sequence consists of a fining-upwards base (reflecting the gradation from coral gravel up into bioturbated muddy sands) and a coarsening-upwards top (reflecting a gradation from bioturbated muddy sands up into a zone of shallow subtidal coral nibble and patch reefs, then inter- and supratidal windward storm shingle ramparts and leeward sand cays).^1";

4148 s[4145] = "DELOS REYES M., MARTENS R. (1995).- Low-cost artificial reef program in the Philippines: an evaluation in the management of a tropical coastal ecosystem.- Beiträge zur Paläontologie 20: 1-6.- FC&P 25-2, p. 65, ID=3167^Topic(s): reefs artificial, reefs management; reefs conservation; Systematics: ; Stratigraphy: Recent; Geography: Philippines^This paper evaluates a 15-year program on low-cost artificial reefs (LCAR) in the Philippines resulting in an eco-economic analysis of reefs. The most common and popular materials used in the construction of artificial reefs are discarded tires and bamboos. Concrete cement is rarely used due to the high cost of its materials. Available data reveals that there is a low biological productivity in bamboo and tire artificial reefs with an average of 0.154kgm-3wk-1 and 0.010kgm-3wk-1, respectively, compared with the natural reefs having 0.256kgm-3wk-1. Likewise, findings show that fishermen earn a lower income of PHP 6.16kgm-3wk-1 from using bamboo reefs and PHP .40kgm-3wk-1 from tire reefs in comparison with the earnings from natural reefs which is PHP 10.24kgm-3wk-1. Preliminary researches on the ecology of artificial reefs (i.e., bamboo and tires) showed that the substrates of such reefs are not conducive to reef organism encrustation, and as rubber tires decay they produce toxic chemicals adding more problems to the ecosystem Recommendations for the tropical coastal ecosystem management are presented.^1";

4149 s[4146] = "COLLINS L.B., ZHU Z.-R.WYRWOLL K.-H., HATCHER B.G., PLAYFORD P.E. CHEN J.-H., EISENHAUER A., WASSERBURG G.J., (1993).- Late Quaternary evolution of coral reefs on a cool-water carbonate margin; the Abrolhos Carbonate Platforms, southwest Australia.- Mar. Geol. 110: 203-212.- FC&P 22-1, p. 51, ID=3423^Topic(s): reefs, cool climates; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Australia SW^Late Quaternary coral reefs have developed on the southwestern Australian margin, which has otherwise been characterized by cool-water carbonates since the Eocene. The Houtman Abrolhos coral reefs are at the limits of existence, extending, with the assistance of the Leeuwin Current, a poleward-flowing, warm water stream, into a region dominated by more temperate communities. Coring in the Easter Group reefs, supported by high precision dating, by both U/Th TIMS and 14C methods, has shown vigorous coral growth, with reefs over 26m thick in the Holocene and over 15m thick in the Last Interglacial. Each of the three Abrolhos platforms consists of a central platform composed of Last Interglacial reefs, about which windward and leeward Holocene reefs developed asymmetrically. Reef, peritidal and eolian facies comprise the emergent Last Interglacial limestones which are extensively calcretized, with reef facies up to 5m above MSL. The Last Interglacial highstand lasted for at least 10ka from 130 to 120ka, and possibly 15ka, from 132 to 117ka. Holocene reef facies are also emergent by 0.5m, and are overlain by peritidal and storm ridge facies in an upward-shallowing sequence. windward (10m thick) and leeward (26m thick) Holocene reefs in the Easter Group show contrasting lithofacies. The wave-exposed windward reefs consist of a slow-growing association of coralline algal bindstones and coral framestones, whereas fast-growing coral framestones dominate the more protected leeward reefs. The leeward

reefs commenced growth 10,000 years ago and grew to the present sea level by 6500 years ago, generating Holocene constructional topography consisting of "blue-hole" terrain in the leeward parts of the platforms.^1";

- 4150 s[4147] = "GUILLO H., BROUSSE R., GILLOT P.Y., GUILLE G. (1993).- Geological reconstruction of Fangataufa atoll (South Pacific).- Mar. Geol. 110: 377-391.- FC&P 22-1, p. 52, ID=3426^Topic(s): reefs, geological history; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Pacific S, Fangataufa Atoll^Several boreholes drilled by the Commissariat à l'Energie Atomique have reached and passed through the volcanic bedrock of Fangataufa atoll. The sampled volcanic rocks under the coral ring were produced during both aerial and submarine activity, whereas rocks drilled under the lagoon were erupted during submarine volcanism only. The bathymetric data show that the atoll has a "starfish" shape. The rift zones are elongated in N-S, N70-80 and N120 directions; these three main directions are also the directions of structural discontinuities in the lithosphere. Reconstruction of the atoll's topography before erosion using a slope angle of about 16° shows that the maximum height reached by the volcano was about 1300m above sea level. For comparison, the maximum height of Mehetia island (southeast of Tahiti) is approximately 435m. The successive construction stages are: (1) initiation of volcanism along the rift zones and construction of a central volcano; (2) production of brecciated lavas; (3) emergent volcanism; and (4) central and aerial activity. The present day position of the aerial volcanic rocks under the coral reef and the submarine products under the lagoon is discussed with reference to two hypotheses. The first is based on sea level changes and the second on a tectonic origin (collapse of the atoll's flanks). Using recent geochronological data, the submarine construction of the atoll related to the hot-spot activity lasted about 1.1Ma. The accumulation rate was approximately 0.7 cm/yr (1.5 x 10⁻³km³/yr) and the aerial volcanic activity lasted about 2Ma (1.5 x 10⁻³km³/yr).^1";
- 4151 s[4148] = "MEISCHNER D. (1996).- Sealevel Oscillations and Growth History of the Great Barrier Reef.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 26, ID=3571^Topic(s): reefs, eustacy, geohistory; reefs eustacy; Systematics: ; Stratigraphy: Holocene; Geography: Australia, Great Barrier Reef^The post-glacial sealevel rose to ca. 3m above the present in the northern Great Barrier Reef ca. 6,000 yrs BP. It oscillated with at least one younger highstand ca. 3,500 yrs BP, and two intermittent lowstands. The present level was reached only a few hundred years ago. The younger sealevel highstand has left marine encrustations on the exposed granite of the Lizard Island Group, coral colonies on the shore platforms around Lizard Island, and shingle terraces and storm beaches on Nymph Island and in the Turtle Group of Low Wooded Isles. This sealevel history is consistent with the one derived from Rottnest Island, Western Australia. In contrast, the Caribbean experienced a single-phased sealevel rise without highstands above present datum. The marked contrast in overall structure and zonation between the Pacific and the Atlantic barrier reefs may be attributed to these different sealevel histories.^1";
- 4152 s[4149] = "PERRIN C. (1990).- Genèse de la morphologie des atolls: le cas de Mururoa (Polynésie Française).- C. R. Acad. Sc. Paris 311, II: 671-678.- FC&P 23-1.1, p. 11, ID=4053^Topic(s): reefs, geomorphology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Polynesia French, Mururoa^^1";
- 4153 s[4150] = "CAMOIN G.F., MONTAGGIONI L.F. (1994).- High energy coralgal-stromatolite frameworks from Holocene reefs (Tahiti, French Polynesia).- Sedimentology 41, 4: 655-676.- FC&P 23-2.1, p. 70, ID=4437^Topic(s): reefs, bioconstructors; reefs;

Systematics: ; Stratigraphy: Holocene; Geography: Polynesia, Tahiti^Drill cores from Holocene reefs on Tahiti (French Polynesia) reveal a framework composed of massive branching acroporids encrusted by coralline algae associated with sessile vermetid gastropods and arborescent foraminifers. Laminated micritic crusts form coatings over coral branches or, more commonly, over related encrusting organisms throughout the cored reef sections; these crusts appear as a major structural and volumetric component of the reef framework. The microbial nature of these micritic crusts is inferred from their typical organic growth forms and geometry, the occurrence of microbial remains and stable isotope measurements. The reef communities accumulated at depths less than 5m below mean sea level in a high energy environment throughout vertical growth from 7140 ± 170 yr BP to the present. The nature of the involved benthic communities, stable isotope data and high calcification rates of microbially encrusted corals strongly suggest that local environmental conditions have been optimal for reef development for the last 7000 years. The causes of the predominance of microbial communities over actual encrusters (red algae, foraminifers) remain problematic and could be related to short term fluctuations in ecological parameters. Microbial micritic crusts seemingly played a prominent role in protecting the coral colonies from bioeroders and grazers and, possibly, in strengthening the framework, due to rapid lithification. The record of similar microbial crusts in other Quaternary reef tracts suggests that microbial communities may have played a more prominent role in Quaternary reefs than presently recognized.^1";

4154 s[4151] = "CHAZOTTES V., LE CAMPION-ALSUMARD T., PEYROT-CLAUSADE M. (1995).- Bioerosion rates on coral reefs: interactions between macroborers, microborers and grazers (Moorea, French Polynesia).- Palaeogeography, Palaeoclimatology, Palaeoecology 113: 189-198.- FC&P 24-1, p. 84, ID=4518^Topic(s): reefs, bioerosion; reefs; Systematics: ; Stratigraphy: Recent; Geography: Polynesia French^A two-year experimental study of bioerosion at Moorea Island, French Polynesia, clearly demonstrated the importance of microborers in the initial stages of the establishment of infaunal boring communities. Rates of erosion by micro- and macroborers and by grazers were estimated from measurements of carbonate removal from experimental substrates, using Image Analysis. The studied substrates have been exposed for 2, 6, 12 and 24 months. After 2 months of exposure, the only borers present in the substrates were cyanobacteria and one chlorophyte (Phaeophila sp.) and their bioerosion rate was estimated at 0.6kg CaCO₃ m⁻² yr⁻¹. In the course of the 2 years of exposure, recruitment of macroborers occurred and their estimated rates of erosion increased during this period from 2.15 to 90g CaCO₃ m⁻² yr⁻¹. Carbonate removal by grazers was the dominant agent of erosion, responsible for 89% of the total bioerosion: 2.6kg CaCO₃ m⁻² yr⁻¹, as recorded in substrates exposed for 2 years. The measurable rates of bioerosion by microborers apparently decreased with the time of exposure from 0.6 to 0.2kg m⁻² yr⁻¹, but these values are underestimations which need to be corrected by including the intensity of microboring in substrate layers removed by grazing. Bioerosion is dependent on numerous environmental factors such as depth, light availability, and nutrient supply. A good knowledge of bioerosional processes in modern environments could highlight bioerosion significance in the fossil record.^1";

4155 s[4152] = "PEYROT-CLAUSADE M., LE CAMPION-ALSUMARD T., HARMELIN-VIVIEN M., ROMANO J.-C., CHAZOTTES V., PARI N., LE CAMPION J., (1995).- La bioerosion dans le cycle des carbonates: essais de quantification des processus en Polynesie francaise.- Bulletin de la Societe geologique de France 166, 1: 85-94.- FC&P 24-1, p. 91, ID=4526^Topic(s): bioerosion; bioerosion quantification; Systematics: ; Stratigraphy: Recent; Geography: Polynesia French^The contribution to bioerosion of the major boring

and grazing species on coral reefs was estimated on French Polynesia by three methods: (1) experimental models using dead coral samples exposed for 5 years. Bioerosion was mainly due to microboring organisms during the first two months, and to macroborers after 6 months of experiment. Grazing was the dominant process since one year and accounted for 66% of the total bioerosion which reached 2.6kg CaCO₃ m⁻²y⁻¹ after two years of exposure: (2) bioerosion rates of grazers. The quantity of carbonate eroded from the reef framework by echinids and scarid fishes was determined through the study of gut contents production. On Moorea barrier reef flat, bioerosion was estimated to 4.5kg CaCO₃ m⁻²y⁻¹ for echinids and to 1.7kg CaCO₃ m⁻²y⁻¹ for scarids; (3) influence of reef communities upon carbonate budget. On the reef studied calcification processes dominated over dissolution processes (2kg CaCO₃ m⁻²y⁻¹. In laboratory experiments, the living corals depleted the carbonate content of seawater (3.7g CaCO₃ m⁻²y⁻¹) which is in turn highly restored by the activity of boring organisms and grazers. These results demonstrated the great importance of bioeroders and grazers in determining the calcium carbonate budget of coral reefs.¹¹;

- 4156 s[4153] = "SMITH S.V., CHAVE K.E., KAM D.T.O. (1973).- Atlas of Kaneohe Bay: A Reef Ecosystem Under Stress.- Unihi-Seagrant TR-72-01, February 1973. The University of Hawaii Sea Grant Program: 128 pp., 65 figs.- FC&P 2-2, p. 10, ID=4742Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Recent; Geography: USA, Hawaii^^1";
- 4157 s[4154] = "MCNEIL F.S. (1972).- Physical and biological aspects of atolls in the northern Marshalls.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp Physical and biological aspects of atolls in the northern Marshalls. 507-567.- FC&P 2-2, p. 13, ID=4780Topic(s): reefs, atolls; reefs; Systematics: ; Stratigraphy: Recent; Geography: Marshall Isls^^1";
- 4158 s[4155] = "FRIEDMAN G.M. (1973).- Great Barrier Reef visited amid symposiums.- Geotimes 18, 11: 23.- FC&P 3-1, p. 17, ID=4853Topic(s): excursion report; Systematics: ; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^In this coral-reef province, under the auspices of the Great Barrier Reef Committee and the Committee for International Symposia on Corals and Coral Reefs, a group of geologists and biologists held a meeting from June 22 to July 2 aboard the ship "Marco Polo".^^1";
- 4159 s[4156] = "LADD H.S. (1973).- Bikini and Eniwetok Atolls, Marshall Islands.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 93-113.- FC&P 3-1, p. 22, ID=4864Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Bikini, Eniwetok^^1";
- 4160 s[4157] = "CHEVALIER J.P. (1973).- Geomorphology and Geology of Coral Reefs in French Polynesia.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 113-141.- FC&P 3-1, p. 22, ID=4865Topic(s): reefs, geology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Polynesia French^^1";
- 4161 s[4158] = "CHEVALIER J.P. (1973).- Coral Reefs of New Caledonia.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 143-167.- FC&P 3-1, p. 22, ID=4866Topic(s): reefs, coral reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: New Caledonia^^1";
- 4162 s[4159] = "WHITEHOUSE F.W. (1973).- Coral Reefs of the New Guinea Region.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1:

- 169-186.- FC&P 3-1, p. 22, ID=4867^Topic(s): reefs, coral reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: New Guinea^^1";
- 4163 s[4160] = "MAXWELL W.G.H. (1973).- Sediments of the Great Barrier Reef Province.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 299-345.- FC&P 3-1, p. 22, ID=4871^Topic(s): sedimentology; sediments; Systematics: ; Stratigraphy: Quaternary; Geography: Australia, Great Barrier Reef^^1";
- 4164 s[4161] = "ORME G.R., FLOOD P.G., EWART A.E. (1974).- An investigation of the sediments and physiography of Lady Musgrave Reef - a preliminary account.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 371-386.- FC&P 4-1, p. 18, ID=5031^Topic(s): reefs, sediments, physiography; reefs; Systematics: ; Stratigraphy: Recent; Geography: Lady Musgrave reef^^1";
- 4165 s[4162] = "BAINES G.B.K., BEVERIDGE P.J., MARAGOS F.E. (1974).- Storms and island building at Funafuti Atoll, Ellice Islands.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 485-496.- FC&P 4-1, p. 19, ID=5042^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Ellice Isls^^1";
- 4166 s[4163] = "TRACEY J.I.jr, LADD H.S. (1974).- Quaternary history of Eniwetok and Bikini atolls, Marshall Islands.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 537-550.- FC&P 4-1, p. 19, ID=5046^Topic(s): reefs, history; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Marshall Isls^^1";
- 4167 s[4164] = "HENNY R.W., MERGER J.W., ZBUR R.T. (1974).- Near surface geologic investigations at Eniwetok Atoll.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 615-626.- FC&P 4-1, p. 19, ID=5052^Topic(s): reefs geology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Enewetak Atoll^^1";
- 4168 s[4165] = "HILL D. (1974).- An introduction to the Great Barrier Reef.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 723-731.- FC&P 4-1, p. 20, ID=5057^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Australia, Great Barrier Reef^^1";
- 4169 s[4166] = "AMERSON A.B.jr, CLAPP R.B., WIRTZ II W.O. (1974).- The natural History of Pearl and Hermes Reef, Northwestern Hawaiian Islands.- Atoll Research Bulletin 174: 306 pp., 80 figs, 115 tabl.; Smithsonian Institution, Washington.- FC&P 4-1, p. 21, ID=5065^Topic(s): ecology; reefs; Systematics: ; Stratigraphy: Quaternary?; Geography: USA, Hawaii^Studies on geology, climate and terrestrial animals, and vegetation.^1";
- 4170 s[4167] = "BROUSSE R., CHEVALIER J.-P., DENIZOT M., SALVAT B. (1974).- Etude géomorphologique des îles Gambier.- Cahiers du Pacifique 18, 1: 9-119.- FC&P 4-1, p. 22, ID=5066^Topic(s): geomorphology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Tuamotu Isls^Situées à l'extrémité SE de l'Archipel des Tuamotu, les îles volcaniques des Gambier sont entourées par un récif barrière ennoyé au sud et à l'ouest délimitant un lagon large et profond. Dans ce mémoire sont étudiés les différents types de côtes et de récifs. Un aperçu sur l'origine de l'Archipel est esquissé.^1";
- 4171 s[4168] = "DUGAS F. (1974).- La sédimentation en Baie de Saint-Vincent

- (Cote Ouest de la Nouvelle-Calédonie).- Cahiers ORSTOM, sér. Géologie 6, 1: 41-61.- FC#038;P 4-1, p. 22, ID=5069Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Recent; Geography: New CaledoniaLes sédiments actuels de la Baie de Saint-Vincent sont le résultat d#039;une part de sables et vases détritiques siliceuses d#039;origine terrigène, d#039;autre part de sables parfois vaseux détritiques calcaires d#039;origine corallienne. La cartographie des faciès met en évidence leurs origines. Cette sédimentation est continue depuis la transgression Flandrienne mise en évidence dans les carottages par le contact argile lagunaire et vase marine. Des éléments chimiques tels NiO, Fe2O3 ou en traces comme le Bore, le Strontium, caractérisent certains faciès.^1";
- 4172 s[4169] = "DUGAS F. (1973).- La sédimentation dans le sud du lagon de la Nouvelle-Calédonie (du Mont Dore au Canal de la Havannah).- ORSTOM, Centre de Nouméa, Section Géologie: 13 pp., 4 cartes.- FC#038;P 4-1, p. 22, ID=5070Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Recent; Geography: New Caledonia^^1";
- 4173 s[4170] = "HOUVENAGHEL G.T., HOUVENAGHEL N. (1974).- Aspects écologiques de la zonation intertidale sur les côtes rocheuses des îles Galapagos.- Marine Biology 26: 135-152.- FC#038;P 4-1, p. 23, ID=5073Topic(s): ecology; ecology; Systematics: ; Stratigraphy: Recent; Geography: GalapagosIslands^Ecological aspects of the intertidal zonation on the rocky shores of the Galapagos Islands. Studies on Zoantharia biofacies.^1";
- 4174 s[4171] = "HOUVENAGHEL G.T. (1973).- Contribution à l#039;étude de l#039;écologie marine des îles Galapagos.- [Bull.?] Acad. Roy. des Sci. d#039;Outre-Mer, Cl. Sci. nat. et méd., N.S. 19, 1: 102 pp., 37 figs, 12 tabl.- FC#038;P 4-1, p. 23, ID=5074Topic(s): ecology; ecology; Systematics: ; Stratigraphy: Recent; Geography: GalapagosIslands^Le présent travail constitue une étude descriptive et synthétique de l#039;écologie marine littorale dans l#039;Archipel des Galapagos. * Les facteurs du milieu dépendent de la géomorphologie et de la nature du substrat, cependant la plupart d#039;entre eux sont influencés par l#039;océan environnant. * Dans une première partie du travail, la géomorphologie de l#039;archipel, la météorologie et l#039;hydrologie sont décrites. Une étude saisonnière de l#039;hydrologie à Bahia Academia (Santa Cruz) est abordée. * Dans le domaine littoral, le faciès rocheux domine. Les substrats meubles sont peu nombreux, peu étendus et dispersés dans tout l#039;archipel. On trouve, également quelques biotopes particuliers: les coraux, les mangroves et les réseaux souterrains d#039;eaux saumâtres. Une description de la zonation intertidale en faciès rocheux est faite à Bahia Academia. Le schéma général de cette zonation est représentatif de l#039;ensemble des côtes rocheuses de l#039;archipel.^1";
- 4175 s[4172] = "REHDER H.A., RANDALL J.E. (1975).- Ducie Atoll: its history, physiography and biota.- Atoll Research Bulletin 183; 40 pp., 29 figs; Smithsonian Institution, Washington.- FC#038;P 4-2, p. 48, ID=5219Topic(s): reefs, geomorphology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Polynesia, Ducie AtollIt is the easternmost atoll of the Polynesian region. It lies 295 miles east of Pitcairn. Geomorphology, bionomy of the island. 14 species of corals are named.^1";
- 4176 s[4173] = "STODDART D.R. (1975).- Sands cays of Tongatapu.- Atoll Research Bulletin 181; 7 pp., 11 figs.- FC#038;P 4-2, p. 49, ID=5224Topic(s): carbonates sand cays; sand cays; Systematics: ; Stratigraphy: Recent; Geography: TongaIslands^The southernmost island of the Tonga Group. Geological and ecological studies of the island.^1";
- 4177 s[4174] = "STODDART D.R., GIBBS P.E. (eds) (1975).- Almost Atoll of Aitutaki. Reef studies in the Cook Islands, South Pacific.- Atoll

- Research Bulletin 190; 158 pp., 58 figs, 59 pls.- FC&P 4-2, p. 49, ID=5225Topic(s):reefs, atolls; reefs; Systematics:; Stratigraphy:Recent; Geography:Pacific S, Cook IslsScientific studies in the southern Cook Islands; background and bibliography. Geomorphology of Aitutaki, Reefs Islands, Reefs. Marine faunas of Cook Islands (check list).^1"
- 4178 s[4175] = "KUHLMANN D.H.H. (1975).- Notes on the influence of particulate organic matter (POM) on light conditions at a coral reef of the Australian Great Barrier Reef.- Int. Revue ges. Hydrobiol. 60, 2: 195-198.- FC&P 5-1, p. 26, ID=5342Topic(s):reefs, light conditions; reefs; Systematics:; Stratigraphy:Recent; Geography:Australia, Great Barrier Reef[light phenomena observed on coelenterates that are attributed to floating luminescent bacteria in the reef environment]^1"
- 4179 s[4176] = "CHEVALIER J.P., SALVAT B. (1976).- Etude geomorphologique de l'atoll de Taiaro (Polynesie Francaise).- Cahiers du Pacifique 19: 169-201.- FC&P 6-1, p. 6, ID=5477Topic(s):reefs; reefs; Systematics:; Stratigraphy:Recent; Geography:Polynesia FrenchPetit atoll dont le lagon est totalement isolé de l'océan; les eaux du lagon dont la salinité atteint 4,3% ne communiquent avec l'extérieur que lors des très fortes tempêtes. Bref aperçu sur l'histoire de l'atoll qui s'est élevé récemment.^1"
- 4180 s[4177] = "CHEVALIER J.P., RICHARD G. (1976).- Les récifs extérieurs de l'atoll de Taiaro : Bionomie et évaluations quantitatives.- Cahiers du Pacifique 19: 203-226.- FC&P 6-1, p. 6, ID=5478Topic(s):reefs; reefs; Systematics:; Stratigraphy:Recent; Geography:Polynesia FrenchAperçu sur les différents types de crêtes récifales. Inventaire des Scléactiniaires.^1"
- 4181 s[4178] = "JONES O.A. (1977).- Some notes on the coral reefs of the Solomon Islands together with a reference to New Guinea.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 7.- FC&P 7-1, p. 32, ID=5597Topic(s):reefs; reefs; Systematics:; Stratigraphy:Recent; Geography:Solomon Isls^1"
- 4182 s[4179] = "BROUSSE R., CHEVALIER J.-P., DENIZOT M., RICHER de FORGES B., SALVAT B. (1980).- Etude geomorphologique de l'isle Tubuai (Australes).- Cahiers de l'Indo-Pacifique 2: 1-54.- FC&P 9-2, p. 12, ID=5856Topic(s):reefs geomorphology; reefs, geomorphology; Systematics:; Stratigraphy:Recent; Geography:Tubuai Isl.^1"
- 4183 s[4180] = "CHEVALIER J.P., DENIZOT M., SALVAT B., SOURNIA A., VASSEUR P. (1980).- Geomorphologie de l'atoll de Takapoto.- Journ. Soc. des Oceanistes 62, 35: 9-18.- FC&P 10-1, p. 23, ID=5893Topic(s):reefs; reefs; Systematics:; Stratigraphy:Recent; Geography:Polynesia French[aperçu sur la physiographie et les conditions hydrologiques d'un atoll des Tuamotu]^1"
- 4184 s[4181] = "CHEVALIER J.P., DENIZOT M (1980).- Les organismes constructeurs de l'atoll de Takapoto.- Journ. Soc. des Oceanistes 62, 35: 31-34.- FC&P 10-1, p. 23, ID=5894Topic(s):reef builders; reef builders; Systematics:; Stratigraphy:Recent; Geography:Polynesia French[court aperçu sur le rôle des Scléactiniaires et des Algues calcaires dans la construction d'un atoll des Tuamotu]^1"
- 4185 s[4182] = "BUDIN I.N., PREOBRAZHENSKIY B.V., SIRENKO B.I., TSAREVA L.A. (1980).- Underwater landscapes of New Hebrides.- Biologiya korallovykh rifov [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 42-54, 5 figs.- FC&P 10-1, p. 61, ID=6032Topic(s):reefs morphology; reefs morphology; Systematics:; Stratigraphy:Recent; Geography:New HebridesUsing the method of underwater transects the construction of relief, distribution of facies

and principal hermatypes, and reef dwellers on the littoral of Pentecost, Paama and Lopevi Islands, New Hebridian archipelago is studied. * On the base of disconformities between underwater levels a conclusion is drawn about irregularity of oscillatory movement of earth crust blocks during Cenozoic in this area. The initial stages of colonization of fresh lava tongues by corals and calcareous algae were studied.^1";

- 4186 s[4183] = "KRASNOV Ye.V. (1973).- Studies on recent and ancient reef communities in the Pacific areas.- FC&P 2, 1: 8-9.- FC&P 2-1, p. 8, ID=6269^Topic(s): reef biocoenoses; reef biocoenoses; Systematics: ; Stratigraphy: Recent; Geography: Pacific^[remarks on ecology of some Recent Pacific reefs, as studied by a Soviet research expedition aboard "Dmitriy Mendelejev" in summer 1971, and remarks on historical trends in the Phanerozoic circum-Pacific reefs]^1";
- 4187 s[4184] = "BOURROUILH-LE JAN F.G. (1984).- Récifs quaternaires soulevés du Pacifique: géochronologie, origine et évolution des formes récifales actuelles et sédimentologie des faciès récifaux.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 4.1-4.23.- FC&P 13-1, p. 10, ID=6317^Topic(s): reefs, diagenesis; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Pacific^La diagenèse ou les transformations subies par un sédiment carbonate de faible profondeur sont proportionnelles au temps écoulé depuis la formation de ce carbonate puis sont dépôt. Le problème majeur de la diagenèse est donc la datation non seulement du sédiment concerné, mais aussi des transformations qui l'ont affecté d'une part après sa formation, et d'autre part, après son dépôt. * Nous envisagerons donc quels sont ces problèmes de datations avec les méthodes directes et les méthodes indirectes à la lumière des dernières découvertes, tant du point de vue de tectonique globale que du point de vue des paléoniveaux marins et du paléoenvironnement. [taken from introductory chapter]^1";
- 4188 s[4185] = "BOURROUILH-LE JAN F.G. (1984).- Gisements de phosphates des atolls soulevés du Pacifique: distribution régionale et mode de formation.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 29.1-29.12.- FC&P 13-1, p. 12, ID=6342^Topic(s): phosphates; phosphatic deposits; Systematics: ; Stratigraphy: Quaternary; Geography: Pacific^L'Océan Pacifique a été, à la fin du XIXème siècle et au début du XXème siècle l'enjeu de rivalités économiques très grandes et le champ clos de courses maritimes entre les puissances riveraines ou européennes. En effet, de petites îles, d'un diamètre de quelques kilomètres seulement, se révélèrent, en général à la suite de découvertes dues au hasard, être recouvertes de phosphates dont l'exploitation s'avérait chaque fois très facile, par suite de l'absence de terrains de couverture. * Les phosphates océaniques constituent une sorte d'exception dans les dépôts de phosphates mondiaux et cela pour plusieurs raisons. Ils sont d'abord opposés systématiquement aux autres dépôts phosphatés par suite de leur origine dite "de guano". Du point de vue gisement, d'après 3 gisements observés, le minerai de phosphate se trouve piégé dans un karst, souvent complexe et profond. Ce karst est en général creusé dans une roche dolomitique. Du point de vue particules, au contraire, ils apparaissent formés de particules sédimentaires identiques aux autres particules phosphatées visibles dans les autres gisements (par exemple tunisien, marocain), oolithes, pisolithes, pelotes focales et bioclastes phosphatisés. [introductory chapter]^1";
- 4189 s[4186] = "PRAHL H.von, GUHL F., GROGL M. (1979).- Gorgona.- Futura Grupo Editorial Ltd., Bogota, 279 pp. [book] - FC&P 14-2, p. 20, ID=6700^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Colombia, Isla

- Gorgona^^1";
- 4190 s[4187] = "DAVIS A.R., WARD D.W. (1999).- Does the large barnacle *Austrobalanus imperator* (Darwin, 1854) structure benthic invertebrate communities in SE Australia?.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 125-131.- FC&P 28-2, p. 8, ID=6943^Topic(s): benthic communities; biocoenoses; Systematics: ; Stratigraphy: Recent; Geography: Australia SE^^1";
- 4191 s[4188] = "ORME G.R. (1977).- The Coral Sea Plateau - a major reef province.- *Biology and Geology of Coral Reefs 4 (Geology 2)* [O.A. Jones & R. Endean (eds)]; chapter 10.- FC&P 7-1, p. 32, ID=5600^Topic(s): coral reefs; Coral Sea Plateau; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Coral Sea Plateau^^1";
- 4192 s[4189] = "CHEVALIER J.P. (1979).- Geomorphologie et coraux.- *Bulletin Museum-EPHE 1 [Atoll de Scilly (Polynesie Francaise) - C. R. preliminaire d'une Expedition scientifique interdisciplinaire et interorganique]*: 31-33.- FC&P 9-1, p. 17, ID=5773^Topic(s): geology; geology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Polynesia French^^1";
- 4193 s[4190] = "CHEVALIER J.P. (1976).- Madreporaires actuels et fossiles du lagon de l'atoll de Taiaro.- *Cahiers du Pacifique 19*: 253-264.- FC&P 6-1, p. 6, ID=5479^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ???; Geography: Polynesia French^Description de *Stylocoeniella paumotensis* n.sp. des récifs holocènes de l'atoll. Etude des formes de croissance de *Porites lobata* Dana, la seule espèce vivante du lagon.^1";
- 4194 s[4191] = "LLOYD A.R. (1973).- Foraminifera of the Great Barrier Reef Bores.- In O.A. Jones & R. Endean (eds): *Biology and Geology of Coral Reefs*; Academic Press New York and London; vol. 1: *Geology 1*: 347-366.- FC&P 3-1, p. 22, ID=4872^Topic(s): ; forams; Systematics: Foraminifera; Stratigraphy: ; Geography: Australia, Great Barrier Reef^^1";
- 4195 s[4192] = "FRANKEL E. (1974).- Recent sedimentation in the Princess Charlotte Bay area, Great Barrier Reef Province.- In *Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane)*; Published by The Great Barrier Reef Committee; vol. 2: 355-369.- FC&P 4-1, p. 18, ID=5030^Topic(s): sedimentology; Systematics: ; Stratigraphy: ; Geography: Australia, Great Barrier Reef^^1";
- 4196 s[4193] = "LADD H.S., NEWMAN W.A., SOHL N.F. (1974).- Darwin guyot, the Pacific's oldest atoll.- In *Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane)*; Published by The Great Barrier Reef Committee; vol. 2: 513-522.- FC&P 4-1, p. 19, ID=5044^Topic(s): reefs, atolls; reefs; Systematics: ; Stratigraphy: ; Geography: Darwin Guyot^^1";
- 4197 s[4194] = "DAVIES P.J. (1974).- Sub-surface solution unconformities at Heron Island, Great Barrier Reef.- In *Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane)*; Published by The Great Barrier Reef Committee; vol. 2: 573-578.- FC&P 4-1, p. 19, ID=5049^Topic(s): reefs, diagenesis; solution unconformities; Systematics: ; Stratigraphy: ; Geography: Australia, Great Barrier Reef^^1";
- 4198 s[4195] = "BROUSSE R., CHEVALIER J.-P., DENIZOT M., SALVAT B. (1978).- Etude geomorphologique des îles Marquises.- *Cahiers du Pacifique 21*: 9-74.- FC&P 8-1, p. 13, ID=5676^Topic(s): geology, reefs; geomorphology; Systematics: ; Stratigraphy: ; Geography: Marquises Isls^[etude de la morphologie littorale en particulier des formations récifales de différentes baies; examen des

- différentes hypothèses envisagées pour expliquer le faible développement des récifs]^1";
- 4199 s[4196] = "BOURROUILH-LE JAN F.G. (1984).- Diagenese des récifs soulevés du Pacifique: calcitisation et dolomitisation.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 28.1-28.28.- FC&P 13-1, p. 12, ID=6341^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: ; Stratigraphy: ; Geography: Pacific^Les études océanographiques, menées depuis plus d'un siècle, ont montré que les sédiments marins carbonates actuels se répartissent schématiquement en deux groupes; les boues à globigérines recouvrent les plaines abyssales tandis que les plates-formes sous-marines ou les plateaux continentaux intertropicaux entre les isobathes 0 et 200m, voient l'élaboration et l'accumulation de sédiments, à granulométrie variable, des lutites aux rudites, mais dont la minéralogie est à dominante aragonitique. * D'autre part, les roches carbonatées sédimentaires anciennes, quelle que soit leur origine paléogéographique et paléobathymétrique, se présentent sous deux faciès minéralogiques apparemment monotones et constants, calcaires ou dolomies. On appelle donc diagenèse le passage, d'une part, du sédiment meuble à la roche consolidée, et, d'autre part, l'ensemble des phénomènes et des mécanismes physiques, chimiques, minéralogiques ou biologiques qui fait passer un sédiment meuble, aragonitique, dans le cas des faciès intertropicaux peu profonds, à une roche cohérente, massive, calcaire ou dolomitique. [introductory chapter]^1";
- 4200 s[4197] = "BEAUVAIS L. (1983).- Jurassic Cnidaria from the Philippines and Sumatra.- CCOP Technical Bulletin 16 [The Jurassic in Southeast Asia]: 39-67.- FC&P 13-2, p. 14, ID=6357^Topic(s): ; Cnidaria; Systematics: Cnidaria; Stratigraphy: Jurassic; Geography: Philippines, Sumatra^^1";
- 4201 s[4198] = "CAIRNS S.D., ZIBROWIUS H. (1997).- Cnidaria Anthozoa: Azooxanthellate scleractinia from the Philippines and Indonesian Regions.- Memoires du Museum National d'Histoire Naturelle 172: 27-243.- FC&P 26-2, p. 71, ID=3750^Topic(s): monograph; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Philippines, Indonesia^A total of 206 species of azooxanthellate Scleractinia are listed from Philippine-Indonesian region, 176 of which are reported as new records. The newly reported specimens originate primarily from the Musorstom 1-3 and Karubar expeditions, but also include specimens collected by the "Albatross", Danish Expedition to the Kei Islands, Snellius 2 Expedition, "Galathea", Mortensen's Java-South Africa Expedition, "Hakuho Maru", "Siboga", Corindon 2, and Estase 2 expeditions as well as some others. In all, approximately 15,600 specimens from some 640 stations are reported, the new records including the description of 26 new species and 3 new genera. Also, 4 new combinations and 1 new name are proposed (Caryophyllia crosnieri for C. elongata Cairns 1993, non Duncan 1873). [first fragment of extensive summary]^1";
- 4202 s[4199] = "KLEEMANN K. (1995).- Associations of coral and boring bivalves: Lizard Island (Great Barrier Reef, Australia) versus Safaga (N Red Sea).- Beiträge zur Paläontologie 20: 31-39.- FC&P 25-2, p. 70, ID=3176^Topic(s): boring bivalves; corals, boring bivalves; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Recent; Geography: Australia, Red Sea^Associations of coral and boring bivalves from Lizard Island (Great Barrier Reef, Australia) are reviewed and compared with those from Safaga, northern Red Sea. Although certain coral and Lithophaga species are present in both areas, the respective associations differ regionally distinctively in L. laevigata and L. simplex. Hosts for L. laevigata at Lizard include Astreopora, Coscinaraea, Cyphastrea, Goniopora, Montipora, Porites, and Psammocora, at Safaga, Favia, Leptastrea, Porites, and P. (Synaraea), rarely Cyphastrea and Montipora

in co-occurrence with *L. purpurea*. Hosts of *L. simplex*, at Lizard include *Acanthastrea*, *Astreopora*, *Echinopora*, *Favia*, *Goniastrea*, *Lobophyllia*, and *Symphyllia*, at Safaga *Astreopora*, *Goniastrea*, and *Pavona*. At Lizard, *L. lima*, found in single or few specimens per coral colony, occurs alone or together with *L. laevigata* (in *Porites*), or *L. simplex* (in *Acanthastrea*, *Astreopora*, and *Favia*). Most bivalve species have a variety of hosts, a few seem to be restricted to a single coral genus. Different genera of bivalves may be found in the same host specimen, e.g., *Pedum* and *Lithophaga* in *Montipora* (at Safaga, Red Sea) and *Porites* (at Lizard, GBR). At Lizard, *Pedum* was found only in *Porites*, including *P. (Synaraea)*, while it occupies at least 12 host genera in the northern Red Sea, particularly *Montipora*. In contrast to coral rock, where several different boring bivalves can occur next to each other, rarely more than one *Lithophaga* species is found per host colony, although it happens in both areas. On the other hand, the same coral species may be inhabited by one species of *Lithophaga* in one area and (mainly) by another in the other area. In *Lithophaga*, more associations are established at Lizard than at Safaga, while in *Pedum* it is the other way round. Altogether, more different associations can be noted than equal ones. Generally, coral-bivalve associations are regionally stable and do not overlap. Thus, host determination should yield the bivalve identity, too.¹;

4203 s[4200] = "GEISTER J. (1992).- Modern Reef Development and Cenozoic Evolution of an Oceanic Island / Reef Complex: Isla de Providencia (Western Caribbean Sea, Columbia).- Facies 27: 1-70.- FC&P 21-2, p. 54, ID=3354Topic(s): reefs, history; reefs; Systematics: ; Stratigraphy: Paleogene - Recent; Geography: Colombia, Caribbean^Providencia Island in the SW Caribbean is 4,5 to 8,5km across (including Sta. Catalina Island). In contrast to nearby San Andres, which is an elevated Tertiary atoll, Providencia is formed by an extinct Miocene volcano. This lies far off the Middle American mainland, and therefore its geological history is somewhat unique among other western Caribbean islands. The submarine basement of Providencia rises with steep to vertical slopes from an ocean of approximately 2,000m depth. This island itself is rugged with peaks reaching up to more than 360m above present sea-level. It is surrounded by a wide carbonate insular shelf protected towards the NE and SE by the second largest barrier reef (after that of Belize) of the Caribbean Sea. The entire reef complex forms a carbonate shelf, which consists of a 32km long windward bank-barrier reef with lagoonal environments in its lee, dotted with patch reefs and minor fringing reefs. [...] The contemporary shelf morphology is the product of a complex history of sea-level oscillations accompanied by terracing at different levels, renewed reef growth and erosion. Of this history, at present, only a few evolutionary stages may be recognized. Volcanic activity did not contribute to the geomorphologic evolution of the island and shelf in post-Miocene time. The shelf was last exposed to subaerial weathering during the sea-level lowering that accompanied the late Wisconsinian glaciation. It appears that since reflooding in the early Holocene some 5,000 years ago, renewed reef growth and sedimentation have only partly concealed or modified the pre-existing shelf topography. [first and last fragment of extensive summary]¹;

4204 s[4201] = "GEISTER J. (1975).- Riffbau und geologische Entwicklungsgeschichte der Insel San Andres (westliches Karibisches Meer, Kolumbien).- Stuttgarter Beitr. Naturkunde B 15; 203 pp., 11 pls, 29 figs.- FC&P 4-2, p. 67, ID=5321Topic(s): reefs, structure, history; reefs; Systematics: ; Stratigraphy: Neogene Quaternary; Geography: Colombia, Caribbean^San Andres, a small high standing limestone, situated near the western margin of the Caribbean Sea is formed by uplifted reef rock of Tertiary (San Andres Formation) and Pleistocene age (San Luis Formation) as well as by Holocene terrestrial and beach deposits (Bay Formation). It is surrounded by a recent reef complex. * The recent reef complex consists

of barrier, fringing and patch reefs. Most reefs show rich coral growth with a clearly discernible coral zonation. Off the west coast, the shelf is formed by two submarine terraces at 4 and 20m of depth. A detailed description of the whole reef complex is given and the process of reef development and erosion are analyzed. * The zonal distributions of benthic environments within the reef complex have been analyzed and interpreted leading to a more general scheme of zonation and classification of Recent Western Caribbean reef complexes. Three facies areas may be defined according to the type of substrate and the related bottom communities. [first part of extensive summary]^1";

4205 s[4202] = "PRAHL H.von, ERHARDT H. (1985).- Colombia - Corales y arrecifos corallinos. [in Spanish].- Fondo para la Proteccion del Medio Ambiente "Jose Celestino Mutis", Bogota, Colombia; 295 pp., 166 figs, 16 pls. [book] - FC&P 15-1.2, p. 51, ID=6728^Topic(s): reefs, reefs protection; corals, coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Holocene; Geography: Colombia^[for review see Geister (1986)]^1";

4206 s[4203] = "GEISTER J. (1972).- Zur Okologie und wuchsform der Saeulenkoralle Dendrogyra cylindrus Ehrenberg - Beobachtungen in den Riffen der Insel San Andrea (Karibisches Meer, Kolumbien).- Mitt. Inst. Colombo-Aleman Invest. Cient. 6: 77-87; Santa Marta.- FC&P 2-1, p. 13, ID=4710^Topic(s): ecology, growth form; Scleractinia, Dendrogyra; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Colombia, Caribbean^Submarine observations around San Andres Island indicate that quiet backreef and leeward reef waters from 1 to 20m deep, are the most favorable habitat for the pillar coral Dendrogyra cylindrus. It thrives even at the submarine terraces along the calm west coast of the Island, where abrasive action by coral fragments is heavy during occasional storm surges. Besides a few minor incrusting and hemispherical species, Dendrogyra seems to be the only major scleractinian to resist abrasion and break-down without permanent damage in this environment. Dendrogyra initiates colony growth with a broad incrustation followed by upgrowth of pillars. Unstable basement may cause tumbling of the whole coral and subsequent pillar growth at approximately right angles to old columns. This process may be repeated, resulting in the formation of a third generation of pillars.^1";

4207 s[4204] = "GEISTER J. (1986).- Book review: Colombia - Corales y arrecifos corallinos; by H. von Prahl & H. Erhardt (1985).- FC&P 15, 1.2: 51.- FC&P 15-1.2, p. 51, ID=6729^Topic(s): coral reefs, book review; book review; Systematics: Cnidaria; Scleractinia; Stratigraphy: Holocene; Geography: Colombia^The systematic descriptions of the corals are accompanied by excellent photographs that show the coral species both as skeletons and in their original habitat. The remarkably good reproduction quality of the coloured submarine pictures is especially noteworthy. wherever possible, the authors add exact location maps and topographical as well as ecological profiles of the reefs described. The book has become an easily accessible introduction to reef ecology and coral systematics, an inventory and guide book to the Recent reefs of Colombia. Undoubtedly, it will form the basis for any future reef protection measures in Colombia. [final fragment of a review]^1";

4208 s[4205] = "DIAZ M.J.M., BARRIOS L.M., CENDALES M.H., GARZON-FERREIRA J., GEISTER J., PARRA-VELANDIA F., PINZON J., LOPEZ-VICTORIA M., OSPINA G.H., VARGAS B., ZAPATA F., ZEA S.S. (2000).- Areas Coralinas de Colombia.- INVEMAR Serie Publicaciones Especiales 5 [J.M. Diaz (ed.)]; 176 pp., 176 figs, 4 tables; Santa Marta.- FC&P 30-2, p. 31, ID=1316^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Colombia^[Authors of the diverse papers are: L.M. Barrios (INVEMAR), M.H.Cendales (Universidad Nacional - INVEMAR), J. Garzón-Ferreira(INVEMAR), J. Geister (University Bern/Switzerland), M. López-Victoria (INVEMAR), G. H. Aspina (INVEMAR), F. Parra-Velandia(INVEMAR), J. Pinzón (INVEMAR), B.

Varegas-Angel (RSMAS, Univ. Miami), F. A. Zapata (Universidad del Valle), S. Zea S. (Universidad Nacional - INVEMAR)]. [Content: Prólogo, I. Introducción; II. Unidades ecológicas de las áreas coralinas; III. Áreas coralinas del Caribe: - Áreas oceánicas, 1. Cayos Albuquerque, 2. Cayos Coutu, 3. Complejo arrecifal de San Andrés, 4. Complejo arrecifal de Providencia, 5. Banco Roncador, 6. Banco Serrana, 7. Banco Quitasueno; - Áreas continentales, 8. Urabá chocona, 9. Isla Tortuguilla, 10. Complejo arrecifal de Isla Fuerte, Bajo Buhsnelly Bajo Burbujas, 11. Archipiélago de San Bernardo, 12. Bajo Tortugas, 13. Península de Barú, Islas del Rosario y bajos aledanos, 14. Bajos de Salmedina, 15. Isla Arena, 16. Banco de las Ánimas, 17. Área de Santa Marta y del Parque Nacional Natural Tayrona, 18. Áreas coralinas de la Guajira, IV. Áreas coralinas del Pacífico: 1. Isla de Malpelo, 2. Isla Gorgona, 3. Chocó Norte : Ensenada de Utría y Punta Tebada, V. Problemática de deterioro y conservación de los arrecifes coralinas en Colombia : 1. Evidencias del deterioro, 2. Causas del deterioro, 2a. Causas naturales, 2b. Causas antropogénicas, 3. Perspectivas de manejo y conservación., Bibliografía, Agradecimientos]^1";

4209 s[4206] = "GEISTER J., DIAZ J.M. (1996).- A field guide to the atolls and reefs of San Andres and Providencia (Colombia).- 8th International Coral Reef Symposium & Smithsonian Tropical Research Institute, Panama City, Panama. [field trip guidebook]: 41 pp., 59 figs. [field trip guide] - FC&P 26-2, p. 7, ID=3667^Topic(s):reefs; reefs; Systematics: Stratigraphy:Recent; Geography:Colombia, Caribbean^^1";

4210 s[4207] = "DIAZ J.M., DIAZ-PULIDO G., GARZON-FERREIRA J., GEISTER J., SANCHEZ J.A., ZEA S., (1996).- Atlas de los arrecifes coralinos del Caribe colombiano. I. Complejos arrecifales oceanicos.- INVEMAR Ser. Publ. esp. 2: 83 pp., figs. 1.1.-9.1., 32 lam., 12 mapas, Sta. Marta.- FC&P 26-2, p. 7, ID=3668^Topic(s):reefs, atlas; reefs; Systematics: Stratigraphy:Recent; Geography:Colombia^^1";

4211 s[4208] = "GEISTER J. (1973).- Los arrecifes de la Isla de San Andres (Mar Caribe, Colombia).- Mitt. Inst. Colombo-Aleman Invest. Cient. 7: 211-228; Santa Marta.- FC&P 3-2, p. 32, ID=4917^Topic(s):reefs, ecology, geology; reefs; Systematics: Stratigraphy:Recent; Geography:Colombia, Caribbean^The windward reef complex NE and E of San Andres Island is briefly described in terms of submarine topography, sediments and the distribution of corals and other benthonic organisms. The breaker zone of the San Andres barrier and other exposed western Caribbean reefs characteristically exhibits a profuse growth consisting almost exclusively of Millepora. In this respect they are different from most other described West Indian reef localities, where Acropora palmata is the dominating species in this part of the reef. The replacement of Acropora palmata by Millepora is interpreted as an adaptation of the reef crest community to high energy environments due to long swell prevailing at the western end of the Caribbean Sea. A few short reef sections exposed to the maximum degree of wave energy show conspicuous algal ridges.^1";

4212 s[4209] = "MARTIN-GARIN B. (2002).- Book review: Areas Coralinas de Colombia.- FC&P 31, 1: 56-57.- FC&P 31-1, p. 56, ID=7108^Topic(s):reefs, book review; reefs; Systematics: Stratigraphy:Recent; Geography:Colombia^Richeiment illustré en couleur tout au long des 176 pages, ce livre synthétise harmonieusement plusieurs décennies de travail en Mer Caraïbe et Océan Pacifique sous l'impulsion de l'INVEMAR (Instituto de Investigaciones Marinas y Costeras) en collaboration avec l'Universidad Nacional, l'Universität Bern, l'Universidad del Valle et l'University of Miami. [fragment of review of a book by J. M. M. Diaz (ed.) et al. (2000)]^1";

4213 s[4210] = "EDGERLEY D.W. (1974).- Fossil reefs of the Sahul Shelf, Timor Sea.- In Proceedings of the Second International Symposium on

- Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 627-637.- FC&P 4-1, p. 20, ID=5053^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: fossil; Geography: Timor Sea^^1";
- 4214 s[4211] = "MINATO M., KATO M. (1977).- Tethys sea corals in the upper Paleozoic.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 228-233.- FC&P 6-1, p. 26, ID=0061^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic U; Geography: Tethys^Summary of distribution of Carboniferous and Permian corals in Tethyan faunal realm.^1";
- 4215 s[4212] = "RIEDEL P. (1991).- Korallen in der Trias der Tethys: Stratigraphische Reichweiten, Diversitätsmuster, Entwicklungstrends und Bedeutung als Rifforganismen.- Mitt. Ges. Geol. Bergbaustud. Oesterr. 37: 97-118. [in German, with English summary].- FC&P 21-1.1, p. 53, ID=3261^Topic(s): distribution; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: Tethys^After the extinction near the Permian-Triassic boundary scleractinian corals first appear in Anisian reefs. They are the only new order in the Triassic reef associations. Until now 313 species belonging to 90 genera are known from the Triassic. During the Triassic the scleractinians show a continuous diversification, along there was an extinction of nearly 90% of the species near the Carnian-Norian boundary. The highest number of taxa occurs in the Norian. In the Rhaetian the number of taxa diminishes. Until the end of the Triassic all scleractinians became extinct. To examine morphological trends the Triassic scleractinian corals have been subdivided into three types of growth forms: solitary, dendroid and cerioid. From the Anisian to the Rhaetian the number of the solitary types diminishes, whereas the amount of the cerioid taxa increases. The portion of the dendroid taxa is nearly constant during the Triassic. The shifts in the composition of the growth forms are explained by general trends in the evolution of the scleractinians, and by changes in the availability of nutrients near the Carnian-Norian boundary. From the Anisian to the Carnian corals play a subordinate role in Triassic reefs. Only in some small and favourable places they could contribute to the reef fauna. Since the Norian scleractinians are one of the most important groups of reef organisms. Dendroid taxa like Retiophyllia contribute most to the mass of reef organisms. The higher abundance of corals in Norian and Rhaetian reefs is explained by several factors: the more common occurrence of grazing organisms (snails, echinoderms) which probably prey on algae, thus providing free space for corals to settle; the symbiosis of the corals with zooxanthellae facilitating the conquest of the light zone and providing better conditions in nutrient poor environments.^1";
- 4216 s[4213] = "RONIEWICZ E. (2010).- Uniform habit spectrum vs. taxonomic discrepancy between two succeeding Triassic coral faunas: A proof of the intra-Norian faunal turnover.- Palaeoworld 19, 3-4: 410-413.- FC&P 36, p. 132, ID=6591^Topic(s): extinctions; faunal turnover, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic Nor; Geography: Tethys^Triassic coral fauna from the Tethys Ocean contains, besides colonial cerioid, meandroid and thamnasterioid corals, a high percentage of solitary and pseudocolonial, phaceloid corals with exclusively epithecal walls, about one-fifth of the genera with micromorphology of septa having pennules or menianes. These features are significant indications of moderate depth environments of low energy level and reduced illumination. Despite a uniform spectrum of growth forms, microstructural criteria allow discriminating a middle Anisian-early Norian (A2-N1) fauna from the middle/late Norian-Rhaetian (N2/3-R) one. Taxonomy of the two faunas shows meaningful differences: of four families that dominated in A2-N1 fauna, Volzeiidae, Conophylliidae, and

Tropiastraeidae are absent from the N2/3-R fauna and Margarophylliidae are present in a considerably reduced volume. As a consequence of reduction of the earlier corals, particular morphologies were eliminated. In the N2/3-R fauna, five families are abundant: the solitary and phaceloid Reimaniphyllidae and Stylophyllidae, along with colonial Cuifastraeidae, Pamirosehidae and Astreaeomorphidae, all known as rare and rudimentary elements in the earlier fauna. This change in faunal content in the Tethys during the Norian was controlled by environmental factor(s) hardly identifiable by simple observation, as this is not connected with any obvious facies or change in coral growth form. [original abstract]^1";

- 4217 s[4214] = "RONIEWICZ E., STANLEY G.D.jr (2009).- Noriphyllia, a new Tethyan Late Triassic coral genus (Scleractinia).- Paläontologische Zeitschrift 83, 4: 467-478.- FC&P 36, p. 104, ID=6534^Topic(s): new genus; Scleractinia Noriphyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: Tethys^Noriphyllia gen. n. is a distinctive coral representing the Coryphyllidae, a group of Late Triassic scleractinian corals. Coral faunas of this age are poorly known. The new coral is distinguished from related corals belonging to the reimaniphyllids by key features of septal microstructure as discerned in thin sections. This microstructure consists of a straight/wavy midseptal zone and lateral septal stereome organized into thin fascicles of fibres, producing a fine and sharp micromorphology of the septal sides. The solitary genus Noriphyllia gen. n. contains two Early Norian species: N. anatoliensis sp. n. chosen as the type species and N. dachsteinae sp. n., and a Carnian species referred to as N. monotutoensis sp. n. The new genus is widely distributed in the Late Triassic, Early Norian reef facies of the Tethys region (Northern Calcareous Alps, Austria; Taurus Mountains, Turkey) and it also occurs in the Carnian of Timor. Noriphyllia gen. n. is unique and details of its microstructural features add new understanding to the composition of both Late Carnian and Early Norian corals. [original abstract]^1";
- 4218 s[4215] = "BERNECKER M. (2005).- Late Triassic reefs from the Northwest and South Tethys: distribution, setting, and biotic composition.- Facies 51, 1-4: 442-453.- FC&P 34, p. 71, ID=1307^Topic(s): distribution; reefs; Systematics: ; Stratigraphy: Triassic U; Geography: Tethys^The paleolatitudinal distribution patterns during Ladinian and Carnian time are characterized by an increasing expansion of reefs from the northern to the southern hemisphere. The optimum of reef diversity and frequency in the Norian is associated with the development of extended attached or isolated carbonate platforms. Norian-Rhaetian sponge and coral reefs of the Northern Calcareous Alps developed (1) as reef belt composed of patch reefs in platform-edge positions facing the open marine northwestern Tethys basins and (2) as patch reefs in intraplateau basins as well as in ramp positions. Carnian and Norian-Rhaetian sponge and coral reefs of the Arabian Peninsula are formed (1) as reef complexes at the margins of carbonate platforms on the tops of volcanic seamounts in the southern Tethyan ocean, as small biostromes on these isolated platforms, and (2) as transgressive reef complexes on the attached platform of the Gondwanan margin. The Norian Gosaukamm reefal breccia of the NW Tethys is a counterpart of Jabal wasa reefal limestone of the Gondwana margin with similarities in geological setting and biotic composition. Rhaetian coral biostromes of low diversity known from the Austrian Koessen basin resemble to the time equivalent Ala biostromes of the isolated Kaur platform in the southern Neo-Tethys by forming a discontinuous layer in shallow intraplateau basin setting.^1";
- 4219 s[4216] = "BEAUVAIS L. (1986).- Evolution paléobiogéographique des formations à sclérectiniales du bassin téthysien au cours du Mésozoïque.- Bulletin de la Société Géologique de France (Série 8) II, 3: 499-509.- FC&P 15-1.2, p. 14, ID=0893^Topic(s):

- biogeography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: Tethys^^1";
- 4220 s[4217] = "MARTIN-GARIN B., LATHUILIERE B., GEISTER J., RAMSEYER K. (2010).- Oxygen isotopes and climatic control of Oxfordian coral reefs (Jurassic, Tethys).- *Palaios* 25, 11: 721-729.- FC&P 36, p. 117, ID=6557^Topic(s): coral reefs, stable isotopes, paleoclimate; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: Tethys^Stable isotope studies were carried out on shells of reef-dwelling brachiopods and oysters to evaluate the impact of climate changes on coral communities during the Oxfordian (Late Jurassic) in western Europe and northwestern Africa. Low to medium diversities observed in coral associations in the pioneering and terminal reef phases correlate well with average seawater paleotemperatures of <20.3 °C. The reef climax coincides with optimum environmental conditions, reflected by a high coral diversity and an average seawater temperature between 22 and 30 °C. The results of this study show that water temperatures set the physiological limits for the distribution of corals and coral reefs in Oxfordian time.^1";
- 4221 s[4218] = "GILL G.A., SANTANTONIO M., LATHUILIERE B. (2004).- The depth of pelagic deposits in the Tethyan Jurassic and the use of corals: an example from the Apennines.- *Sedimentary Geology* 166, 3-4: 311-334.- FC&P 33-2, p. 27, ID=1147^Topic(s): bathymetry; Scleractinia, ecology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Tethys^Assessing the palaeobathymetry of pelagic deposits is rather speculative, as proof through lithology or fossils significant for depth estimates is sparse. This is unfortunate as the bathymetric history of pelagic successions allows to conceive the evolution of continental margins and oceanic basins. Discoveries in coral biology bring an unexpected impact on basin analysis. Evidence strongly suggests that pennular corals, fossil and modern, constitute a zooxanthellate group with an outstanding specialization in colonizing deeper parts of the marine photic zone. This adaptation includes light amplification by autofluorescent pigmented cells, and particular feeding, witnessed by peculiar gastric ducts and skeletal features. Such corals occur in the Umbria-Marche and Sabina Apennines on top of Late Jurassic submarine highs and at basin margins. Values of palaeodepth relative to pelagic deposits are provided by corals and other environmental data. Because depth reconstruction involves classical Tethyan facies, such as Ammonitico Rosso, Aptychus limestone and radiolarian cherts, we must note that these results do not meet with actualistic models relying on carbonate dissolution for estimating depth. Deposits viewed as bathyal to abyssal could also have accumulated within, or just below, the photic zone. Thus, a new insight opens on Mesozoic bathymetries, regarding vast areas (Middle East to Caribbean) and on subjects ranging from platform drowning to regional extension styles.^1";
- 4222 s[4219] = "CECCA F., MARTIN-GARIN B., MARCHAND D., LATHUILIERE B., BARTOLINI A. (2005).- Palaeoclimatic control of biogeographic and sedimentary events in Tethyan and Peri-Tethyan areas during the Oxfordian (Late Jurassic).- *Palaeogeography, Palaeoclimatology, Palaeoecology* 222, 1-2: 10-32.- FC&P 34, p. 73, ID=1315^Topic(s): reefs, paleoclimates; reefs ecology; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: Tethys, Peri-Tethys^The paleobiogeographical distribution of Oxfordian ammonites and coral reefs in northern and Central Europe, the Mediterranean area, North and East Africa, and the Middle East and Central Asia is compared with the distribution in time and space of the most important lithofacies. Interest in the Oxfordian is focused on changes in facies and in biogeographical patterns that can be interpreted as the results of climatic events. Paleotemperature trends inferred from oxygen isotopes and paleoclimatic simulations are tested

against fossil and facies data. A Late Callovian–Early Oxfordian crisis in carbonate production is indicated by the widespread absence of Lower Oxfordian reefal formations. There is a gap (hiatus) in deposition on epicontinental platforms, with Middle Oxfordian deposits resting paraconformably on Upper Callovian, while shales accumulated in adjacent intracratonic basins. Simultaneously, in Mediterranean Tethys, radiolarites accumulated in deep troughs while Rosso Ammonitico facies formed on pelagic swells. However, deposition on swells was also discontinuous with numerous gaps (hiatuses) and sequences that are much reduced in thickness. Middle Callovian deposits are generally overlain by Middle Oxfordian limestones. The dearth of carbonates is consistent with a cooling event lasting about 1 My. By the middle Oxfordian a warming, leading to a “greenhouse” type conditions, is suggested on the basis of both biogeographical (mostly coral reef distribution) and geochemical data. Carbonates spread onto an extensive European platform while radiolarites reached a maximum development in the Mediterranean Tethys. Two distinct latitudinal belts, with seemingly different accumulation regimes, are therefore inferred. Similar latitudinal belts were also present in the late Oxfordian, when carbonates were widespread. The distribution of reefal facies in the late Oxfordian–early Kimmeridgian fits relatively well with GCMs simulations that imply low rainfall in the Tethyan Mediterranean area and slightly higher precipitation in central and northern Europe. Local salinity variations, reflecting more arid or humid conditions, may bias the paleotemperature signal inferred from $\delta^{18}O$ values. Biogeographical and facies distributions, combined with $\delta^{18}O$ values, unravel the ambiguity and support a Late Callovian–Early Oxfordian cooling followed by warming in the later Oxfordian. ¹”;

- 4223 s[4220] = "BROIN F. de, BARTA-CALMUS S., BEAUVAIS L., CAMOIN G., DEJAX J., GAYET M., MICHARD J.-G., OLIVAUX T., ROMAN J., SIGOGNEAU-RUSSELL D., TAQUET P., WENZ S., (1991).- Paleobiogeographie de la Tethys: apports de la paleontologie a la localisation des rivages, des aires emergees et des plates-formes au Jurassique et au Cretace.- Bulletin de la Societe geologique de France 162, 1: 13-26.- FC#038;P 20-1.1, p. 21, ID=2801Topic(s): biogeography; Systematics: ; Stratigraphy: Jurassic Cretaceous; Geography: Tethys¹”;
- 4224 s[4221] = "REITNER J., SCHLAGINWEIT F. (1990).- Calcisuberites stromatoporoides n.gen. n.sp., ein neues Taxon der Hadromerida (Demospongiae, Porifera) mit einem kalkigen Basalskelett aus der tethyalen Unterkreide.- Berliner geowissenschaftliche Abhandlungen 124: 247-257.- FC#038;P 20-1.1, p. 74, ID=2864Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Cretaceous L; Geography: Tethys¹A new taxon of a coralline sponge is described from a Lower Cretaceous–Urgonian component of the Coniacian “Basiskonglomerat”; of the Gosau facies near Oberwossen (Chiemgau, Southern Germany). The sclerosponge exhibits bundles of subradially arranged tylostyles in the outer layer of the basal skeleton (ectosome). Microscleres are missing. The arrangement of the tylostyles is characteristic for the demosponge taxon Hadromerida (pars). Missing the microscleres is close relationship to the taxon Suberites/polymastia is very probable. The calcareous basal skeleton exhibits a stromatopod architecture. ¹”;
- 4225 s[4222] = "SCHLAGINWEIT F. (2009).- The incertae sedis Carpathoporella Dragastan, 1995, from the Lower Cretaceous of Albania: skeletal elements (sclerites, internodes #47; branches, holdfasts) of colonial octocorals.- Facies 55, 4: 553-573.- FC#038;P 36, p. 105, ID=6536Topic(s): morphology, systematics; Octocorallia Carpathoporella; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous L; Geography: Tethys¹The incertae sedis Carpathoporella Dragastan, 1995, reported from the Lower Cretaceous of the western Tethyan domain, is usually interpreted as remains of calcareous algae (Dasycladales or Characeae). New

thin-section material from the Aptian of Albania sheds light not only on its biogenic nature but also the morphological variability of this taxon. In fact, *Carpathoporella* represents the debris of colonial, bushy, most likely gorgonid octocorals with tuberculated spheroids that maybe fused at least near the basal root-like holdfast. Colony branching originates from longitudinally grooved calcareous branches or internodes. Possible relationships to other Upper Cretaceous to Palaeogene genera are discussed and a revised critical inventory of Cretaceous octocorals is presented. Due to the evidenced morphological features, *Carpathoporella* could either represent an ancestral isidid octocoral of the order Alcyonacea such as *Moltkia* Steenstrup or, due to the likely primary aragonitic skeletal mineralogy, a representative of *Epiphaxum* Lonsdale of the order Helioporacea. Due to morphological analogies, the new combination *Carpathoporella elliotti* is proposed. In any case, the Lower Cretaceous record from Tethyan peri-reefal shallow-water carbonates is highlighted since numerous skeletal findings of fossil gorgonid Octocorallia were so far only known from Upper Cretaceous and younger strata of outer shelf environments of the boreal realm. The origin of deep-water Upper Cretaceous octocorals from Lower Cretaceous shallow-water taxa such as *Carpathoporella* is proposed as a possible further example of onshore/offshore evolutionary pattern. [original abstract]^1";

- 4226 s[4223] = "GILL G.A., LAFUSTE J.G. (1987).- Structure, repartition et signification paleogeographique d'Aspidiscus, hexacoralliaire cenomanien de la Tethys [structure, distribution and paleogeographic significance of *Aspidiscus*, a Cenomanian scleractinian coral of the Tethys].- Bulletin de la Societe geologique de France 1987, 8, III, 5: 921-934.- FC#038;P 18-1, p. 22, ID=2218^Topic(s): ; Scleractinia, *Aspidiscus*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: Tethys^Aspidiscus is a coral of a particularly attractive form, easily recognizable by field geologists. Therefore the numerous citations in the literature and the frequency in many collections favour the setting of a distribution map for the species of this Cenomanian genus. Apart from a single non-confirmed mention from Uruguay, all the specimens collected to date come from around the Mediterranean with an exceptional abundance in North Africa. Lesser concentrations are known from the Middle East, Spain, France and Greece. In North Africa the localities which yielded *Aspidiscus* are alined from eastern Algeria via Tunisia to Tripolitania in a narrow belt (less than 100 km) over 1000 km. This belt, directed NW-SE, cuts obliquely the structural lines. The various outcrops along this strip seem to gather in groups (7 to 8) recalling the pattern suggested, by Freund (1961) for the distribution of ammonites in the Middle East during the Lower Turonian - that of parallel troughs (with ammonites) separated by ridges and directed NE-SW. The recognition of "faulted-tilting blocks" announced by Bureau (1983, 1984, 1986) may also be attempted in explaining the layout of the *Aspidiscus* localities in North Africa, which coincides rather well with satellite photogeological alinements (Biju-Duval et al. 1976). The enigmatic mention of this coral in Uruguay raises the question of sea links - Atlantic or Trans-Saharan (Collignon and Lefranc 1974) - between North Africa and South America during the Cenomanian.^1";
- 4227 s[4224] = "BERTHOU P.Y., PHILIP J. (1972).- La limite Cénomanien - Turonien dans les formations récifales du domaine mésogéen.- C. R. Séances S. G. F. 6: 238-239.- FC#038;P 2-2, p. 22, ID=4819^Topic(s): stratigraphy; reefs; Systematics: ; Stratigraphy: Cretaceous Cen / Tur; Geography: Tethys^^1";
- 4228 s[4225] = "PERRIN C., PLAZIAT J.C., ROSEN B.R. (1998).- The Miocene coral reefs and reef corals of the SW Gulf of Suez and NW Red Sea: distribution, diversity and regional environmental controls.- Sedimentation and tectonics in rift basins, Red Sea - Gulf of Aden

- [B.H. Purser & D.W.J Bosenice (eds)]: 296-319; Chapman and Hall.- FC;P 28-1, p. 68, ID=3955Topic(s):reefs, reef corals; reefs; Systematics:Cnidaria; Anthozoa; Stratigraphy:Miocene; Geography:Red Sea NWCoral reefs developed within the Gulf of Suez - northern Red Sea region during a relatively brief time interval which corresponds to the Middle Miocene maximum of worldwide marine transgression associated with a global warm climate. The mixed carbonate - siliciclastic sequences including reefs belong to the marine Miocene syn-rift unit (Group B or Upper Rudeis - Kareem Formations) and possibly extend from Langhian to early Serravallian. * Various sites where coral reefs occur are presented with description of reef geometries and their relationships to local structural framework together with diversity of coral fauna and associated organisms. Studied reef locations extend along the Egyptian coast of the Gulf of Suez and northwestern Red Sea from north of Hurghada to the Abu Ghusun - Ras Honkorab area. [...] Mediterranean reef corals and coral reefs became definitively extinct within the Gulf of Suez - northern Red Sea region at the latest during the Serravallian, as a result from the increasing restriction of marine water inducing the evaporite sedimentation. This regional restriction is interpreted as directly related to the gradual closure of the Suez Isthmus likely due to both eustatic and tectonic movements and finally leading to the isolation of the Gulf of Suez - Red Sea from the main basin of the Mediterranean i.e. much earlier than the extinction of the reef corals within the Mediterranean at the end of the Miocene. [excerpts from an abstract]^1";
- 4229 s[4226] = "DULLO W.-C. (1986).- Variation in Diagenetic Sequences: An Example from Pleistocene Coral Reefs, Red Sea, Saudi Arabia.- Reef Diagenesis [J.H. Schroeder & B.H. Purser (eds)]: 77-90; Springer, Berlin & Heidelberg.- FC;P 15-2, p. 6, ID=6732Topic(s):reefs diagenesis; reefs, diagenesis; Systematics:Cnidaria; Anthozoa; Stratigraphy:Pleistocene; Geography:Red Sea^1";
- 4230 s[4227] = "KORA M. (2000).- Pliocene and Plio-Pleistocene macrofauna from the Red Sea coastal plain (Egypt): Biostratigraphy and biogeography.- Geologica et Palaeontologica 34: 219-235.- FC;P 31-2, p. 48, ID=1702Topic(s):biostratigraphy, biogeography; paleontology; Systematics:; Stratigraphy:Neogene; Geography:Egypt^[several scleractinian corals are mentioned from Upper Pliocene and Plio-Pleistocene deposits]^1";
- 4231 s[4228] = "Al-RIFAIY A., CHERIF O.K. (1988).- The Fossil Coral Reefs of Al-Aqaba, Jordania.- Facies 18: 219-230.- FC;P 17-2, p. 38, ID=2199Topic(s):reefs, stratigraphy, eustacy; reefs; Systematics:; Stratigraphy:Pleistocene; Geography:Jordan, Aqaba Gulf^Three major cycles of fossil coral reef development have been recognized on the Jordanian coast of the Gulf of Aqaba. Eustatic changes in sea level, coastal erosional processes and faulting has led to the formation of seven distinct terraces. It seems that the eustatic sea level changes governing the development of these reefs correspond to glacial and interglacial episodes of the late Pleistocene.^1";
- 4232 s[4229] = "DULLO W.-C. (1990).- Facies, Fossil Record, and Age of Pleistocene Reefs from the Red Sea (Saudi Arabia).- Facies 22: 1-46.- FC;P 19-1.1, p. 57, ID=2675Topic(s):reefs, geology; reefs; Systematics:; Stratigraphy:Pleistocene; Geography:Red Sea^Facies patterns within the Pleistocene reef terraces along the Red Sea coast exhibit lateral changes over short distances. These changes reflect either transitions within the depositional environment or they are related to minor or major sea level fluctuations. On the basis of quantitative distribution of biota in the field as well as in thin section it is possible to establish and map these lateral patterns. Important biota are framebuilders and secondary reef encrusters (foraminifers, coralline algae). Frequency distributions of sessile foraminifera and scleractinians are strikingly

similar to those of the recent environment within diagenetically unaltered terraces. The main reef terraces occur in different elevated levels above the present sea level. Morphological steps are caused by onlap during different sea levels, by tectonics, or by erosion during transgression. Although several morphological steps exist which obscure the terrace stratigraphy, only three reef units can be distinguished. Each unit exhibits a lateral facies development, which begins at the shore, covering the whole lagoonal facies and ends at the upper reef slope. Besides this lateral facies pattern vertical patterns occur as well, showing a transgressive sequence in the youngest (lower) and oldest (upper) unit and a regressive one in the middle unit. In top quality outcrops, like wadi sections, it is possible to differentiate within the youngest reef unit between three onlapping reef cycles. Such cycles, however, can not be seen in the middle and oldest formations. The three reef cycles within the youngest unit and the three units as well, exhibit different degrees of diagenetic alterations, which are strongly reflected by a gradual reduction in the number of biota. This reduction may be best described as a process of "sieving", where these differences in diagenesis are recorded, they correspond to the age of the reef units. U/Th datations of the investigated terraces reveal an age for the youngest unit between 86.000 and 118.000 years B.P. During this time three major sea level high stands have occurred, which explain the existence of three reef cycles. The age of the middle formation is around 205.000 years, while the age of the oldest formation can only be assumed to fit in the time span between 290.000 and 340.000 years B.P. All these data correspond to other published datations along the Red Sea coast.¹¹;

- 4233 s[4230] = "FAURE H., HOANG C.T., LALOU C. (1973).- Structure et géochronologie ²³⁰Th/²³⁴U des récifs coralliens soulevés à l'Ouest du Golfe d'Aden (T.F.A.I.).- Rev. Géogr. phys.-Géol. dyn., Paris 1973, 2e sér., 15, 4: 393-403.- <FC>P 3-1, p. 17, ID=4851Topic(s): reefs, U/Th geochronometry; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Aden GulfLes côtes du Golfe d'Aden de la Mer Rouge au Golfe de Tadjoura présentent des dépôts calcaires coralliens pleistocènes. Ces formations, de faciès variés, permettent de définir une unité chronostratigraphique datée à environ 125000 ans largement étendue qui constitue un repère précis de la stratigraphie du Pleistocene. Les affleurements en position topographique élevée présentent des traces de lessivage et de recristallisation responsables de la transformation en calcite de l'aragonite des coraux. Pour cette raison, ils ne peuvent être datés et ne peuvent pas toujours être rattachés avec certitude au même cycle. Ils pourraient comprendre des niveaux plus anciens. Le repère daté permet de chiffrer les déformations subies par la bande littorale du golfe depuis 125000 ans. Les déformations dépassent 20 ou 50m (peut-être 100m pour un repère non daté). Elles se traduisent par des failles de 8m de rejet mesurable et un mouvement d'ensemble positif qui atteint son maximum le long du méridien d'Obock. Vers le SO et le N, les déformations s'atténuent et la surface du niveau marin de 125000 ans se rapproche progressivement du niveau actuel de la mer.11;
- 4234 s[4231] = "DULLO W.-C., JADO A.R. (1984).- Facies, zonation patterns and diagenesis of Pleistocene reefs on the eastern Red Sea coast.- Proc. Symp. Coral Reef Environ. Red Sea (Jeddah 1984): 254-275.- <FC>P 15-2, p. 6, ID=6731Topic(s): reefs, facies, diagenesis; reefs, ecology diagenesis; Systematics: ; Stratigraphy: Pleistocene; Geography: Red Sea11;
- 4235 s[4232] = "DULLO W.-C. (1984).- Progressive diagenetic sequence of Aragonite structures: Pleistocene coral reefs and their modern counterparts on the eastern Red Sea coast, Saudi Arabia.- Palaeontographica Americana 54: 254-260 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].-

- FC&P 14-2, p. 47, ID=0905^Topic(s): reefs, diagenesis; reefs; Systematics: ; Stratigraphy: Pleistocene Recent; Geography: Red Sea^Uplifted coral reefs on the eastern Red Sea coast and the Gulf of Aqaba compared to their modern analogues reveal faunal differences due to diagenesis. Whereas all biota show more or less the same amount of diagenetic reduction in numbers, aragonitic mollusks are more reduced in number. Although the skeletons of many organisms and also marine cements, consist of aragonite, their reaction to diagenesis in the vadose environment differs. The diagenetic alteration of aragonite cements into calcite occurs earlier than that of aragonitic coral skeletons. The diagenesis of aragonitic mollusks begins only after the complete replacement by calcite of aragonite in corals and cements. In this stage the diagenetic environment can be already so well advanced that leaching predominates with little concomitant calcite precipitation. This leads to a major loss of aragonite mollusks. This diagenetic sequence can be related to the differing influence of organic matrices formed during aragonite precipitation; to the density of the crystal fabric; and also to the degree of undersaturation of the meteoric water with respect to CaCO₃.^1";
- 4236 s[4233] = "FRICKE H.W., HOTTINGER L. (1983).- Coral bioherms below the euphotic zone in the Red Sea.- Marine Ecology Prog. Ser. 11: 113-117.- FC&P 13-1, p. 13, ID=0379^Topic(s): reefs; Anthozoa bioherms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea^1";
- 4237 s[4234] = "FRICKE H.W., SCHUHMACHER H. (1982).- The depth limits of Red Sea stony corals: an ecophysiological problem (A deep diving survey by submersible).- Marine Ecology 4/2: 163-194.- FC&P 13-1, p. 13, ID=0380^Topic(s): ecology, bathymetry; Anthozoa ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea^1";
- 4238 s[4235] = "ZHOU RENLING, MENG Z., GUAN XILIAN (1983).- Ecological analyses of ahermatypic corals from the northern shelf of South China Sea.- Tropical Oceanology 2, 3: 238-243.- FC&P 13-1, p. 28, ID=0419^Topic(s): ecology; Anthozoa ahermatypic; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: China Sea S^1";
- 4239 s[4236] = "SCHEER G. (1984).- The distribution of reef-corals in the Indian Ocean with a historical review of its investigation.- Deep-Sea Research A, 31/6-8A: 885-900.- FC&P 13-2, p. 10, ID=0632^Topic(s): hermatypic, distribution; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indian Ocean^With extensive reference list.^1";
- 4240 s[4237] = "SCHEER G., PILLAI C.S.G. (1983).- Report on the stony corals from the Red Sea.- Zoologica 133: 1-198.- FC&P 13-2, p. 11, ID=0633^Topic(s): hermatypic, revision; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea^Revision of the Red Sea reef coral fauna^1";
- 4241 s[4238] = "MERGNER H., SCHUHMACHER H. (1985).- Quantitative Analyse von Korallengemeinschaften des Sanganeb-Atolls (mittleres Rotes Meer). I. Die Besiedlungsstruktur hydrodynamisch unterschiedlich exponierter Aussen- und Innenriffe.- Helgolaender Meeresuntersuchungen 39: 375-417.- FC&P 15-1.2, p. 9, ID=0848^Topic(s): ecology; Anthozoa communities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea^Quantitative analysis of coral communities of Sanganeb-Atoll (central Red Sea), I. The community structure of outer and inner reefs exposed to different hydrodynamic regimes.^1";
- 4242 s[4239] = "SCHUHMACHER H., MERGNER H. (1985).- Quantitative Analyse von Korallengemeinschaften des Sanganeb-Atolls (mittleres Rotes Meer) II. Vergleich mit einem Riffareal bei Aqaba (nordliches Rotes Meer) am Nordrande des indopazifischen Riffgurtels.- Helgolaender Meeresuntersuchungen 39: 419-440.- FC&P 15-1.2, p. 10,

- ID=0852^Topic(s): ecology, quantitative analysis; coral biocoenoses; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea N / central^^1";
- 4243 s[4240] = "WOODROFFE C., MCLEAN R., POLACH H., WALLENSKY E. (1990).- Sea level and coral atolls: Late Holocene emergence in the Indian Ocean.- *Geology* 18: 62-66.- FC&P 19-1.1, p. 61, ID=2686^Topic(s): reefs, atolls, eustacy; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Holocene; Geography: Cocos Isls^The Cocos (Keeling) Islands in the eastern Indian Ocean were visited by Charles Darwin, who described geomorphological evidence that he considered supported his subsidence theory of coral-reef development. However, several other accounts of the reef islands have questioned Darwin's interpretation, and have suggested that a conglomerate platform that underlies most of the reef islands may indicate recent emergence of the atoll. Radiocarbon ages of corals from this conglomerate platform, reported here, indicate that it formed in the late Holocene. Fossil in situ microatolls above present upper coral growth limits, the levation of associated beachrock, and the morphological similarity of the conglomerate platform to the present reef-flat deposits indicate a late Holocene sea level above the present relative to the atoll. The atoll has undergone at least 0,5 m of emergence since about 3000 yr B.P. This represents the first radiometrically dated evidence of Holocene emergence from islands in the eastern or central Indian Ocean.^1";
- 4244 s[4241] = "RIEGL B., COOK P.A. (1995).- Is damage susceptibility linked to coral community structure? A case study from South Africa.- *Beiträge zur Paläontologie* 20: 65-73.- FC&P 25-2, p. 73, ID=3180^Topic(s): ecology, damage susceptibility; coral biocoenoses; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Africa S^Africa's southernmost coral communities are situated in northern Natal, South Africa (27°50'S), within the Maputaland and St. Lucia Marine Reserves. Growing concern about the possible impact of recreational activities on the health of the coral ecosystem prompted the present study on the structure and health of the reefs. Coral community studies by means of line transects identified three basic coral community types, which correlated with the geomorphology of the sandstone outcrops on which corals grew. 1) Fossil dunes were dominated by alcyonacea in depths between 8 and 24m. 2) Flat outcrops between 18 and 24m depth were dominated by scleractinia (mainly Acropora). Within these community types, a further small-scale differentiation into sub-communities inside and outside of gullies occurred. 3) Deep hard substrata between 25 and 34 m depth were dominated by sponges, ascidians and sea-fans. Quantitative damage assessment was used to correlate community structure to damage susceptibility. The flat-outcrop Acropora community was considered most fragile, while the other community types (dominated by leathery alcyonaceans or by sponges) were considered more robust. Such quantitative assessments can be of value to the development of zoning schemes for marine reserves.^1";
- 4245 s[4242] = "SCHUHMACHER H., KOHL D.K., REINICKE G.B. (1995).- Long-term fluctuations of coral communities at Aqaba and on Sanganeb-Atoll (northern and central Red Sea) over more than a decade.- *Beiträge zur Paläontologie* 20: 89-97.- FC&P 25-2, p. 75, ID=3182^Topic(s): ecology, decadal scale fluctuations; coral biocoenoses, fluctuations; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea N / central^Quantitative analyses of coral communities had been carried out on test squares in a fore reef area of a fringing reef near Aqaba (northern Red Sea) and on inner and outer reef slopes on Sanganeb-Atoll (central Red Sea) in 1976 (Mergner & Schuhmacher 1981) and 1980 respectively (Mergner & Schuhmacher 1985). Further investigations at Aqaba in 1989 and on Sanganeb in 1991 yielded information on the growth and mortality of individual colonies as well

as data on long-term fluctuations of community parameters. Near Aqaba, data of the test square U-7 (5 x 5m in size) at a depth of some 10m showed that significant changes occurred in the composition of the coral reef community between 1976 and 1989: xeniid soft coral colonies completely disappeared during this time, in total, 112 species of Cnidaria including 88 scleractinia were found in the test square in 1976 and 1989. The diversity ($H1 = 3.23$ in 1989- $H1 = 3.42$ in 1976, based on Cnidaria-coverage) compared to the highest in the world. On Sanganeb-Atoll coral communities of four test squares (TQ-FV) of 5 x 5m were analyzed. The data of 1991 for four TQs comprised a total of 3034 colonies of 130 species of stony corals, soft corals and hydrocorals, among them 86 species of Scleractinia. A mean diversity of $H1 = 2.80$ in 1991 and $H1 = 2.58$ in 1980 (based on Cnidaria-coverage) was recorded. The comparison of the qualitative analyses of the Sanganeb TQs in 1980 and 1991 proved the constancy of the coral communities. The analysis of the TQs near Aqaba and on Sanganeb-Atoll, however, showed significant differences when compared latitudinally. On Sanganeb-Atoll the data suggest that the stable abiotic conditions support a relative constancy of the coral communities in the reef areas studied, whereas near Aqaba considerable alterations become evident over a decade. Higher fluctuations of abiotic conditions (light, temperature) near the boundary of the geographical reef belt as well as grazing by sea urchins may account for retarded regeneration after occasional disturbances.^1";

- 4246 s[4243] = "RIEGL B., PILLER W.E. (1997).- Distribution and Environmental Control of Coral Assemblages in Northern Safaga Bay (Red Sea, Egypt).- Facies 36, 1: 141-162.- FC&P 26-1, p. 90, ID=3659^Topic(s): ecology; coral biocoenoses; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Egypt, Red Sea^Coral assemblages in northern Safaga Bay, Red Sea, Egypt, are qualitatively described. Nine distinct assemblages were found, which correspond to quantitatively defined community types previously described from the area off Hurghada, northern Red Sea. Their distribution within northern Safaga Bay was mapped. Strong gradient and/or steep relief assemblages were: Acropora assemblage on windward (exposed) reefs, Porites assemblage on leeward (sheltered) reefs, Porites assemblage on leeward (sheltered) reefs, Millepora assemblage on current exposed reefs, Stylophora assemblage on reef flats. Low gradient and/or low relief assemblages were: Acropora dominated coral patches in areas of good circulation to a depth of 15m, Stylophora/Acropora coral patch assemblages in shallow sheltered environments, faviid carpet in low relief areas between 10 and 25m which with increasing turbidity turns into a depauperate faviid carpet, Porites carpet in low relief areas between 5 and 15m with clearest water, Sarcophyton carpet in low relief areas with high suspension load, platy scleractinian assemblage in deeper water (>25m) with low light intensity. The distribution of coral assemblages depends basically on 1) topography 2) hydrodynamics 3) light and 4) suspension load.^1";
- 4247 s[4244] = "RIEGL B., PILLER W.E. (1999).- Coral frameworks revisited - reefs and coral carpets in the northern Red Sea.- Coral Reefs 18: 241-253.- FC&P 28-2, p. 20, ID=4017^Topic(s): reefs, coral frameworks; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea N^Coral communities were investigated in the northern Red Sea, the Gulfs of Suez and Aqaba, for their framework building potential. Five types of coral frameworks were differentiated: Acropora reef framework, Porites reef framework, Porites carpet, faviid carpet, and Stylophora carpet. Two non-framework community types were found: Stylophora-Acropora community, and soft coral communities. Reef frameworks show a clear ecological zonation along depth and hydrodynamic exposure gradients, with clear indicator communities for each zone. By definition, coral carpets build a framework and lack a distinct zonation since they only

grow in areas without pronounced gradients. In the northern Red Sea they show a gradual change with depth from Porites to faviid dominance. A Stylophora carpet is restricted to shallow water in the northern Gulf of Suez. Although growth rates of carpets may be somewhat smaller than those of reefs, the carbonate accumulation is considered to be higher in carpet areas due to their significantly higher areal extension. In addition, reef and carpet have different sediment retention characteristics - the carpet retains, the reef exports. The in situ fossilization potential of coral carpets is expected to be higher than that of reef frameworks.^1";

- 4248 s[4245] = "CARBONE F., MATTEUCCI R., ROSEN B.R., RUSSO A. (1994).- Recent Coral Facies of the Indian Ocean Coast of Somalia with an Interim Check List of Corals.- Facies 30: 1-14.- FC&P 23-1.1, p. 85, ID=4198^Topic(s): reefs, facies, coral lists; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Somalia^From a study of two areas, Jesira and the Bajuni Archipelago, about 400 km apart, a general pattern can be established for the Recent facies, together with the morphological and taxonomic features of the corals. Present day coral development is characterized by true fringing reefs in the Bajuni Archipelago and by scattered patches and knolls in the Jesira area. The coral fauna, consisting of 27 genera and 63 species so far (including all uncertainties, but not sight records), is rather poor, though coral communities are locally well developed. These figures probably reflect incomplete study and sampling. Although comparison with other areas may therefore be premature, a preliminary biogeographical analysis suggests that this fauna is more closely related to that of the Red Sea than to East Africa and the Seychelles. This differs from other published biogeographical work on Indian Ocean coral faunas, but further study of the corals in this and neighboring areas of the Indian Ocean is needed in order to resolve this apparent anomaly.^1";
- 4249 s[4246] = "LOYA Y., SLOBODKIN L.B. (1971).- The Coral Reefs of Eilat (Gulf of Eilat, Red Sea).- Regional Variation in Indian Ocean Coral Reefs [D.R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 117-139.- FC&P 2-2, p. 12, ID=4630^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea, Eilat^^1";
- 4250 s[4247] = "LOYA Y. (1972).- Community structure and species diversity of hermatypic Corals at Eilat (Red Sea).- Marine Biology 13: 100-123.- FC&P 1-2, p. 12, ID=4631^Topic(s): ecology, biodiversity; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea, Eilat^^1";
- 4251 s[4248] = "PICHON M. (1971).- Comparative Study of the Main Features of some Coral Reefs of Madagascar, La Réunion and Mauritius.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 185-216.- FC&P 2-2, p. 12, ID=4753^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Madagascar, Reunion, Mauritius^^1";
- 4252 s[4249] = "ROSEN B.R. (1971).- The Distribution of Reef Coral Genera in the Indian Ocean.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 263-299.- FC&P 2-2, p. 12, ID=4755^Topic(s): hermatypic, distribution; reef corals, genera; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indian Ocean^^1";
- 4253 s[4250] = "PILLAI C.S.G. (1971).- Composition of the Coral Fauna of the

- Southeastern Coast of India and the Laccadives.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 301-327.- FC&P 2-2, p. 12, ID=4756^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: India S, Laccadives^^1";
- 4254 s[4251] = "SCHEER G. (1971).- Coral Reefs and Coral Genera in the Red Sea and Indian Ocean.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 329-367.- FC&P 2-2, p. 12, ID=4757^Topic(s): coral reefs, distribution; coral reefs, coral genera; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indian Ocean^^1";
- 4255 s[4252] = "SCHEER G. (1972).- Investigations of Coral Reefs in the Maldive Islands with notes on lagoon patch reefs and the method of coral sociology.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 87-120.- FC&P 2-2, p. 12, ID=4764^Topic(s): coral reefs, patch reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Maldives^^1";
- 4256 s[4253] = "MAHADEVAN S., NAYAR K.N. (1972).- Distribution of coral reefs in the Gulf of Mannar and Palk Bay and their exploitation and utilization.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 181-190.- FC&P 2-2, p. 13, ID=4769^Topic(s): coral reefs, distribution; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: India, Mannar Gulf^^1";
- 4257 s[4254] = "PILLAI C.S.G. (1972).- Stony corals of the Seas around India.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 191-216.- FC&P 2-2, p. 13, ID=4770^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: India^^1";
- 4258 s[4255] = "RAJENDRAN A.D.I., DAVID K. (1972).- A preliminary underwater survey of the extent of the coral reefs in and around some of the islands in Gulf of Mannar.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 231-238.- FC&P 2-2, p. 13, ID=4772^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: India, Mannar Gulf^^1";
- 4259 s[4256] = "STODDART D.R. (1973).- Coral Reefs of the Indian Ocean.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 51-92.- FC&P 3-1, p. 22, ID=4863^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indian Ocean^^1";
- 4260 s[4257] = "PILLAI C.S.G., VINE P.J., SCHEER G. (1973).- Bericht ueber eine Korallensammlung von den Seychellen.- Zool. Jb. Syst. Bd. 100: 451-465.- FC&P 3-2, p. 34, ID=4923^Topic(s): collection of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Seychelles^The

Sechelles Coral Reef Conservation Expedition; operated in the Seychelles from 25th July to 12th September 1971 and brought home from Baie Ternay, on the north-west of the island of Mahé, a coral collection which was handed over to the Hessian State Museum, Darmstadt. * The expedition divided the investigated bay into zones: 1, sand and algae; 2, marine angiosperms; 3, sand; 4, sand with isolated patch reefs containing live corals; 5, reef flat consisting mainly of dead coral fragments and algae; 6, reef slope with living corals, gradually increasing to 10m followed by a steeper slope to 25m depth; 7, sand with isolated corals sloping gently from 20m to 30m. * Corals were collected at four points: on a patch reef 1.5m deep, and on the reef slope at 10, 17 and 25m, using SCUBA. The coral composition of the different points is described and listed in a table. The difference in coral composition between Baie Ternay and other coral reefs at the east side of Mahé is discussed and it is suggested that the particularly sheltered position of Baie Ternay, open to NW and sheltered from the prevailing SE monsoon winds accounts for these differences. * In a systematic section the 29 collected coral species from 21 genera are listed, partly described and supplied with notes about geographical distribution. One species, *Caulastrea furcata*, is new for the Seychelles.^1";

- 4261 s[4258] = "SCHUHMACHER H. (1974).- On the conditions accompanying the first settlement of corals on artificial reefs with special reference to the influence of grazing sea urchins (Eilat, Red Sea).- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 257-267.- FC#038;P 4-1, p. 17, ID=4999^Topic(s): reefs artificial, corals settlement; reefs, artificial; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea, Eilat^^1";
- 4262 s[4259] = "MONTAGGIONI L. (1974).- Coral reefs and Quaternary shore-lines in the Mascarene Archipelago (Indian Ocean).- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 579-593.- FC#038;P 4-1, p. 19, ID=5050^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Quaternary; Geography: Mascareignes^^1";
- 4263 s[4260] = "SCHEER G. (1974).- Investigation of a coral reef at Rasdu atoll in the Maldives with the quadrat method according to phytosociology.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 655-670.- FC#038;P 4-1, p. 20, ID=5055^Topic(s): coral reefs, research methods; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Maldives^The present paper is supplementary to the paper submitted to the Symposium on Corals and Coral Reefs held at Mandapam, South India, in 1969, in which the basic ideas of a coral sociology, founded upon the elements of phytosociology, were explained. In the present paper the more essential principles, somewhat modified, are repeated. The Rasdu Atoll in the Maldives is taken as an example to show how coral reefs can be examined with coral sociological methods. On eight sample quadrats of the inner reef flat, on ten of the outer reef flat and on six of the lagoon bottom, abundance-dominance and gregariousness of the corals occurring there were determined and listed in tables. The corals were arranged according to their frequency. Frequency diagrams and variation curves of the species numbers of the different stands were drawn, and reference is made to the differences in the composition of the sample quadrats. The reefs of Rasdu Atoll are compared with other reefs of the Maldives. * Basic viewpoints of classification of coral communities in terms of dominant, differential and characteristic species are explained. Provided that detailed and unequivocal keys of

- identification exist, particularly for the difficult coral genera, it should be possible to establish coral associations and characteristic species by co-operative effort.^1";
- 4264 s[4261] = "MERGNER H., SCHUHMACHER H. (1974).- Morphologie, Okologie und Zonierung von Korallenriffen bei Aqaba (Golf von Aqaba, Rotes Meer).- Helgolaender wiss. Meeresunters. 26: 238-358.- FC&P 10-2, p. 12, ID=6055^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea, Aqaba^^1";
- 4265 s[4262] = "MERGNER H., SCHUHMACHER H. (1981).- Quantitative Analyse der Korallenbesiedlung eines Vorriffareals bei Aqaba (Rotes Meer).- Helgolaender [wiss] Meeresunters. 34: 337-354.- FC&P 10-2, p. 12, ID=6056^Topic(s): hermatypic; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea, Aqaba^^1";
- 4266 s[4263] = "NOBBE F. (1981).- Beitrage zur Faunistik und Oekologie der Korallenriffe bei Aqaba, Rotes Meer, unter besonderer Beruecksichtigung der Poriferen.- Ruhr-Universitaet Bochum, Dissertation.- FC&P 10-2, p. 12, ID=6059^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea, Aqaba^^1";
- 4267 s[4264] = "MONTAGGIONI L., FAURE G. (1980).- Recifs coralliens des Mascareignes (Ocean Indien).- Collect. Trav. Centre Univ. de la Réunion 1980: 151 pp., 27 figs, 5 tabs, 46 phot., 30 pls.- FC&P 10-2, p. 79, ID=6109^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Mascareignes^^1";
- 4268 s[4265] = "DULLO W.-C. (1982).- Zur Diagenese aragonitischer Strukturen am Beispiel rezenter und pleistozaner Korallenriffe des Roten Meeres. [in German, with English summary].- Natur u. Mensch, Jmitt. 1982: 109-115.- FC&P 12-2, p. 41, ID=6238^Topic(s): reefs, aragonite diagenesis; aragonite diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Quaternary; Geography: Red Sea^The diagenetic alteration of aragonite cements into calcite happens earlier than that one of aragonitic coral skeletons within the vadose environment. The diagenesis of aragonitic molluscs starts after the complete replacement of aragonite by calcite in corals and cements. This diagenetic sequence can be referred to the different influence of organic substances during aragonite precipitation, to the density of the crystal fabric, as well as to the degree of saturation of the meteoric water with respect to CaCO3 within the diagenetic environment. [original summary]^1";
- 4269 s[4266] = "GEISTER J. (1984).- Film review: "Die Korallengarten von Shadwan"; von H. Fleissner & G. Fleissner.- FC&P 13, 2: 60.- FC&P 13-2, p. 60, ID=6374^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Red Sea^Der Film wurde in den Jahren 1964 bis 1967 im nordlichen Roten Meer gedreht, und zwar im Bereich der Inseln der Strasse von Cubal (hauptsachlich bei Shadwan) und an der agyptischen Festlandkuste zwischen Hurghada und Koseir. Er besteht aus etwa 2 gleich langen Teilen. Teil 1 behandelt die Organisation und Ausrustung der Expedition zum Roten Meer und die Herstellung der fur die Aufnahmen wichtigen Hilfsmittel. Teil 2 ist als Lehr- und Dokumentarfilm konzipiert und gibt einen umfassenden Uberblick uber biologische und geologische Zusammenhange in rezenten Korallenriffen. * Die Szenerie und die Handlung des Riff-Films wird ausschliesslich durch die Korallen und die Mitglieder der Faunengemeinschaft der Riffe bestimmt. Ein breiter Raum wird der Darstellung von Wechselbeziehungen zwischen den Rifforganismen sowie von ihrem Verhalten eingeräumt. Daneben machen technisch perfekte mikroskopische Nahszenen die Zooxanthellen und Nesselkapseln der Riffkorallen sichtbar. Sehr spektakulare Zeitlupen-Nahaufnahmen zeigen die Explosion einzelner Cniden. Als Beispiel fur die Ernahrung der

Korallen sieht der Zuschauer, wie die Polypen kleine Amphipoden fangen, und wie die Beute zum Mund der Polypen transportiert wird. Eine Zeitrafferszene demonstriert darüberhinaus anschaulich, wie die Polypen ihren Korallenstock selbst von Sedimentüberdeckung reinigen. * Der Film wurde speziell als Lehrfilm für Universitäten und Schulen sowie für das Fernsehen gedreht. Obschon die Felddarstellungen nun fast 20 Jahre zurückliegen, gibt er nach Ansicht des Rezensenten unter allen vergleichbaren, öffentlich ausleihbaren Riff-Filmen die abgerundetste Einführung in den Themenkreis des rezenten Korallenriffes. Deshalb bietet er gerade auch dem Riffpalaontologen und Paläoökologen, der keine Gelegenheit hat, in rezenten Riffen zu tauchen, notwendige Einblicke in das heutige Riffökosystem sowie Anschauungsmaterial für die wichtigsten geologischen Prozesse und damit wertvolle Anregungen für die Interpretation von fossilen Riffablagerungen. Auch für den Laien ist die Vorführung des Filmes wegen der ausserordentlich schönen und mit technischer Perfektion gedrehten Unterwasserszenen ein grosser Genuss.¹¹;

- 4270 s[4267] = "GEISTER J. (1984).- Book review: *Biologiya korallyvykh rifov. Issledovaniya na banke Fantom (Timorskoye morye)*. Sbornik nauchnykh trudov.- FC&P 13, 2: 61-63.- FC&P 13-2, p. 61, ID=6375Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor SeaDer Band stellt eine Reihe wissenschaftlicher Untersuchungsergebnisse von der 7. Ausfahrt des sowjetischen Forschungsschiffes &Kallisto& vor, welche im Mai/Juni 1978 zu den Korallenriffen der &Phantom-Bank& auf dem Sahul-Schelf vor der Nordküste von Australien (Timor-See) führte.¹¹;
- 4271 s[4268] = "YEVSYEYEV G.A. (1983).- Physiko-geographische und geologische Charakterisierung des Sahul-Schelfes. [in Russisch].- *Biologiya korallyvykh rifov. Issledovaniya na banke Fantom (Timorskoye morye)*. Sbornik nauchnykh trudov: 5-9; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.- FC&P 13-2, p. 61, ID=6376Topic(s): coral reefs, physiography, geology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor SeaKurze, allgemeine Charakterisierung der Geomorphologie (bemerkenswerte submarine Terrassenstufen in 61, 90 und 130m Tiefe), der Meerestromungen (Einfluss des Monsuns), der Lufttemperatur, Wolkenbedeckung und der Niederschläge.¹¹;
- 4272 s[4269] = "PROPP M.V. (1983).- Merkmale der Hydrochemie und der Produktivität des Wassers und die photosynthetisch wirksame Lichteinstrahlung. [in Russisch].- *Biologiya korallyvykh rifov. Issledovaniya na banke Fantom (Timorskoye morye)*. Sbornik nauchnykh trudov: 10-19; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.- FC&P 13-2, p. 61, ID=6377Topic(s): coral reefs, hydrochemistry, productivity; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor SeaWasserproben aus dem Bereich der &Phantom-Bank& werden auf ihren Gehalt an Sauerstoff, Orthophosphat, Ammoniak, Nitraten, Nitriten, Kieselsäure, Chlorophyll und Phaeophytin, Fe, Cu, Mn und Zn sowie auf ihre Salinität hin untersucht. Das Wasser der Region wird insgesamt als mesotroph eingestuft. Zur relativ hohen Produktivität bei verhältnismässig geringer Biomasse des Phytoplanktons scheint die hohe Wassertemperatur beizutragen. Weitere Untersuchungen betreffen die Durchleuchtung des Wassers in Abhängigkeit von der Wellenlänge des Lichtes und der Wassertiefe, sowie die Verteilung der Strahlungsenergie in Abhängigkeit von der Wassertiefe.¹¹;
- 4273 s[4270] = "YEVSYEYEV G.A. (1983).- Verteilung der Gastropoden und zweiklappigen Mollusken. [in Russisch].- *Biologiya korallyvykh rifov. Issledovaniya na banke Fantom (Timorskoye morye)*. Sbornik nauchnykh trudov: 20-35; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.- FC&P 13-2, p. 61, ID=6378Topic(s):

coral reefs, Gastropoda, Bivalvia; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor Sea^Es wurden 150 Gastropodenarten und 70 Pelecypodenarten aufgesammelt. Die repräsentativsten 70 Gastropodenarten und 35 Pelecypodenarten werden unter Angabe ihrer Verteilung über 37 Sammelstationen in Reihenfolge ihrer Häufigkeit aufgelistet. Die Sammelstationen reichen bis in 10m Tiefe. Die quantitative Verbreitung der Gesamtfaua sowie diejenige von ausgewählten Arten im Bereich der Bank werden graphisch dargestellt und diskutiert. Ferner werden die Grossen- und Altersstruktur, die vielfach beobachtete Zertrümmerung der Schalen, sowie die unterschiedliche Verteilung der rechten und linken Klappen erörtert. Betrachtungen über die allgemeinen ökologischen Bedingungen auf der Bank sowie über den möglichen Einfluss des östlichen Timor-Stromes auf die Bildung der Molluskenvergesellschaftungen runden den Artikel ab.^1";

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s[4271] = "LATYPOV Yu.Ya. (1983).- Physiographische Zonierung und Verteilung der Scleractinia. [in Russisch].- Biologiya korallyvykh rifov. Issledovaniya na banke Fantom (Timorskoye more). Sbornik nauchnykh trudov: 36-42; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.- FC&P 13-2, p. 62, ID=6379^Topic(s): coral reefs, physiographic zonation; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor Sea^Die Phantom-Bank hat fast elliptischen Umriss und besteht aus einem System felsiger Wälle und sandiger Becken. Diese bilden eine Struktur, welche einem ringförmigen Riff mit zentraler Lagune sehr ähnlich ist. Der Abfall von der Oberkante der Wälle zum Boden der Becken beträgt 3-5m. Vergleiche von Tiefenmessungen über der Bank mit 65 Jahre alten Messungen ergaben eine seitherige Absenkung der Bank um 5-6 cm. * Auf der Phantom-Bank wurden folgende physiographische Zonen ausgeschieden und anhand der Korallenfauna charakterisiert: (1) Aussenabhang, bestehend aus Steilabhangen und senkrechten Felswänden. Umgibt die Bank allseits und ist in Tiefen zwischen 16 und 20m sowie 40 und 60m ausgebildet. Er wird grösstenteils besiedelt von dünnen, schildförmigen und seltener von verzweigten und massigen Kolonien. An Steilstufen wurde eine dichte Besiedlung durch Halimeda beobachtet, an den Steilhängen Gerolle, bestehend aus Halimeda-Sand. Im oberen Teil des Abhanges wurden gut ausgebildete Brandungsrinnen-Systeme festgestellt. Die Bedeckung durch Riffbildner erreicht in diesem Bereich bis zu 100% und besteht vor allem aus blattförmigen und astigen Kolonien von Acropora sowie astigen Porites, dickastigen Millepora und Heliopora. (2) Aussenrand der Bank im Übergangsbereich zum Hang. Es ist 10 bis 20m breit, eben bis leicht geneigt, mit verstreuten bis zu 1m hohen Buckeln und grossen abgestorbenen Acropora-Kolonien. Auf den Konvexformen des Reliefs beobachtet man eine intensive Besiedlung durch Heliopora coerulea, Porites nigrescens, Acropora cytherea, A. palifera, grosse, massige Poritiden und Faviiden sowie Kalkalgen (v.a. Halimeda). (3) Durch Erosion überprägte Zone, mit einem Relief, das stark durch Ausbildung zahlreicher Buckel und Spitzen gegliedert ist. Letztere erreichen 2 bis 3m Höhe und erscheinen stark von der Erosion "zerfressen". Sie werden in mehreren Etagen von Korallen besiedelt, insbesondere von Acropora, Heliopora, grossen, laibförmigen Kolonien von Porites, Favia und Leptoria. Grosse Blöcke aus Riffkalk bilden hier Pseudo-Fleckenriffe. (4) Zone der "blauen Lagunen". Sie umfasst die Depressionen vor allem im Ost- und Südostteil der Bank. Der Meeresboden ist hier weithin mit Kalksediment bedeckt, vor allem von Sand, über dem das Wasser blau erscheint. Korallenbesiedlung (Helioporen, Milleporen, Acroporen und Weichkorallen) sowie vereinzelte Ansammlungen von Fungien sind ausschliesslich auf den Bereich von Erhebungen beschränkt. * Die beobachtete, physiographisch-ökologische Riffzonierung und der Artenreichtum der Korallen ist mit typischen indopazifischen Riffen vergleichbar. Die Acroporen sind auch hier Hauptriffbildner, treten in zahlreichen Wuchsformen auf und reichen bis

- in 10m Tiefe. Sie repräsentieren 1/3 des Artenbestandes.¹¹";
- 4275 s[4272] = "KRASNOV Ye.V., SILINA A.V. (1983).- Koralllobionten der Steinkorallen. [in Russisch].- *Biologiya korallyovykh rifov. Issledovaniya na banke Fantom (Timorskoye morye). Sbornik nauchnykh trudov: 43-50; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.*- *FC&P 13-2*, p. 62, ID=6380^Topic(s): coral reefs, coral epi- and endobionts; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor Sea^Es werden Ergebnisse einer vergleichenden Untersuchung von "Koralllobionten" (Epibionten und Endobionten) verschiedener Korallengattungen dargestellt. Diese basiert auf der Analyse von 34 lebenden Kolonien strauchformiger Korallen verschiedener Gattungen, welche in 12 bis 17 m Wassertiefe gesammelt wurden. In Tabellen wird die Häufigkeit und Zusammensetzung der auf den verschiedenen Korallengattungen angetroffenen Koralllobionten zusammengestellt. Diagramme geben Darstellungen von Diversität und Dominanz sowie von Artenzahl und Biomasse der Koralllobionten in Abhängigkeit von der Größe der Wirtskolonien bei strauchförmigen Acroporen und Pocilloporen. Die Anzahl der Arten, die Häufigkeit und die Biomasse der Koralllobionten erhöhen sich beträchtlich mit der Größenzunahme der Wirtskoralle. Der Besiedlungsgrad von Pocillopora durch Epibionten übertrifft denjenigen von Acropora. In frühen Wachstumsstadien werden beide Korallengattungen durch dekapode Krebse besiedelt. Mit dem Wachstum der Kolonie treten bei den Pocilloporen Ophiuren und Asteroideen hinzu, während sich zwischen den Acroporen Fische einnisten. Die dekapoden Krebse erreichen auf strauchförmigen Wuchsformen von Korallen verschiedener Gattungen ihre größte Häufigkeit.¹¹";
- 4276 s[4273] = "TITLEYANOV Ye.A., ZVALINSKIY V.I., LELETKIN V.A., SHAPOSHNIKOVA M.G. (1983).- Photosynthese der Zooxanthellen von Rifkorallen unter verschiedenen Beleuchtungsbedingungen. [in Russisch].- *Biologiya korallyovykh rifov. Issledovaniya na banke Fantom (Timorskoye morye). Sbornik nauchnykh trudov: 51-74; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.*- *FC&P 13-2*, p. 63, ID=6381^Topic(s): coral reefs, Zooxanthellae photosynthesis; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor Sea^Untersucht wurden Gehalt und Verhältnis photosynthetischer Pigmente, Absorptions- und Anregungsspektren der Fluoreszenz sowie die Geschwindigkeit von Photosynthese und Atmung der symbiontischen Zooxanthellen verschiedener Korallenarten. Die untersuchten Korallen lebten in folgenden 3 ökologischen Nischen: in kräftig durchlichteten, sowie abgeschatteten Bereichen (Wassertiefe 15 bis 17m) und in 45m Wassertiefe. * Die Untersuchungen ergaben Einflüsse der Beleuchtung auf den Gehalt an photosynthetischen Pigmenten, auf das Chlorophyll, den biochemischen Energiefluss, die Atmung sowie auf die Photosynthese. Ferner zeigte sich, dass im abgeschatteten Bereich und in 45m Tiefe die Anpassung an die verringerte Beleuchtung auf gleiche Weise verwirklicht wird, und dass die Korallen hier das Licht geringerer Intensität besser ausnutzen.¹¹";
- 4277 s[4274] = "PROPP M.V., TARASOV V.G., CHERBADZHI I.I. (1983).- Der Stoffwechsel der Benthosgemeinschaften. [in Russisch].- *Biologiya korallyovykh rifov. Issledovaniya na banke Fantom (Timorskoye morye). Sbornik nauchnykh trudov: 75-103; AN SSSR, Dal'nevostochnyi Nauchnyi Tsentr, Vladivostok.*- *FC&P 13-2*, p. 63, ID=6382^Topic(s): coral reefs, metabolic rates; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Timor Sea^Es wurden die Geschwindigkeit von Atmung, Photosynthese, Absorption und Ausscheidung verschiedener biogener Elemente bestimmt und daraus eine Reihe von Schlussfolgerungen gezogen.¹¹";
- 4278 s[4275] = "GEISTER J. (1984).- Book review: Die Malediven. Paradies im Indischen Ozean; by I. Eibl-Eibesfeldt.- *FC&P 13, 2: 64-65.*-

- FC&P 13-2, p. 64, ID=6383^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Maldives^In den knapp 20 Jahren seit Erscheinen von Eibl-Eibesfeldts erfolgreichem Buch "Im Reich der tausend Atolle" sind Flugreisen von Europa selbst zu entlegenen tropischen Küsten nicht nur möglich geworden, sondern sie werden auch in grosser Zahl zu erschwinglichen Preisen angeboten und durchgeführt, so dass heute tausende von tauchbegeisterten Naturfreunden zu tropischen Koralleninseln reisen. Sicher haben die Fernsehberichte von Hans Hass über die "Xarifa"-Expeditionen und Eibl-Eibesfeldts oben genanntes Buch mit der Schilderung der Riffuntersuchungen in den Malediven im Rahmen einer dieser Expeditionen zu einem nicht unwesentlichen Teil zu dieser Entwicklung beigetragen. Es ist deshalb verständlich, dass sich Verfasser und Verlag der Mühe unterzogen haben, das erfolgreiche "Atollbuch" überarbeitet und wissenschaftlich auf den neuesten Stand ergänzt für die heutige Generation von Riff-Besuchern wieder herauszubringen. [first part of extensive review]^1";
- 4279 s[4276] = "EIBL-EIBESFELDT I. (1982).- Die Malediven. Paradies im Indischen Ozean.- Piper & Co. Verlag München / Zürich; 324 pp., 190 Abb. (darunter zahlreiche grossformatige Farbfotos).- FC&P 13-2, p. 64, ID=6384^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Maldives^Das Buch ist sicher eine obligatorische Lektüre für jeden, der sich als Wissenschaftler oder als Tourist auf eine Tauchreise zu den Malediven vorbereitet. Es ist darüberhinaus ein hervorragendes und leicht zugängliches Einführungskolleg in die Biologie von Riff und Lagune, geschrieben von einem Autor, der schon vor über 30 Jahren als einer der ersten Wissenschaftler mit moderner Tauchausrüstung loszog, um das Leben der Riffe direkt am Ort unter Wasser zu studieren. Und es ist die packende Schilderung der verschiedenen Aspekte des rezenten Riffkosystems, das dieses Buch gerade auch für den Geologen und Paläontologen zu einer besonders lesenswerten Lektüre macht. [conclusions of a review by J. Geister (1984; see FC&P 13, 2: 64-65)]^1";
- 4280 s[4277] = "WAGNER T. (1993).- Underlying principles of reef coral sclerochronology and its usefulness for environmental analysis in the reef ecosystem of Mauritius Island (Indian Ocean).- Bern [University ?] Ph.D. Thesis; 1993.- FC&P 23-1.1, p. 51, ID=6837^Topic(s): hermatypic, sclerochronology; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Mauritius^An investigation of reef corals from Mauritius (Indian Ocean) was undertaken with 2 aims: studying underlying principles of sclerochronology and searching for the skeletal records of environmental stress factors affecting local reefs, which have recently suffered heavy degradation. 129 skeletons of massive Porites, representing 2 species (P. lutea, P. solida), and 14 corals of other massive species were sampled from a variety of localities and depths, especially at the west coast. [introductory part of extensive summary]^1";
- 4281 s[4278] = "SUKARNO S. (1972).- Corals and coral reefs study in Indonesia.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 175-180.- FC&P 2-2, p. 13, ID=4768^Topic(s): coral reefs, research history; corals, coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indonesia^^1";
- 4282 s[4279] = "ANTONIUS A., SCHEER G., BOUCHON C. (1991).- Corals of the Eastern Red Sea.- Atoll Research Bulletin 334: 1-22.- FC&P 22-1, p. 38, ID=3397^Topic(s): taxonomy; Anthozoa, Hydrozoa; Systematics: Cnidaria; Anthozoa Hydrozoa; Stratigraphy: Recent; Geography: Saudi Arabia, Red Sea^Coral collections

were made along the Saudi Arabian coastline of the Red Sea, from Haql in the north (Gulf of Aqaba), to Jizan in the south, including nearshore and offshore collecting sites. Corals were taken from all depth-zones in the Jeddah area (max. depth 65m), but from shallow water only (max. depth 9m) at all the other sites. The present collection consists of 146 species of Scleractinia, the octocoral *Tubipora musica*, and among the hydrozoans 3 species of *Millepora*, and *Distichopora violacea*. 12 scleractinian species are new for the Red Sea: *Pocillopora* cf. *eydouxi*, *Acropora anthocercis*, *A. aspera*, *A. cerealis*, *A. divaricata*, *A. donei*, *A. echinata*, *A. monticulosa*, *Montipora peltiformis*, *M. turgescens*, *M. undata*, and *Porites australiensis*. Collections were made from 1981 through 1988.^1";

- 4283 s[4280] = "HOOPER J.N.A. (1996).- A toxic *Biemna* from Madagascar (Demospongiae: Poecilosclerida).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 123-133.- FC&P 25-2, p. 29, ID=3098^Topic(s): ; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Madagascar^A new species of toxic marine sponge, *Biemna laboutei* sp.nov., belonging to the order Poecilosclerida, family Desmacellidae, is described from the outer-reef slope of Nosy-Be, Madagascar. The species is the sixth known desmacellid to have toxic (dermatitis-producing) properties. It is compared with other desmacellids from the Indian Ocean region. [original abstract]^1";
- 4284 s[4281] = "SCHEER G., OBRIST K. (1986).- *Distichopora nitida* Verrill (Cnidaria, Hydrozoa) from the Maldives, a new record from the Indian Ocean.- Coral Reefs 05, 3: 151-154.- FC&P 22-1, p. 44, ID=1996^Topic(s): ; Hydrozoa, *Distichopora*; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Indian Ocean^The stylasterid *Distichopora nitida* was found during dives at four localities in the South Maalhosmadulu Atoll, Maldives, Central Indian Ocean. It occurs at the reef slope in a depth of 22-48m at the edge of grottoes. All features of the Maldivian coral coincide with Boschma's (1959) description of *D. nitida* from the Pacific Ocean. The most important characteristics and the distribution of *D. nitida* were compared with those of other shallow water representatives of the genus in the Indo-Pacific. A locality of *D. nitida* in the western Indian Ocean, thus far unpublished, is mentioned.^1";
- 4285 s[4282] = "MERGNER H. (1967).- Über den Hydroidenbewuchs einiger Korallenriffe des Roten Meeres. I. Die oekologischen Gegebenheiten der untersuchten Riffgebiete und ihre Auswirkung auf Verteilung und Besiedlungsdichte des Hydroidenbewuchses.- Z. Morph. Tiere 60: 35-104.- FC&P 10-2, p. 12, ID=6053^Topic(s): ; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Red Sea^1";
- 4286 s[4283] = "MERGNER H., WEDLER E. (1977).- Über die Hydroidpolypenfauna des Roten Meeres und seiner Ausgänge.- Meteor Forsch. Ergebnisse D, 24: 1-32.- FC&P 10-2, p. 12, ID=6058^Topic(s): ; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Red Sea^1";
- 4287 s[4284] = "MERGNER H. (1966).- Aufgaben und Ergebnisse der Hydroidenforschung im Roten Meer.- Umschau in Wissenschaft und Technik 24: 814-816.- FC&P 10-2, p. 11, ID=6112^Topic(s): ; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Red Sea^1";
- 4288 s[4285] = "SCHUHMACHER H. (1973).- Morphologische und ökologische Anpassungen von *Acabaria*-Arten (Octocorallia) im Roten Meer an verschiedene Formen der Wasserbewegung.- Helgoländer wiss. Meeresunters. 25: 461-472.- FC&P 10-2, p. 12, ID=6061^Topic(s): ; Octocorallia *Acabaria*; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Red Sea^1";

- 4289 s[4286] = "VERSEVELDT J., BENAYAHU Y. (1978).- Descriptions of one old and five new species of Alcyonacea (Coelenterata: Octocorallia) from the Red Sea.- Zoologische Mededelingen 053, 6: 57-74.- FC&P 15-2, p. 40, ID=0732^Topic(s): taxonomy; Octocorallia Alcyonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Red Sea^Five new species of octocorals (Coelenterata) are described from the Red Sea and the Gulf of Eilat. One previously described species, *Stereonephthya imbricans* Thomson & Dean 1931, is discussed and compared with *Coronephthya* (*Stereonephthya*) *macrospiculata* Thomson & Dean 1931.^1";
- 4290 s[4287] = "OFWEGEN L.P.van, SCHLEYER M.H. (1997).- Corals of the South-west Indian Ocean V. *Leptophyton benayahui* gen. nov. & spec. nov. (Cnidaria, Alcyonacea) from deep reefs off Durban and on the KwaZulu-Natal south coast, South Africa.- South African Association for Marine Biological Research. Oceanographic Research Institute. Investigation Reports, 71: 1-12; Durban.- FC&P 27-2, p. 60, ID=3924^Topic(s): taxonomy; Octocorallia Alcyonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Africa S^*Leptophyton benayahui* gen. nov. & spec. nov. is a new genus and species (family Nephtheidae) described from material collected off Durban and on Aliwal Shoal. The genus is compared with other genera of the family that possess similar sclerites or colony morphology.^1";
- 4291 s[4288] = "REINICKE G.B., SCHUHMACHER H. (1996).- Significance of Different Traits of Soft-Coral Assemblages (Octocorallia, Alcyoniina) in benthic Reef Communities of the Red Sea.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 27, ID=3572^Topic(s): ecologic assemblages; Octocorallia Alcyoniina; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Red Sea^Different types of soft-coral assemblages in Red Sea benthic reef communities were investigated with regard to spatial distribution patterns, dynamics in abundance and persistence as well as hermatypic (or "anti-hermatypic") properties. The detailed patterns of 12 by species predominantly preferred depth ranges and fluctuations in abundance were mapped for the Xenidae, a group of rapid colonizers of denuded substrates. Further qualitative observations included the other alcyoniid and nephtheid genera *Sarcophyton*, *Lobophytum*, *Sinularia*, *Litophyton* and *Dendronephthya*. The results were used to define and describe "Xenia-aspects" for the predominant scleractinian species assemblages along the reef slope gradient of reefs near Aqaba (northern Red Sea) and at the Sanganeb-Atoll (central Red Sea). The hermatypic properties of two species of *Sinularia* are presented. The skeletal values for porosity, compressive and bending strength of *S. leptocladus* resemble those of common scleractinian taxa. These soft corals considerably contribute to the reef framework in lagoonside and windward slope habitats of the Sanganeb-Atoll. With regard to characteristics of colonizing behavior, competition and persistence, predominant soft-coral taxa capable of high areal occupation in Red Sea reefs are grouped into four types of assemblages, which demonstrate the wide spectrum of alcyonacean life history traits. It is suggested that these different types can describe variable soft-coral assemblages with regard to their functional significance in benthic reef communities.^1";
- 4292 s[4289] = "SCHUHMACHER H. (1983).- Die Tiefenverbreitung lichtabhaengeriger Steinkorallen und die Ansatztiefe rezenter Riffe im Golf von Akaba (Rotes Meer).- Essener geogr. Arb. 6: 59-69.- FC&P 13-1, p. 13, ID=0391^Topic(s): bathymetry; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Red Sea, Aqaba^Bathymetric distribution of light-dependent scleractinians and

- the lower limit of reef formation at Aqaba, Red Sea.^1";
- 4293 s[4290] = "ZHOU RENLING, ZHOU JINMING (1982).- Preliminary study on the deep-sea Scleractinia from East China Sea. I. and II.- Marine Sciences Bulletin 1, 4-5: 51-67.- FC&P 13-1, p. 28, ID=0417^Topic(s): deep sea forms; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: China Sea E^^1";
- 4294 s[4291] = "CAIRNS S.D. (2004).- A new shallow-water species of Javania (Scleractinia: Flabellidae) from Indonesia.- The Raffles bulletin of zoology 52, 1: 7-10.- FC&P 34, p. 53, ID=1272^Topic(s): taxonomy; Scleractinia, Flabellidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indonesia^A new species of azooxanthellate solitary Scleractinia, Javania erhardti, is described from relatively shallow water in Indonesia. It differs from congeners in having six cycles of septa (192 septa), slightly concave septal axial edges, and a rudimentary columella. To aid in its identification, both a key to the 10 known Recent species in the genus and a distribution table of the 13 fossil and Recent species are given. Javania erhardti often contains commensal boring sponges in its base.^1";
- 4295 s[4292] = "ABD EL-WAHAB M., EL SOROGY A.S. (2003).- Scleractinian corals as pollution indicators, Red Sea Coast, Egypt.- Neues Jahrbuch fur Geologie und Palaontologie, Monatshefte 2003, 11: 641-644.- FC&P 32-2, p. 52, ID=1402^Topic(s): pollution indicators; Scleractinia, environment; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Egypt^The analysis of trace elements of thirty-four specimens of scleractinian corals from the Red Sea Coast indicates an enrichment in Cu, Pb, Ni, Zn and Co in Recent skeletons in comparison with their Pleistocene counterparts which were deposited in a pristine environment unaffected by human activities. Differences in the distribution patterns of trace elements among the Recent specimens are attributed in general to differences in microstructure and microarchitecture of the examined species. The highest concentrations are generally found in skeletons with loose crystal packing and high intergranular porosity (suborder Fungiina and occasionally Astrocoeniina), whereas the lowest concentrations are mostly recorded in skeletons with tight crystal packing as well as lower reactive surface area and intercrystalline porosity. The high concentrations of trace elements in Recent skeletons of scleractinian corals may be attributed to the increase of landfills, domestic sewage, phosphate mining and tourism activities in the Hurghada area.^1";
- 4296 s[4293] = "RAMANUJAM N., MUKESH M.V. (1999).- Metal concentrations in coral skeletons in Tuticorin Group of Islands, Gulf of Mannar, India.- Mitteilungen Geologisch-Paläontologischen Instituts Universität Hamburg 82 (SCOPE Sonderband): 279-283.- FC&P 29-1, p. 53, ID=1498^Topic(s): metals, environmental pollution; Scleractinia, chemistry; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indian Ocean^Metal contents were determined in coral skeletons from coral colonies collected in the reef areas of Tuticorin group of islands. In addition to higher concentrations of Sr, metals like Zn, Fe, Ti, Cu, Mo, Cr, Ni, Hg, Sn, V and Cd are present at higher levels than the maximum permissible limit of world standards. They appear to be related to pollution from thermal power plants and chemical industries. [original abstract]^1";
- 4297 s[4294] = "GATTUSO J.-P. (1985).- Features of depth effects on Stylophora pistillata, a hermatypic coral in the Gulf of Aqaba (Jordan, Red Sea).- Proc. 5th Int. Coral Reef Cong., Tahiti, 6: 95-100.- FC&P 16-1, p. 16, ID=1931^Topic(s): bathymetry; Scleractinia, ecology; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Red Sea, Aqaba^^1";
- 4298 s[4295] = "GATTUSO J.-P., JAUBERT J. (1984).- Premieres donnees concernant l'action de la lumiere sur le metabolisme, la

- croissance et la calcification in situ du Scleractiniaire hermatypique *Stylophora pistillata*.- C. R. Acad. Sc. Paris 299, ser. 3, 14: 585-590.- FC&P 16-1, p. 16, ID=1932^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Red Sea, Aqaba^1";
- 4299 s[4296] = "DULLO W.-C., SUSSMEIER G., TIETZ G. (1987).- Diversity and Distributional Patterns of Reef Building Scleractinians in Recent Lagoonal Patch Reefs on the Coast of Kenya.- Facies 16: 1-10.- FC&P 16-2, p. 28, ID=2069^Topic(s): reefs, diversity; Scleractinia, diversity; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Kenya^Four patch reef areas were mapped in detail within the microatoll zone of the narrow fringing reef near Kilifi (Coast of Kenya). The biota of these four test areas were counted according to frame building scleractinians and reef dwellers, including calcareous algae. The species diversity of the scleractinians was evaluated using the Shannon Wiener Theory Index. This index is small in landward patches, increasing towards the inner microatoll zone with a maximum almost at the beginning of the rear reef. Here, this index becomes zero, probably owing to decreasing water depths that limit vertical patch reef growth within the lagoonal environment. The interaction between the substrate preparation by coralline algae and reef destruction by sea urchins are additionally important factors influencing this species diversity pattern.^1";
- 4300 s[4297] = "DULLO W.-C., HECHT C. (1990).- Corallith Growth on Submarine Alluvial Fans.- Senckenbergiana maritima 21, 1/4: 77-86.- FC&P 20-1.1, p. 62, ID=2831^Topic(s): ; Scleractinia, Algae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Red Sea^The Red Sea and especially the Gulf of Aqaba are characterized by mixed siliciclastic and marine carbonatic shallow water sediments. Alluvial fans of varying dimensions deposited during ephemeral flash floods continue into the marine environment. They are partly settled by calcareous biota. Coralline algae are prominent pioneer encrusters, however, scleractinians with spherical growth patterns occur as well. Such coralliths enclose a core of one or several pebbles of crystalline rocks. Their almost regular growth banding in the outer part of the sphere is caused by bioturbation of scarid and balistid fishes.^1";
- 4301 s[4298] = "RIEGL B. (1995).- A revision of the hard coral genus *Acropora* Oken, 1815 (Scleractinia: Astrocoeniina: Acroporidae) in southeast Africa.- Zoological Journal of the Linnean Society 113: 249-288.- FC&P 25-1, p. 43, ID=3037^Topic(s): revision; Scleractinia, *Acropora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Africa SE^All species of the scleractinian coral genus *Acropora* presently known to occur in south-east Africa are reviewed. Twenty-three species are discussed, most of them are widely distributed in the Indo-Pacific. [shortened abstract]^1";
- 4302 s[4299] = "RIEGL B. (1995).- Description of four new species in the hard coral genus *Acropora* Oken, 1815 (Scleractinia: Astrocoeniina: Acroporidae) from south-east Africa.- Zoological Journal of the Linnean Society 113: 229-247.- FC&P 25-1, p. 43, ID=3038^Topic(s): new species; Scleractinia, *Acropora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Africa SE^Four new species of the hermatypic scleractinian coral genus *Acropora* are described from south-east Africa.^1";
- 4303 s[4300] = "POTTHAST I. (1992).- Short-term progressive early diagenesis in density bands of recent corals: *Porites* colonies, Mauritius Island, Indian Ocean.- Facies 27: 105-112.- FC&P 22-1, p. 53, ID=3428^Topic(s): diagenesis; Scleractinia diagenesis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mauritius^The growth history of some

recent Porites colonies of Mauritius Island (Indian Ocean) was dated by sclerochronological methods. Couples of high-density and low-density bands represent the annual growth rate of the corals and allow the growth pattern of every year in the corallum to be counted. The growth and structure of the skeletons of Porites solida and Porites lutea were investigated. Older parts of the aragonitic skeleton in these 10 to 20 year old corals show various secondary microstructures resulting from alterations and thickenings of the elements of the skeleton. The primary needle-like aragonite crystals are absent in older parts of the corallum and blocky aragonitic cements can occur. Pores and primary skeletal elements are overgrown by new microstructures. These microstructures are caused by secondary cementation and exhibit frontal zones (Stirnzonen), zigzag-like and pseudolamellar-structures. The lamellar structures can be compared with similar structures in the exoskeleton of some Rugosa. A very short early diagenesis within the recent corals is responsible for the thickening and alteration of skeletal elements. It occurs only 4 to 5 years after formation of the skeleton and tends to increase in importance in older parts of the corallum. Nevertheless, there is no proof for any alteration of aragonite to calcite.¹;

4304 s[4301] = "WALLACE C.C. (1997).- New species and new records of recently described species of the coral genus Acropora (Scleractinia: Astrocoeniina: Acroporidae) from Indonesia.- Zoological Journal of the Linnean Society 120, 1: 27-50.- FC&P 26-2, p. 74, ID=3760Topic(s): taxonomy, new taxa; Scleractinia, Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indonesia¹Six new species of the coral genus Acropora are described from Indonesia. These include a species which is remarkable for tubercular coenosteal structures similar to those of the confamilial genus Montipora. The new species include three regional endemics (A. togianensis and A. batunai from central east Sulawesi and A. derawanensis from east Kalimantan), one species with broad distribution across the southern island chains (A. sukarnoi) and two species which occur throughout most of the Indonesian archipelago (A. indonesia and A. hoeksemai). A further two species described from Western Australia and Papua New Guinea in 1994 (A. turaki and A. jacquelineae respectively) are recorded from Indonesia for the first time, as common members of an unusual assemblage type in the Togian Islands. The range of another species described from Lombok in 1994 (A. suharsonoi) is extended into Bali. With A. desalwii, A. lokani and A. indiana, this brings to 12 the number of Acropora species newly recorded as being endemic to the Indonesian archipelago or to Indonesia and one adjoining region (either the Indian Ocean or the western Pacific). [original abstract]¹;

4305 s[4302] = "HEISS G.A., DULLO W.-C. (1997).- Stable isotopes from recent and fossil Porites sp. in the Northern Red Sea.- Coral Research Bulletin 05: 161-169.- FC&P 27-1, p. 51, ID=3806Topic(s): stable isotopes; stable isotopes; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Red Sea N¹The stable isotopic composition of scleractinian corals (PISOTOPESorites sp.), two recent and one fossil, from the Egyptian Red Sea coast was studied. The oxygen isotope record proves the assumption that recent sea surface temperatures are comparable to the time of last sea level highstand in Eemian (stage 5e, 125.000yBP). Deposition of high-density and low-density bands in respect to season shows the same patterns as today with high-density band deposition in winter (low water temperatures) and low-density band deposition in summer (high water temperatures). δ18O is negatively correlated with δ18C with a shift in phase of 1 to 2 month. Thus, acoupling of carbon isotopes to light intensity and oxygen isotopes to water temperature is suggested. To get an overview on seasonal patterns of stable isotope composition a sampling technique with a resolution of four samples per year is of sufficient precision.¹;

- 4306 s[4303] = "HOEKSEMA B.W., BEST M.B. (1991).- New observations on scleractinian corals from Indonesia (2). Sipunculan-associated species belonging to the genera Heterocyathus and Heteropsammia.- Zoologische Mededelingen 065, 16 [24.12.1991]: 221-245.- FC&P 23-1.1, p. 75, ID=4165^Topic(s): sipunculan-associated; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indonesia^Three Indonesian species of Heterocyathus and two of Heteropsammia are briefly diagnosed. Remarks are given in their synonymy, phenotypic variation, and ecology. All five species are found on soft substrata in the proximity of coral reefs and live in association with a sipunculan worm. This interspecific association is discussed with regard to whether it is mutualistic or parasitic.^1";
- 4307 s[4304] = "NAQVI S.A.S. (1994).- Seasonal variation in an annually banded coral Porites: A scanning electron microscopy investigation.- Marine Geology 118: 187-194.- FC&P 23-2.1, p. 51, ID=4392^Topic(s): annual banding; Scleractinia, Porites; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Lakshadweep Isls^Seasonal bands of the hard coral Porites sp. collected from three different islands of Lakshadweep (Northwest Indian Ocean) are examined under a scanning electron microscope (SEM). SEM photographs reveal the presence of detrital inclusions in high density bands and their absence in low density bands. It is proposed that during the monsoon season, run-off from the island may bring detrital material that subsequently gets incorporated in coral skeleton. By contrast, calm and dry conditions prevailing during the non-monsoon period preclude such incorporation due to non-availability of detrital material in the water column. In addition to the inclusions of detrital material, the presence of low-Mg calcite and carbonate cementation in seasonal bands are also observed.^1";
- 4308 s[4305] = "SPIRO B.F., HANSEN H.J. (1970).- Note on early diagenesis of some Scleractinian Corals from the Gulf of Eilat, Israel.- Bulletin Geol. Soc. of Denmark 20: 72-78.- FC&P 1-2, p. 12, ID=4632^Topic(s): diagenesis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Israel, Eilat Gulf^Debris of Favia sp. and Favites sp. from the dry beach of the Gulf of Eilat was found to be partly recrystallized. Microprobe analysis showed development of high Sr-Mg calcite. The process of calcite formation involves three steps: dissolution of aragonite preferably where organic material has been concentrated, preferred loss of Ca during short-distance transportation of the solution, and precipitation of high Sr-Mg calcite.^1";
- 4309 s[4306] = "PICHON M. (1972).- Les peuplements à base de scléractiniaux dans les récifs coralliens de la Baie de Tuléar (Sud-Ouest de Madagascar).- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972: p. 135-154.- FC&P 2-2, p. 12, ID=4766^Topic(s): coral reefs; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Madagascar^^1";
- 4310 s[4307] = "PILLAI C.S.G., SCHEER G. (1974).- On a collection of Scleractinia from the Strait of Malacca.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 445-464.- FC&P 4-1, p. 17, ID=5004^Topic(s): collection of fossils; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Malacca Strait^During the Second'Xarifa' Expedition under the leadership of Dr. Hans Hass one of the authors (Scheer) made a representative collection of Corals from Pulau Perak, Sembilan Islands and Pulau Jarak (between 4 and 6 deg. N and 98 and 102 deg. E) in the

- Strait of Malacca. All the specimens are preserved in Hessian State Museum, Darmstadt, West Germany and include 58 species divided among 20 genera of 12 families. A detailed taxonomic account of the various species is given and the known geographic distribution of many species is extended westward from the Pacific.¹";
- 4311 s[4308] = "PICHON M. (1974).- Free living scleractinian coral communities in the coral reefs of Madagascar.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 173-181.- FC&P 4-1, p. 18, ID=5017^Topic(s): free living; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Madagascar^^1";
- 4312 s[4309] = "SCHEER G., PILLAI C.S.G. (1974).- Report on the Scleractinia from the Nicobar Islands.- Zoologica 42, 3, 122: 1-75; Stuttgart.- FC&P 4-1, p. 24, ID=5079^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Nicobars^A short historical review shows that only very few corals are known from the Nicobars, though about 40 genera should occur there. During the "Xarifa" Expedition 1957/58 (led by Dr. Hans Hass) an extensive amount of coral was able to be collected from the north coast of the island of Great Nicobar and from the south-east of the island of Tillanchong. The corals are deposited in the Hessian State Museum at Darmstadt. * On the north coast of Great Nicobar collections had been made at two places in the Ganges Harbour, and off Tillanchong especially in the Castle Bay and there at the fringing reef, on the bottom of the bay and on steep rocky cliffs at the exit of the bay. A description of the reefs is given and the different collecting places characterized. * The systematic section deals with 110 species of 45 genera and 14 families. They are described and compared with related species and are followed by notes on their distribution. Many species are shown in photographs. The corals are systematically grouped in a list showing which species were collected at which station. * Two species are new, one genus was given a new name. 20 species were found to be also present in the Indian Ocean.¹";
- 4313 s[4310] = "ZIBROWIUS H. (1974).- Scléractiniales des îles Saint Paul et Amsterdam (sud de l'Océan Indien).- Tethys 05, 4: 747-778.- FC&P 4-1, p. 27, ID=5087^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indian Ocean S^Etude de 11 espèces de Scléractiniales récoltées en partie par la "Valdivia" (1898-1899), en partie récemment lors de campagnes de pêche à la langouste. Cinq espèces vivant en général à des profondeurs bathyales sont communes à l'Atlantique nord-oriental et aux îles Saint Paul et Amsterdam (Desmophyllum cristagalli, Lophelia pertusa, Madrepora oculata, Solenostoma variabilis, Stenocyathus vermiformis). Certaines de ces espèces sont connues encore plus loin dans l'Océan Indien et même dans le Pacifique. Une espèce minuscule, interstitielle, et plutôt typique des faibles profondeurs, est étroitement apparentée à une forme de l'Atlantique nord-oriental (Sphenotrochus sp.). Caryophyllia profunda, espèce connue seulement dans les mers australes entre l'archipel Tristan da Cunha (sud de l'Atlantique) et les îles Chatham (sud-ouest du Pacifique) est comparée en détail à Caryophyllia cyathus de l'Atlantique nord-oriental. Compte tenu des méthodes de prélèvement et du nombre d'opérations effectuées dans des fonds probablement peu variés, un nombre assez réduit d'espèces de scléractiniales vivant dans les parages des îles Saint Paul et Amsterdam a été récolté. On ignore, en particulier, la faune de scléractiniales des fonds rocheux à faible profondeur.¹";
- 4314 s[4311] = "PILLAI C.S.G., SCHEER G. (1974).- On a collection of Scleractinia from the Strait of Malacca.- Proc. IInd Intern. Coral Reef Symp. 1: 445-464.- FC&P 4-2, p. 47, ID=6291^Topic(s): collection of fossils; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Malacca

- Strait^During the Second^Xarifa^ Expedition under the leadership of Dr. Hans Hass one of the authors (Scheer) made a representative collection of Corals from Pulau Perak, Sembilan Islands and Pulau Jarak (between 4 and 6 deg. N and 98 and 102 deg. E) in the Strait of Malacca. All the specimens are preserved in Hessian State Museum, Darmstadt, West Germany and include 38 species divided among 20 genera of 12 families. A detailed taxonomic account of the various species is given and the known geographic distribution of many species is extended westward from the Pacific. [original abstract]^1";
- 4315 s[4312] = "DULLO W.-C., MEHL J. (1986).- Dendrophyllia deepwater coral buildups: a comparative case study from the Recent coral sea peak (Red Sea) and the Danian Faxe limestone (Denmark).- FC&P 15-2, p. 15, ID=6744^Topic(s): reefs deep-water; Dendrophyllia reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Red Sea^The depositional environment of the Danian Faxe Limestone is still under discussion. Most of the biological and sedimentological patterns point to a^'deep water^' buildup. Since the cruise 29 of the research vessel ^"Sonne^" in the Red Sea we know similar recent coral limestones from a water depth of 500m. […] some basic data [speak] for the interpretation of ancient Dendrophyllia-buildups as being formed within the deep water environment. [taken from the short note]^1";
- 4316 s[4313] = "IMMENHAUSER-POTTHAST I. (1994).- Geochemistry of recent, massive scleractinian corals and environmental investigations in the reef ecosystem of Mauritius Island ^/ Indian Ocean. [in German].- Bern [University?] Thesis; x + 141 pp., 49 figs, 17 tabs, 4 pls.- FC&P 23-2.1, p. 28, ID=6854^Topic(s): reefs degradation; corals, geochemistry; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mauritius^The subject of this work are recent, massive hermatypic reef corals of the genera Pontes LINK and Platygyra Ehrenberg. Geochemical analyses of the aragonitic skeletons were used to investigate ecological aspects of the degraded littoral ecosystem of Mauritius Island. Water and sediment samples of the reef complex also were analyzed and correlated with coral analyses. [...] Eutrophication of the littoral ecosystem is one possible reason for the reef degradation in Mauritius Island. The detrimental influence of elevated heavy metal concentrations together with high phosphate concentrations on the vitality of reef corals can be shown. [first and last fragments of extensive summary]^1";
- 4317 s[4314] = "WIJSMAN-BEST M. (1974).- Biological results of the Snellius Expedition 25. Faviidae collected by the Snellius Expedition I. The genus Favia.- Zoologische Mededelingen 048, 22: 249-261.- FC&P 4-1, p. 27, ID=5086^Topic(s): taxonomy; Scleractinia, Faviidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indonesia^A review of 11 species of the genus Favia, collected in Indonesia.^1";
- 4318 s[4315] = "BEST M.B., SUHARSONO (1991).- New observations on scleractinian corals from Indonesia (3). Species belonging to the Merulinidae with new records of Merulina and Boninastrea.- Zoologische Mededelingen 065, 26 [24.12.1991]: 333-342.- FC&P 23-1.1, p. 74, ID=4161^Topic(s): taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indonesia^Nine coral species belonging to four genera (one new for Indonesia) and their adaptation to different environmental conditions are discussed. The rare species Merulina triangularis (Veron ^& Pichon 1979) and Boninastrea boninsis Yabe ^& Sugiyama 1935, are recorded for the first time from Indonesia. ^1";
- 4319 s[4316] = "DULLO W.-C., MOUSSAVIAN E., BRACHERT T.C. (1990).- The foralgal crust facies of the deeper fore reefs in the Red Sea: a deep diving survey by submersible.- Geobios 23, 3: 261-281.- FC&P 20-2, p. 68, ID=2968^Topic(s): reefs; fore reefs;

Systematics: Foraminifera algae; Stratigraphy: Recent; Geography: Red Sea^Autochthonous organic frameworks from the deeper fore reef (-50 m to -110 m) of the Red Sea are composed predominantly of incrusting calcareous algae and foraminifera. This foralgal crust facies is represented by three types. The first is a pure foralgal crust community which forms small buildups with bumpy surfaces. Calcareous red algae and incrusting foraminifera comprise more than 60% of the biogenous fabric. The second type is a framework in which foralgal crusts are secondary binders around the hermatypic deep water scleractinian *Leptoseris fragilis*. The third type occurs on drowned reefs, exhibiting a mixture of Pleistocene shallow water and present day deep water binding species. Therefore, the morphology of this subfacies is more governed by an inherited relief, characterized by pinnacles and barrel shaped towers. This present day deep water foralgal community started to develop within the Cretaceous in shallow water environments, composed predominantly of corallinaceans, peyssoneliaceans, and subordinately of acervulinid foraminifera. With the beginning of the Neogene, the shallow water community of reef binding foraminifera and calcareous algae changed and became dominated by the foraminifera *Acervulina*. The living foralgal crust of the deeper fore reef in the Red Sea represent a binding community of Upper Cretaceous and Palaeogene shallow water environments which has shifted in greater water depths with time. ^1";

- 4320 s[4317] = "MASTALLER M. (1978).- The marine molluscan assemblages of Port Sudan, Red Sea.- Zoologische Mededelingen 005, 3: 117-144.- FC&P 10-2, p. 11, ID=6051^Topic(s): reefs molluscs; molluscs, reef complex; Systematics: Mollusca; Stratigraphy: Recent; Geography: Red Sea, Port Sudan^^1";
- 4321 s[4318] = "MASTALLER M. (1979).- Beitrage zur Faunistik und Oekologie der Mollusken und Echinodermen in den Korallenriffen bei Aqaba, Rotes Meer.- Ruhr-Universitaet, Bochum, Dissertation 1979.- FC&P 10-2, p. 11, ID=6052^Topic(s): ; Mollusca Echinodermata; Systematics: Mollusca Echinodermata; Stratigraphy: Recent; Geography: Red Sea, Aqaba^^1";
- 4322 s[4319] = "RAO M.U. (1972).- Coral reef flora of the Gulf of Mannar and Palk Bay.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, December, 1972; pp 217-230.- FC&P 2-2, p. 13, ID=4771^Topic(s): coral reefs flora; flora; Systematics: Plantae; Stratigraphy: Recent; Geography: India, Mannar Gulf^^1";
- 4323 s[4320] = "MOORE M.D., CHARLES C.D., RUBENSTONE J.L., FAIRBANKS R.G. (2000).- U/Th-dated sclerosponges from the Indonesian Seaway record subsurface adjustments to west Pacific winds.- Paleoceanography, 15, 4: 404-416.- FC&P 30-1, p. 34, ID=1523^Topic(s): geochronometry U/Th; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Indian Ocean^Stable isotope records from sclerosponges collected at 10-20m depth in the Indonesian Seaway and Solomon Islands are particularly well suited for reconstructing century-scale trends in ambient temperature variability and the oceanic uptake of fossil fuel carbon. Basal U/Th dates demonstrate that the sclerosponges analyzed [*Astrosclera willeyana*] are 85-100 years old. Isotopic records from the Indonesian specimens suggest a strong subsurface cooling over the past 20 years that is not manifested in either surface instrumental or shallower coral proxy records. However, analysis of observed subsurface temperatures in Indonesia, observed winds in the west Pacific, and simulated subsurface temperatures from a steady state general circulation model hindcast forced by observed winds combine to suggest that thermocline adjustments could account for at least part of the recent cooling inferred from the Indonesian sclerosponges. If so, the sclerosponge data suggests that, on average, the west Pacific thermocline has

- shoaled significantly over at least the past 2 decades. [original abstract]^1";
- 4324 s[4321] = "THOMAS P.A. (1972).- Boring sponges of the reefs of Gulf of Mannar and Palk Bay.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin,. December, 1972; pp 333-362.- FC&P 2-2, p. 13, ID=4776^Topic(s): boring sponges; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: India, Mannar Gulf, Palk Bay^^1";
- 4325 s[4322] = "PISERA A., RUTZLER K., KAZMIERCZAK J., KEMPE S. (2010).- Sponges in an extreme environment: suberitids from the quasi-marine Satonda Island crater lake (Sumbawa, Indonesia).- Journal of the Marine Biological Association of the United Kingdom 90, 1: 203-212.- FC&P 36, p. 39, ID=6407^Topic(s): extreme environments; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Indonesia^Sponges are rare in extreme environments, and very little is known about their adaptations to such settings. Evidence from two species in a marine-derived midwater stratified crater lake on Satonda Island (Sumbawa, Indonesia) suggests their production of gemmules (resting bodies), a rare trait in marine sponges but common in freshwater forms, may be a survival mechanism in the lake's harsh environment. With its epilimnion hydrochemistry characterized by changing alkalinity, salinity, and O2 levels over the region's wet and dry seasons, the lake sustains only a few marine macroscopic organisms, among them the suberitid sponges *Protosuberites lacustris* comb. nov. and *Suberites* sp. (Hadromerida: Suberitida). Both species belong to the same group as sponges reported from other marine-derived lakes with strongly varying and extreme environmental (especially chemical) parameters. The morphological characters, taxonomic position, ecological adaptations, environmental conditions, and biota associated with the sponges in this ecologically unique site are presented here.^1";
- 4326 s[4323] = "PATTANAYAK J.G. (1999).- Annotated checklist of marine sponges of the Indian region.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 439-455.- FC&P 28-2, p. 9, ID=6974^Topic(s): checklist; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Indian region^^1";
- 4327 s[4324] = "ANGELUCCI A., CARBONE F., MATTEUCCI R. (1982).- La scogliera di Ilisi nelle Isole dei Bagiuni (Somalia meridionale). [The Ilisi fringing reef in the Bagiuni Islands (southern Somalia).]- Bolletino della Societa Paleontologica Italiana 21, 2-3: 201-210.- FC&P 13-2, p. 52, ID=0592^Topic(s): geology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Somalia^In the fringing reefs of Ilisi Island, landwards from sea, the following facies can be recognized: a) sandy plain with isolated bathymetric heights (depth 8-12 m); b) high steepness fore-reef slope densely covered by corals (*Sarcophyton*) and branched poritids; c) reef rim covered by extensive masses of branched porites; d) flat reef characterized by little covering of corals and wide-spreading of biogenic coarse gravel-sized pieces; e) isolated patch reefs in the very thick thriving plain; f) upper subtidal-intertidal zone. Well developed *Thalassodendron* grasslands render an important contribution to the sediment production; most parts of the carbonate material derives from the mechanical destruction of the incrusting carbonate Red Algae growing around the stems. These muffs support the flourishing population of articulate corallinaceans. [original summary]^1";
- 4328 s[4325] = "DULLO W.-C., HOTZL H. (1985?).- Quaternary marine sediments in the Midyan area and the Gulf of Aqaba.- Quaternary Period of Saudi Arabia 2. [Jado A. R. & Zotl J. (eds)].- FC&P 13-2, p. 9, ID=0618^Topic(s): reefs, sedimentology; sediments, reefs; Systematics: ; Stratigraphy: Quaternary; Geography:

- Red Sea, Aqaba^^1";
- 4329 s[4326] = "HOTTINGER L. (1984).- Les organismes constructeurs sur la plate-forme du Golfe d''Aqaba (Mer Rouge) et les mecanismes regissant leur repartition.- Geobios, Memoir special 8: 241-249.- FC&P 13-2, p. 10, ID=0626^Topic(s): reef-builders, ecology; reefs, reef-builders; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Aqaba^Factors controlling the distribution of reef building organisms in the Gulf of Aqaba.^1";
- 4330 s[4327] = "JUX U., JUX E. (1982).- Diagenese quartarer Riffkarbonate aus dem Roten Meer.- Acta Universitatis Stockholmiensis, Contr. Geol. XXXVII/8, 99-115.- FC&P 13-2, p. 10, ID=0627^Topic(s): reefs, diagenesis; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Red Sea^The chemical and mineralogical composition as well as diagenetic textures of biogenic carbonates from fossil and recent fringing reefs of the northern and southern Red Sea were studied. Cements of fibrous aragonite and granular Mg-Calcite were precipitated in a marine-phreatic environment soon after death of the frame-builders. During more humid climatic phases some of the subaerially exposed biostromes may have trapped vadose ground water, which sometimes can be traced from the formation of vugular pore spaces and sparites (Original summary).^1";
- 4331 s[4328] = "MERGNER H. (1984).- The ecological research on coral reefs of the Red Sea.- Deep-Sea Research 31: 855-884.- FC&P 14-1, p. 44, ID=0955^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Red Sea^Klunzinger (1872) characterised the zonation of the coral reef near Al-Qusayr, Egypt with the help of indicator species He identified a Stylophora-zone among other zones and established the first biophysiological zonation of a coral reef which is, in many respects, still valid today. Since then, ecological research work on coral reefs has developed to its present understanding of one of the most complicated and densely populated ecosystems on Earth^1";
- 4332 s[4329] = "BOGGEMANN M., HESSLING R., WESTHEIDE W. (2001).- Ein Saumriff auf Mahé, Seychellen. Zonierung von Flora und Fauna bei Anse Forbans.- Natur und Museum 131, 7: 201-211.- FC&P 30-1, p. 30, ID=1552^Topic(s): reefs, ecology, stratigraphy; reefs; Systematics: ; Stratigraphy: Recent; Geography: Seychelles^^1";
- 4333 s[4330] = "CARBONE F., ACCORDI G., ANGELUCCI A., MATTEUCCI R. (1999).- The modern coral colonization of the Bajuni Barrier Island (Southern Somalia): A facies model for carbonate-quartzose sedimentation.- Geologica Romana 35: 111-149.- FC&P 30-1, p. 30, ID=1553^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Somalia^The Somali coast south of Kisimayo has been investigated and a modern depositional model is proposed. Several evolutive phases have been identified, corresponding to eustatic sea-level variations starting from isotope stage 5e, which led to the present coastal setting, characterized by mixed carbonate-terrigenous sedimentation and conditioned by climatic factors. The sea level fall below the continental shelf edge during the last glacial period caused subaerial exposure, erosion and weathering of the sedimentary substratum. As a consequence a braided fluvial net developed on the coastal belt and coastal dune ridges migrated toward the shelf edge, influencing the distribution pattern of the modern sedimentary and ecological environments. The Holocene inundation of the shelf caused the drawing of the channels, the overflowing of the interdune areas, the formation of the Bajuni barrier island, of which coastal lagoons and channelized tidal flats. The relation among inherited morphology, supply of terrigenous material and development of coral communities is shown in a series of ecological profiles and sketch maps of facies distribution. The depositional systems of outer shelf, marine passes, coastal sound and braided channels have been investigated in detail in some key areas. The types of coral

colonization as well as their interactions with seagrass meadows have been examined. In outer shelf corals grow in form of fringing reefs and coral carpets around the abraded flat of the islands and along some morphological steps corresponding to old sea-level stillstands. In the marine passes crossing the barrier island, the hard substrate is colonized by fringing and pinnacle reefs, coral carpets and knobs and their distribution is controlled by the energy dispersion of the tidal currents. In the coastal sound corals grow to form at places small fringing reefs and carpets along the protected edges of the islands and near the channel mouths, whereas patch and table reefs are found on isolated erosion remnants inside wide Thalassodendron meadows. The braided channelized area of the coastal belt is characterized by the development of mangal and salt flat depositional systems where the facies distribution is controlled by the extension of the tidal prism.¹";

4334 s[4331] = "PILLER W., MANSOUR A.M. (1989).- Sedimentologie und Fazies in der Bucht von Safaga (Rotes Meer, Aegypten).- Geol. Palaeont. Mitt. Innsbruck 16: 88-89.- FC&P 19-1.1, p. 19, ID=2571^Topic(s): facies; facies; Systematics: ; Stratigraphy: Recent; Geography: Egypt, Red Sea^^1";

4335 s[4332] = "PILLER W., PERVESLER P. (1989).- The Northern Bay of Safaga (Red Sea, Egypt): An Actupalaeontological Approach. I. Topography and Bottom Facies.- Beiträge zur Paläontologie Österreichs 15: 103-147.- FC&P 19-1.1, p. 59, ID=2679^Topic(s): reef complexes, facies; reef complexes; Systematics: ; Stratigraphy: Recent; Geography: Egypt, Red Sea^Topographically the Northern Bay of Safaga can be subdivided into 4 parts: the "East area" with water depths down to 55 m exposed towards the open sea, the shallow "North area", the "West area" with a central basin of 30 to 38 m depth, and the Southwest "channel", which is connected to the Southern Bay. Mapping of the sea bottom allowed several bottom facies to be distinguished: 1) Coral reefs, which can be subdivided into fringing reefs, patch reefs (platform reef, miniatoll, pinnacle reefs), and coral patches. 2) Rock bottom, representing subtidal rocky substrate without or with sparse sediment cover and lack of dense stony coral settlement. 3) Coral carpet, showing areal covering of hard bottom by abundant stony corals without vertical zonation. 4) Sand bottom, where in addition to pure sands several other subtypes occur (sand with coral patches, sand with seagrass, sand with macroids, muddy sand). 5) Mud bottom, rich in infauna and lebensspuren. 6) Rocky tidal flats. 7) Mangrove. The bottom facies distribution is mainly controlled by the underlying morphology and by water currents.¹";

4336 s[4333] = "VOGT H. (1995).- video image analysis of coral reefs in Saudi Arabia: a comparison of methods.- Beiträge zur Paläontologie 20: 99-105.- FC&P 25-2, p. 76, ID=3184^Topic(s): reef research, video image analysis; reef research; Systematics: ; Stratigraphy: Recent; Geography: Saudi Arabia^The use of video images saves considerable amounts of expensive underwater working time. Nevertheless a substantial amount of time is needed during image analysis. Further advantages and disadvantages of the video system, as well as its future use are discussed in detail. This study is a result of a larger programme which used video recordings to assess the health situation of coral reefs after the Gulf War. The more comprehensive findings of this programme are reported elsewhere (Vogt 1994). [end fragment of extensive summary]^1";

4337 s[4334] = "DULLO W.-C., REIJMER J.J.G., SCHUMACHER H., EISENHAUER A., HASSAN M., HEISS G.A., (1996).- Holocene Reef Growth and Recent Carbonate Production in the Red Sea.- Goettinger Arbeiten zur Geologie und Palaontologie, Special volume 2 [Reitner J., Neuwiller F. & GunkeI F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 23, ID=3563^Topic(s): reef growth, carbonates; reef growth,

carbonates; Systematics: ; Stratigraphy: Recent; Geography: Red Sea^Holocene reef growth, present date bioerosion and recorded carbonate production were studied in the fringing reef at Aqaba, Red Sea. Water depth, wave impact as well as nutrient availability were considered. The carbonate production was measured for several coral samples. Samples of Porites colonies were collected from several depths and sites near the Marine Science Station at Aqaba. Growth rate depends on water depth, size and age of colonies. Within the coral optimum of water depth growth rates vary between 5 and 16 mm/yr. Coral carbonate production was calculated on the base of annual growth increments and skeletal density using transects from shallow subtidal down to 40 m water depth. High resolution stable isotope data were measured to prove the origin of growth increments. Long-term trends of sea surface temperature and carbon isotope shift (1800-today) fit to the known global deviations. Bioerosion rates were determined using standard dead coral substrates exposed in different water depths and environmental settings. Rates vary between 0.6 and 1.4 kg/m²yr. Sediment export evaluated by means of simple sediment traps ranges between 0.3 and 0.7 kg/m²yr. Gross carbonate production, mainly built up by scleractinian corals, amounts to ca. 1.57 kg/m²yr. Bioerosion alters approx. 1.3 kg/m²yr of hard substrates into sediment. Sediment export is estimated to be ca. 0.4-0.6 kg/m²yr. Thus a net production of ca. 0.7 to 0.9 kg/m²yr should remain in the present reef, which is proved by the recorded carbonate production (reef drillings). Net production preserved in the reef can be given with ca. 800 kg/m²kyr (=0.8 kg/m²yr).^1";

4338 s[4335] = "DULLO W.-C., CAMOIN G.F., BLOMEIER D., EISENHAUER A., THOMASSIN B.A., (1996).- Sealevel Changes and Evolution of the Foreslopes of the Comoro Islands: Direct Observations from Submersible.- Goettinger Arbeiten zur Geologie und Palaontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 23, ID=3564^Topic(s): reefs morphology; Systematics: ; Stratigraphy: Quaternary; Geography: Comoro Isls^Mayotte foreslopes exhibit a distinct pattern in the overall morphology, starting in the deep with an unlithified sedimentary wedge and slope, followed upwards by a cemented slope, and finally by a steep, almost vertical wall. On top of the wall, drowned reefs occur. Dated corals may reveal the history of sealevel changes indicating reef growth during isotope stage 3 (50-26 kyrs BP) at a present-day water depth that is deeper than 80 m and also has developed a coeval reef talus facies. A maximum sealevel drop of 150 m occurred during the last glacial maximum followed between 22-18 kyrs BP. This lowering of sealevel is documented by karst features such as small caves and corroded and jagged surfaces. The phase of deglaciation is recorded by two give-up reef levels at 100 m / 90 m water depth and 65 m / 55 m water depth which we may relate to the Belling (14 kyrs BP) and post Younger Dryas (11.5 kyrs BP) meltwater pulses, known from the deep-sea record.^1";

4339 s[4336] = "DULLO W.-C., EISENHAUER A., HEISS G.A., WISCHOW D., CAMOIN G.F., COLONNA M., MONTAGGIONI L., (1996).- Coral and Reef Growth in the Western Indian Ocean (La Reunion, Mayotte, and Seychelles).- Goettinger Arbeiten zur Geologie und Palaontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 24, ID=3565^Topic(s): reefs, reef growth, sclerochronology; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Indian Ocean w^The present day coral growth and stable isotopic record from three latitudinal different islands in the western Indian Ocean were analyzed. All colonies grow at a water depth between 2m and 7m. Stable isotope records were obtained with a sampling distance of 1mm from the upper part of the cores that comprise between 3 and 6 years of coral growth. For the core from

Mayotte additional annual samples were taken. Their record reaches back to the year 1920. From the southernmost location off La Reunion the most accentuated seasonal oxygen isotopic signal was found, indicated also by Sr/Ca ratios. The Mayotte samples showed a clear seasonal signal, where deposition of HD-bands is linked to rising seawater temperatures. From Mahe the oxygen isotopic signal is less clear than at the other sites. Cores through the Holocene reefs of La Reunion and Mayotte indicate a reef growth of about 20m during the 9,000 years. There is a pronounced change in reef growth strategy, starting with a catch up mode in the order of 7m/1,000 years followed by a decreased reef growth after 5,000 years BP in the order of 1m/1,000 years. This difference in growth is related to the early Holocene Climatic Optimum and the fact that sealevel reached its present position about 3,000 years BP.¹;

4340 s[4337] = "ZUSCHIN M., HOHENEGGER J. (1998).- Subtropical Coral-reef Associated Sedimentary Facies Characterized by Molluscs (Northern Bay of Safaga, Red Sea, Egypt).- *Facies* 38, 1: 229-254.- **FC#038;P 27-1**, p. 123, ID=3881^Topic(s): reef mollusc facies; reef molluscs; Systematics: ; Stratigraphy: Recent; Geography: Red Sea^The shallow marine subtropical Northern Bay of Safaga is composed of a complex pattern of sedimentary facies that are generally rich in molluscs. Thirteen diver taken bulk-samples from various sites (reef slopes, sand between coral patches, muddy sand, mud, sandy seagrass, muddy seagrass, mangrove channel) at water depths ranging from shallow subtidal to 40m were investigated with regard to their mollusc fauna >1mm, which was separated into fragments and whole individuals. * Fragments make up more than 88% of the total mollusc remains of the samples, and their proportions correspond to characteristics of the sedimentary facies. The whole individuals were differentiated into 622 taxa. The most common taxon, *Rissoina cerithiiformis*, represented more than 5 % of the total mollusc content in the samples. The main part of the fauna consists of micromolluscs, including both small adults and juveniles. Based on the results of cluster-, correspondence-, and factor analyses the fauna was grouped into several associations, each characterizing a sedimentary facies: (1) "*Rhinoclavis sordidula* - *Corbula erythraeensis* - *Pseudominolia nedyma* association"; characterizes mud. (2) "*Microcirce* sp. - *Leptomyaria* sp. association"; characterizes muddy sand. (3) "*Smaragdia* spp. - *Perrinia stellata* - *Anachis exilis* - assemblage"; characterizes sandy seagrass. (4) "*Crenella striatissima* - *Rastafaria calypso* - *Cordites akabana* - assemblage"; characterizes muddy seagrass. (5) "*Glycymeris* spp. - *Parvicardium sueziensis* - *Diala* spp. - assemblage"; characterizes sand between coral patches. (6) "*Rissoina* spp. - *Triphoridae* - *Ostreoidea* - assemblage"; characterizes reef slopes. (7) "*Potamides conicus* - *Siphonaria* sp. 2- assemblage"; characterizes the mangrove. The seagrass fauna is related to those of sand between coral patches and reef slopes with respect to gastropod assemblages, numbers of taxa and diversity indices, and to the muddy sand fauna on the basis of bivalve assemblages and feeding strategies of bivalves. The mangrove assemblage is related to those of sand between coral patches and the reef slope with respect to taxonomic composition and feeding strategies of bivalves, but has a strong relationship to those of the fine-grained sediments when considering diversity indices. Reef slope assemblages are closely related to that of sand between coral patches in all respects, except life habits of bivalves, which distinctly separates the reef slope facies from all others.¹;

4341 s[4338] = "KUHLMANN D.H.H. (1994).- Tongue Island - an atoll in the making: among others Alexander von Humboldt was right.- *Courier Forschungsinstitut Senckenberg* 172 [Oekentorp-Kuester P. (ed.) *Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera*, Vol. 2]: 283-292.- **FC#038;P 23-1.1**, p. 21, ID=4085^Topic(s): reefs; reefs; Systematics: ;

- Stratigraphy: Recent; Geography: Red Sea, Tongue Isl^In the southern Red Sea lies the tiny Tongue Island. It is a small circular parasitic volcano derived from the large neighbouring island Djeoel Sukar. It is irregular in height, some parts are above, some beneath sea level. The rocks consist of dark brown lava and tuff-like breccia. It encloses a 40 m deep lagoon, about 555 m in diameter. The upper submerged parts of the crater are typically overgrown by corals. To depths of 2 to 11 m they include mainly Acroporidae (22 species), Poritidae (13) and Faviidae (25). In contrast, on the rubble of the fore-reef, in quieter waters 10 to 25 m deep, among others there are mainly mushroom corals (9) as well as rolling coral lumps of Cyphastrea serailia and Siderastrea savignyana. These same species lived in both habitats, although they differ in their growth form. This circular isle with its recent coral communities is reminiscent of an atoll. According to Alexander von Humboldt (1806) atolls were formed on the scoria of volcanoes. Should the remaining parts of this crater ring become submerged in the future, Tongue Island would become a circular reef according to Humboldt's theory. This is quite a rare type of reef, distinct from the true atolls in Darwin's sense.^1";
- 4342 s[4339] = "CIARAPICA G. PASSERI L. (1993).- On overview of the Maldivian coral reef in Felidu and North Male Atoll (Indian Ocean): Platform drowning by ecological crises.- Facies 28: 33-66.- FC&P 24-1, p. 68, ID=4491^Topic(s): reefs, geology, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Maldives^This paper gives general information on the sedimentary environments and carbonate producers in some Maldivian atolls (North Male Atoll and Felidu Atoll), the Acanthaster planci outbreaks in North Male Atoll, and the geological evolution of the Maldives.^1";
- 4343 s[4340] = "CUSI M.A., SANTIAGO J.G., DY D.T., SCHOLZ J. (1993).- Characterization of a submarine cave at Marigondon, Mactan Cebu: A cryptic reef habitat.- The Philippine Scientist 30: 48-57.- FC&P 24-2, p. 37, ID=4534^Topic(s): reefs, cryptic habitats; reefs; Systematics: ; Stratigraphy: Recent; Geography: Cebu^^1";
- 4344 s[4341] = "STODDART D.R. (1971).- Environment and History in Indian Ocean Reef Morphology.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 3-38.- FC&P 2-2, p. 11, ID=4747^Topic(s): reefs geomorphology; reefs, geomorphology; Systematics: ; Stratigraphy: Recent; Geography: Indian Ocean^^1";
- 4345 s[4342] = "BRAITHWAITE C.J.R. (1971).- Seychelles Reefs: Structure and Development.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 39-63.- FC&P 2-2, p. 11, ID=4748^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Seychelles^^1";
- 4346 s[4343] = "GUILCHER A. (1971).- Mayotte Barrier Reef and Lagoon, Comoro Islands, as compared with other Barrier Reefs, Atolls and Lagoons in the world.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 64-86.- FC&P 2-2, p. 11, ID=4749^Topic(s): reefs structure, comparisons ; reefs; Systematics: ; Stratigraphy: Recent; Geography: Comoro Isls^^1";
- 4347 s[4344] = "ROSEN B.R. (1971).- Principal Features of Reef Coral Ecology in Shallow Water Environments of Mahe, Seychelles.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of

- London; published for The Zoological Society of London by Academic Press, London and New York]: 163-183.- FC&P 2-2, p. 12, ID=4752^Topic(s): reef ecology; reef ecology; Systematics: ; Stratigraphy: Recent; Geography: Seychelles^^1";
- 4348 s[4345] = "DAVIES P.S., STODDART D.R., SIGKE D.C. (1971).- Reef Forms of Addu Atoll, Maldives Islands.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 217-259.- FC&P 2-2, p. 12, ID=4754^Topic(s): reefs, morphology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Maldives^^1";
- 4349 s[4346] = "THOMASSIN B.A. (1971).- Les Faciès d'Epifaune et d'Epiflore des Biotopes Sédimentaires des Formations Coralliennes dans la Région de Tuléar (Sud-Ouest de Madagascar).- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 371-396.- FC&P 2-2, p. 12, ID=4758^Topic(s): reef complexes, epibionts; reef complexes; Systematics: ; Stratigraphy: Recent; Geography: Madagascar, Tulear^^1";
- 4350 s[4347] = "BRANDER K.M., MCLEOD A.A.Q.R., HUMPHREYS W.F. (1971).- Comparison of Species Diversity and Ecology of Reef-Living Invertebrates on Aldabra Atoll and at Watamu, Kenya.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 397-431.- FC&P 2-2, p. 12, ID=4759^Topic(s): reefs, biodiversity; reefs; Systematics: ; Stratigraphy: Recent; Geography: Kenya^^1";
- 4351 s[4348] = "STODDART D.R. (1972).- Regional variation in Indian Ocean coral reefs.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 155-174.- FC&P 2-2, p. 12, ID=4767^Topic(s): reefs, regional variation; reefs; Systematics: ; Stratigraphy: Recent; Geography: Indian Ocean^^1";
- 4352 s[4349] = "THOMASSIN B. (1972).- Les Biotopes de sables coralliens dérivant des appareils récifaux de la région de Tuléar.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 291-313.- FC&P 2-2, p. 13, ID=4774^Topic(s): reef complexes, biotopes; reef complexes, coral sands; Systematics: ; Stratigraphy: Recent; Geography: Madagascar, Tulear^^1";
- 4353 s[4350] = "WEYDER T P. (1973).- Morphologie et sédimentologie de la partie méridionale du grand récif de Tuléar (Madagascar): les ensembles sédimentaires de la pente externe.- Téthys, supplement 5: 133-156.- FC&P 3-1, p. 20, ID=4860^Topic(s): reefs, geomorphology, sedimentology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Madagascar, Tulear^Le secteur étudié correspond à la partie sud du Grand Récif de la Baie de Tuléar. Les facteurs du milieu pris en considération sont: les vents, la houle et les marées. Les courants de flot et de jusant ont des actions différentes sur les édifices récifaux particulièrement si l'on considère leurs actions sur les transferts sédimentaires. Ces facteurs déterminent différents types d'édifices récifaux. Leurs particularités sont définies si l'on considère les positions relatives des axes topographiques, morphologiques et de croissance par rapport aux directions de la houle et du vent. * Pour les analyses

sédimentologiques, les valeurs des indices sont obtenues par calculatrice IBM 360/44. Je considère d'abord les faciès sédimentaires à l'intérieur de chaque zone morphologique. Ils sont déterminés en appliquant une nouvelle technique mathématique. Celle-ci est basée sur les propriétés d'une nouvelle représentation graphique qui est une spirale logarithmique. Par rapport aux autres représentations graphiques des sédiments, la spirale est définie par son équation mathématique. Les indices sédimentologiques des échantillons de faciès ont des valeurs déterminées qui ont une signification hydrodynamique. Un nouvel indice: le facteur hydrodynamique (FH) est aussi défini. Pour chaque unité morphologique de ces récifs, je donne rapidement la description des traits morphologiques et j'explique l'évolution sédimentaire en relation avec les houles et les courants de marée. * Cette étude précise la sédimentation et les mouvements des sables fins; qui recouvrent la pente interne des édifices récifaux de ce secteur. ^1";

4354 s[4351] = "MERGNER H., SCHEER G. (1974).- The physiographic zonation and ecological conditions of some south Indian and Ceylon coral reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 3-30.- FC#038;P 4-2, p. 47, ID=5008^Topic(s): reefs, structures, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: India, Sri Lanka^On the occasion of the First International Symposium on Coral Reefs, 1969 in Mandapam Camp, South India, the ecological and sociological conditions of nine different reef sections off the coast of South India and Ceylon were examined with special emphasis on their morphological and structural aspects, their water movement and their light intensity. Coral growth and species distribution of corals were analyzed as well as the growth and distribution of the most abundant and predominant sea weeds and benthic animals. The results of these investigations were combined and compared with one another, and therefore allow characterization of typical physiographic zones, especially within three carefully analyzed reef areas: one reef composed of numerous small patches along Manauli Island near Mandapam Camp, one fringing reef plate with three steps to the open sea south of Hikkaduwa, Ceylon, and one typical small lagoon reef in front of the same place. All these investigations are part of a greater program concerning the influence of different abiotic ecological factors, especially of water exchange, lighting and substrate, on coral growth and reef zonation. ^1";

4355 s[4352] = "PICHON M. (1974).- Dynamics of benthic communities in the coral reefs of Tulear: succession and transformation of the biotopes through reef tract evolution.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 55-68.- FC#038;P 4-1, p. 17, ID=5010^Topic(s): coral reefs, ecological succession; ecological succession; Systematics: ; Stratigraphy: Recent; Geography: Madagascar^^1";

4356 s[4353] = "JAUBERT J.M., VASSEUR P. (1974).- Light measurements: duration aspect and the distribution of benthic organisms in an Indian Ocean coral reef (Tulear, Madagascar).- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 127-142.- FC#038;P 4-1, p. 17, ID=5014^Topic(s): reefs, light conditions; reefs; Systematics: ; Stratigraphy: Recent; Geography: Madagascar^^1";

4357 s[4354] = "VASSEUR P. (1974).- The overhangs, tunnels and dark reef galleries of Tulear (Madagascar) and their sessile invertebrate communities.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 143-159.- FC#038;P 4-1, p. 17, ID=5015^Topic(s): reefs, cryptic environments; reefs;

- Systematics: ; Stratigraphy: Recent; Geography: Madagascar, Tuléar^1";
- 4358 s[4355] = "FAURE G. (1974).- Morphology and bionomy of the coral reefs discontinuities in Rodriguez Island (Mascarene Archipelago, Indian Ocean).- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 161-172.- FC&P 4-1, p. 18, ID=5016^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Mascareignes^1";
- 4359 s[4356] = "WEYDERT P. (1974).- Sur l'existence d'une topographie antécifale dans la région de Tuléar (côte sud ouest de Madagascar).- Marine Geology 16: 39-45.- FC&P 4-1, p. 26, ID=5084^Topic(s): reefs, geomorphology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Madagascar, Tuléar^L'analyse de la disposition et de la morphologie des édifices récifaux de la région de Tuléar et du modèle continental élaboré au début du Quaternaire, permettent de retracer les grandes lignes de la morphologie de cette période. Les édifices récifaux de la première génération (récifs externes), est-à-dire contemporains de la première transgression (tatsimienne), se sont implantés en suivant étroitement le canevas imposé par le réseau hydrographique. Cette implantation ne s'est pas faite uniformément sur le rebord du plateau continental mais uniquement selon les interfluves des vallons. Il s'est ainsi constitué une chaîne d'unités récifales qui, ultérieurement, sont devenues coalescentes. Les récifs internes et les bancs récifaux ont suivi, mais à un degré moindre, le canevas imposé par l'érosion fluviale.^1";
- 4360 s[4357] = "WEYDERT P. (1974).- Morphologie et sédimentologie de la pente externe de la partie nord du Grand Récif de Tuléar (SW de Madagascar). Nature et répartition des éléments organogènes libres.- Marine Geology 17: 299-337.- FC&P 4-1, p. 26, ID=5085^Topic(s): reefs, geomorphology, sedimentology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Madagascar, Tuléar^La baie de Tuléar est située sur la côte SW de Madagascar. Elle est limitée vers le large par une barrière récifale: le Grand Récif. D'autres formations se trouvent à l'intérieur de cette baie: récifs frangeants et internes, îlots et bancs coralliens, etc. La zone étudiée: le secteur de l'épave, se trouve sur le côté SW de la partie nord du Grand Récif, en face de la ville de Tuléar. * L'étude a été effectuée en plongée jusqu'à -50m et à l'aide de dragages jusqu'à -150m. [first part of extensive summary]^1";
- 4361 s[4358] = "BAKUS G.J. (1975).- Marine zonation and ecology of Cocos Island, off Central America.- Atoll Research Bulletin 179: 9 pp., 7 figs.; Smithsonian Institution, Washington.- FC&P 4-2, p. 44, ID=5205^Topic(s): reefs ecology; reefs, Anthozoa; Systematics: ; Stratigraphy: Recent; Geography: Cocos Isls^[zonation of the leeward side; presence of Porites californica, Pocillopora robusta, Tubastrea aurea, Leptoseris, Psammocora stellata]^1";
- 4362 s[4359] = "FAURE G. (1975).- Etude comparative des récifs coralliens de l'Archipel des Mascareignes (Océan Indien).- The Mauritius Institute Bull. 8, 1: 25 pp., 8 pls.- FC&P 4-2, p. 45, ID=5210^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Mascareignes^The present work is a comparative study of the coral reefs of the Mascarene Archipelago (La Réunion, Mauritius, Rodrigues). * The first part is a brief survey of the environmental factors. The second is a descriptive study of the main reef structures analyzed in terms of morphology and ecology: outer slope (from 0 to 15m, spurs and grooves zones of coral morphogenesis, from 15 to 25m, spurs and grooves zone of volcanic morphogenesis, from 25 to 50m, volcanic flagstone) lagoon formations, morphological discontinuities (passes, outer creeks and outfalls, inner

- creeks and reef pools). * The last part is a discussion on the common features and on the peculiarities of each island. The author gives also the distribution of hermatypic scleractinian coral genera in the Archipelago.¹";
- 4363 s[4360] = "MONDON J.M. (1976).- Contribution à la géomorphologie et sédimentologie des récifs coralliens de l'île Maurice.- Université d'Aix-Marseille, Unpublished Thesis.- FC#038;P 5-1, p. 16, ID=5329Topic(s): reefs, morphology, sedimentology; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Mascareignes, Maurice Isl¹[unpublished] Etude des différentes unités morphologiques, de la sédimentologie dynamique des compartiments récifaux; étude minéralogique des éléments fins; nature et répartition des éléments bioclastiques. Examen de quelques formations quaternaires (récifs émergés, éolianites, grès de plage, accumulations sableuses). Problème des oscillations eustatiques récentes.¹";
- 4364 s[4361] = "MERGNER H. (1979).- Quantitative ökologische Analyse eines Rifflagenenareals bei Aqaba (Golf von Aqaba, Rotes Meer).- Helgolaender wiss. Meeresunters. 32: 476-507.- FC#038;P 10-1, p. 29, ID=5929Topic(s): reef complexes, quantitative ecology; reef complexes; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Aqaba¹";
- 4365 s[4362] = "PREOBRAZHENSKIY B.V. (1980).- Scott-reefs (Timor Sea, Indian Ocean).- Biologiya korallovykh rifov [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 30-41, 3 figs.- FC#038;P 10-1, p. 61, ID=6031Topic(s): morphology, facies; Scott reefs; Systematics: ; Stratigraphy: Recent; Geography: Timor Sea¹ A morphology and principal facies zones of relict reef group Scott is described. Those reefs are situated in an optimal climate area of the Indian Ocean. New types of morphological elements of a reef structure are established - they are near island lagoon and one-sided atoll lagoon.¹";
- 4366 s[4363] = "MERGNER H., SVOBODA A. (1977).- Productivity and seasonal changes in selected reef areas in the Gulf of Aqaba (Red Sea).- Helgolaender wiss. Meeresunters. 30: 383-399.- FC#038;P 10-2, p. 12, ID=6057Topic(s): reef ecosystems; reef ecosystems; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Aqaba¹";
- 4367 s[4364] = "SCHUHMACHER H. (1973).- Die lichtabhängige Besiedlung von Hafentuetzpfeilern durch sessile Tiere und Algen aus dem Korallenriff bei Eilat (Rotes Meer).- Helgolaender wiss. Meeresunters. 24: 307-326.- FC#038;P 10-2, p. 12, ID=6060Topic(s): reef dwellers; reef inhabitants; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Eilat¹";
- 4368 s[4365] = "SCHUHMACHER H. (1977).- Initial phases in reef development, studied at artificial reef types off Eilat (Red Sea).- Helgolaender wiss. Meeresunters. 30: 400-411.- FC#038;P 10-2, p. 13, ID=6067Topic(s): reefs artificial; reefs, artificial; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Eilat¹";
- 4369 s[4366] = "BRAITHWAITE C.J.R. (1982).- Patterns of accretion of reefs in the Sudanese Red Sea.- Marine Geol. 46: 297-325.- FC#038;P 11-1, p. 57, ID=6131Topic(s): reef growth, geohistory; reef growth; Systematics: ; Stratigraphy: Recent; Geography: Red Sea¹ Reefs in the North Towartit and Shambaya Groups of the Sudanese Red Sea rest on major blocks which have been defined by large-scale fault movement. The dominant surface features in these areas have been formed by the sub-aerial sculpting of the Tertiary and later limestones during late Pleistocene periods of low sea-level stand. This has resulted in the formation of large numbers of closed depressions reaching -60m depth. These punctuate a surface lying between -20 and -30m which is itself probably a residual of an older, undulating, higher level surface. The margins of depression are submarine cliffs, the smooth floors are blanketed with Recent sediments

- while the intervening ridges have become the sites for reef accretion. [first part of extensive summary]^1";
- 4370 s[4367] = "KÖHLER K., KULL U., SCHMID P. (eds) (1980).- Eilat und das Riff. Ein Exkursionsbericht aus Israel I.- Arbeiten und Mitteilungen aus dem Biologischen Institut der Universität Stuttgart 3; 108 pp.- FC&P 11-2, p. 19, ID=6144^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Eilat^Report of field excursion to the Recent reefs of Eilat and the desert vegetation of southern Israel and Sinai. Included is a biographical sketch and a publication list of Carl Benjamin Klunzinger (1834-1914) who pioneered the investigation of the Red Sea reef biota. Publication is conceived as field guide booklet that may be useful for future excursions. (see Schmid & Kohler 1981 for supplement and continuation of this publication)^1";
- 4371 s[4368] = "SCHMID P., KÖHLER K. (eds) (1981).- Eilat und das Riff. Ein Exkursionsbericht aus Israel II.- Arbeiten und Mitteilungen aus dem Biologischen Institut der Universität Stuttgart 4; 131 pp.- FC&P 11-2, p. 19, ID=6145^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, Eilat^Report of field excursion to the Recent reefs of Eilat and the desert vegetation of southern Israel and Sinai. Publication is conceived as field guide booklet that may be useful for future excursions. (see Kohler, Kull & Schmid 1980 - introductory volume of this guidebook)^1";
- 4372 s[4369] = "JUX U. (1984).- C13/C12- und O18/O16-verhältnisse in Skelettkarbonaten von Riffbildnern des Roten Meeres.- Mitt. Geol.-Palaont. Inst. Univ. Hamburg 56 [Festband Georg Knetsch]: 143-156.- FC&P 13-1, p. 21, ID=6347^Topic(s): reef builders, stable isotopes C O; reef builders; Systematics: ; Stratigraphy: Recent; Geography: Red Sea^The isotopic composition of the carbonates in skeletons of ecologically significant, benthonic genera (mainly corals) derived from Red Sea fringing reefs and coral islands was studied. Between genera and biozones distinct differences were noticed in the O18/O16 and C13/C12 ratios. Corals from the reef edges have "lighter" carbonates (down to -2% δC13 and 4% δO18) than organisms from the lagoons (up to +4% δC13 and -2% δO18). * This trend was noticed everywhere and is explained by higher salinities in the lagoons (increase of δC13) and strong evaporation on the reef flats (decrease in δO16). The regional depression of the δO18 ratios for about 1% in lagoonal carbonates is related to the general rise in surface water temperatures from North (Egypt) to South (Saudi Arabia). * In view of the isotope fractionations on the reef flats and within the lagoons an indication of the temperatures should be restricted to carbonates from corals of the reef edges. * Fossil reef organisms (Pleistocene fringing reefs) have similar O18/O16 and C13/C12 ratios as their living counterparts. In spite of diagenetic changes, the facies remains isotopically marked. [original summary]^1";
- 4373 s[4370] = "GISCHLER E., HUDSON J.H., PISERA A. (2009).- Late Quaternary reef growth and sea level in the Maldives (Indian Ocean).- Marine Geology 250, 1-2: 104-113.- FC&P 36, p. 126, ID=6578^Topic(s): reef growth, U-Pb geochronometry; reef growth; Systematics: ; Stratigraphy: Quaternary Holö; Geography: Maldives^Based on rotary drilling and radiometric and U-series dating, we present the first comprehensive data on Holocene reef anatomy and sea-level rise as well as nature and age of underlying Pleistocene limestone in the Maldives. Holocene reefs in Rasdhoo Atoll, central Maldives, are composed of four facies including (1) robust-branching coral facies, (2) coralline algal facies, (3) domal coral facies, and (4) detrital sand and rubble facies. Branching coral and coralline algal facies predominate the marginal reefs and domal corals and detrital facies preferentially occur in a lagoon reef. In addition, microbialite crusts are found in lower core sections of

marginal reefs. Microbialites formed during the early Holocene in reef cavities. Holocene reef thickness ranges from 14.5 m to 22 m. Reef growth started as early as 8.5 kyr BP. Marginal reefs accreted in the keep-up mode with rates of 15 m/kyr. Rate of sea-level rise significantly slowed down from 7–6 kyr BP and subsequently gradually rose with rates of 1 m/kyr. The lagoon reef accreted in the catch-up mode with rates of around 4 m/kyr. Even though no indications of a higher than present sea level were found during this study, it is not entirely clear from the data whether the sea gradually rose to or exceeded present level in the late Holocene. Submarine cementation in Holocene reefs studied is rather weak, presumably as a consequence of high accretion-rates, i.e., short time available for consolidation. Pleistocene coral grainstone was encountered in one core at 14.5 m below present level and three U-series dates indicate deposition during marine isotope stage 5e ca. 135 kyr BP. [original abstract]¹;

4374 s[4371] = "FLUGEL H.W., HUBMANN B. (1993).- Palaeontologie und Plattentektonik am Beispiel proto- und palaeotethyder Korallenfaunen.- Jb. Geol. B.-A. 136, 1: 27-37.- FC&P 22-2, p. 78, ID=3492Topic(s): plate tectonics; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Prototethys, PaleotethysWe will show with some examples of paleontological-taxonomical surveys of Rugosa and Tabulata of different age (Ordovician to Permian) and regions of the Northern Gondwanian margin (Sardinia, Austria, Anatolia, Iran, Oman, Afghanistan, Pakistan, Nepal, Tibet) the importance of such studies for the solution of plate tectonic problems.^1";

4375 s[4372] = "BEAUVAIS L., BERNET-ROLLANDE M.-C., MAURIN A.-F. (1985).- Reinterpretation of pre-Tertiary classical reefs from Indo-Pacific. Jurassic examples.- 5ème Congrès International Récifs Coralliens: 581-586.- FC&P 15-1.2, p. 14, ID=0897Topic(s): reefs ecology; reefs; Systematics: ; Stratigraphy: Jurassic; Geography: Indo-Pacific^1";

4376 s[4373] = "TURKEY M., SCHUHMACHER H. (1985).- Latopilumnus tubicolus n.gen. n.sp., eine neue korallenassoziierte Krabbe, die die Bildung einer Wohnhöhle induziert (Crustacea: Decapoda: Pilumnidae).- Senckenbergiana maritima 17, 1/3: 55-63.- FC&P 15-1.2, p. 40, ID=0763Topic(s): coral-crustacean symbiosis; coral symb; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indo-PacificLatopilumnus tubicolus n.gen. n.sp. is associated with the scleractinian coral Tubastraea micranthus. It is the only non-hapalocarcinid crab known to live in a dwelling-cavity formed by its host coral. The species is, to date, known from the Philippines and Japan but probably has a much wider distribution in the Indopacific.^1";

4377 s[4374] = "POTTS D.C. (1984).- Generation times and the Quaternary evolution of the reef-building corals.- Paleobiology 10, 1: 48-58.- FC&P 14-1, p. 44, ID=0956Topic(s): hermatypic, faunal stasis; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Quaternary; Geography: Indo-PacificFaunal stasis among Indo-Pacific reef-building corals is explained as the result of chronic environmental disruptions preventing evolutionary processes from approaching completion since the Late Pliocene. The model assumes shallow reefal habitats (<20m) on the continental shelves are major sites of scleractinian evolution and explores ecological and evolutionary consequences of high-frequency sea-level fluctuations and their associated transgression-regression cycles. Because single generations, dominated by a few large clonal genotypes, may persist indefinitely, local populations may not have experienced enough generations to approach evolutionary equilibrium with their environments during the estimated average duration (ca. 3200 yr) of existence of shallow habitats. Persistent consequences of chronic evolutionary disturbance may be the extensive intraspecific variation so characteristic of the dominant genera of shallow Indo-Pacific corals

- and the apparent paucity of recently evolved endemic species. The same disturbances may have accelerated speciation rates among reefal organisms with much shorter generation times. (Original summary)¹";
- 4378 s[4375] = "ENDEAN R. (1973).- Population Explosions of *Acanthaster planci* and Associated Destruction of Hermatypic Corals in the Indo-West Pacific Region.- In Jones O.A. & R. Endean (eds): *Biology and Geology of Coral Reefs*, vol. 2, *Biology 1* (Academic Press, New York and London): 390-438.- **FC**;P 3-2, p. 36, ID=4939**Topic(s)**: corals extinctions, *Acanthaster*; *Anthozoa*; **Systematics**: *Cnidaria*; *Anthozoa*; **Stratigraphy**: Recent; **Geography**: Indo-Pacific¹";
- 4379 s[4376] = "PREOBRAZHENSKIY B.V., KRASNOV Ye.V. (eds) (1980).- *Biologiya korallovykh rifov*. [biology of coral reefs; in Russian, with English summaries].- *Biologiya korallovykh rifov* [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]; Nauka, Moskva: 264 pp., 76 figs, 12 tabs.- **FC**;P 10-1, p. 61, ID=6028**Topic(s)**: coral reefs; coral reefs; **Systematics**: *Cnidaria*; *Anthozoa*; **Stratigraphy**: Recent; **Geography**: Indo-Pacific^The book contains results of the 1974-1977 expeditions of the Institute of Marine Biology of the Far Eastern Science Center and other institutes of the USSR Academy of Sciences to coral reefs of the central Indo-Pacific Oceans. Papers included are on many subjects, including methods for underwater research, reef community structure and zonation, and the ecology and zoology of dominant reef organisms. Particular attention is given to the life-forms of corals and their associations with reef facies, problems of coral regeneration and problems of reef ecosystem modelling. * It is hoped that this book will be of interest to a wide range of specialists including reef biologists, ecologists, biogeographers and paleogeographers.¹";
- 4380 s[4377] = "POLYAKOV D.M. (1980).- The linear growth rate and environments of colonial reef corals.- *Biologiya korallovykh rifov* [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 159-175, 3 figs, 7 tabs.- **FC**;P 10-1, p. 62, ID=6033**Topic(s)**: hermatypic, growth rates; reef corals; **Systematics**: *Cnidaria*; *Anthozoa*; **Stratigraphy**: Recent; **Geography**: Indo-Pacific^The paper offers a literature survey of different physical and chemical methods of determination of annual linear growth rates. There is comparison of results and an estimation of influence of ecological factors on the form and annual increase of colonial reef corals in paper. The best results were obtained using method of X-ray in combination with staining of alizarine red in living corals. This method permits determination not only of annual growth rate, but as well to measure density of skeleton matters and of seasonal growth rate of good preservation modern and fossil corals. * Seasonal layers skeletal matter of the high density are formed in more high temperatures, but layers of low density - in minimum temperature of sea water. Layers with low density of skeleton matter are broader then layers with high density. The greatest linear growth is observed on the depths 9-10m. In the presence of zoochorella in endoderm the process of polyp's calcification is more rapid in light than in the darkness as well as at branches and at massive colonies.¹";
- 4381 s[4378] = "MURAKHVERI A.M., PREOBRAZHENSKIY B.V. (1980).- The physiological light sums and the life-forms of hermatypic corals.- *Biologiya korallovykh rifov* [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 192-203, 12 figs.- **FC**;P 10-1, p. 62, ID=6036**Topic(s)**: hermatypic, ecology; reef corals; **Systematics**: *Cnidaria*; *Anthozoa*; **Stratigraphy**: Recent; **Geography**: Indo-Pacific^The model of light dependence of coral life-forms is proposed, basing on the suggestion of specific minimal and maximal treshold sensibility to the light intensity by them, which causes photosynthetic activity regulation of symbiotic Zooxantellae and construction of skeleton. The theory allows to forecast the development of certain life-forms due to real light conditions on the reef.¹";

- 4382 s[4379] = "NOVOZHILOV A.V. (1980).- An investigation of bottom turbulences on the Indian Ocean coral reefs.- *Biologiya korallovykh rifov* [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 211-217, 3 figs.- FC&P 10-1, p. 63, ID=6037^Topic(s): coral reefs, bottom turbulence; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Indo-Pacific^The parameters of horizontal turbulences of South Nilandu atoll lagoon and Coetive (Seyshelles) Island is proposed. During preparation of data tensor theory of turbulences was applied. By the absence of wind agitation the exchange in the lagoon bottom region and near the basement of the fringing reefs is more intensive than in the shallow near shore reef zones. The trend to the loss of anizotrophy of turbulent exchange with the depth into the chosen interval of volumetric and temporal scale is discovered. The connection between turbulence intensity and tides is shown.^1";
- 4383 s[4380] = "REITNER J., WORHEIDE G., THIEL V., GAUTRET P. (1996).- Reef Caves and Cryptic Habitats of Indo-Pacific Reefs - Distribution Patterns of Coralline Sponges and Microbialites.- *Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2* [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 28, ID=3574^Topic(s): reefs cryptic communities; reefs, cryptic habitats; Systematics: Porifera Monera; Corallina; Stratigraphy: Recent; Geography: Indo-Pacific^The results on distribution patterns of the three most important coralline sponge taxa and related microbialites from Indo-Pacific coral reef caves are presented. The stromatoporoid taxon *Astrosclera*, the chaetetid *Acanthochaetetes*, and the thalamid *Vaceletia* are not equally distributed throughout the investigated areas. Distinctive distribution patterns were observed. All taxa are living in cryptic habitats, but *Astrosclera* was also found in dim-light zones and shaded overhangs. The related microbialites vary in relation to the sedimentological setting of the environment. Very well developed microbialites were found in environments influenced by the weathering of crystalline basement rocks (e.g. Lizard Island) and deep large caves within a carbonate basement (e.g. Marigondon Cave, Cebu / Philippines). Poorly developed microbialites were observed in open oceanic environments with carbonate basement rocks (e.g. Osprey Reef and reefs of the outer Great Barrier Reef).^1";
- 4384 s[4381] = "WORHEIDE G. (1998).- The Reef Cave Dwelling Ultraconservative Coralline Demosponge *Astrosclera willeyana* Lister 1900 from the Indo-Pacific.- *Facies* 38, 1: 1-88.- FC&P 27-1, p. 105, ID=3857^Topic(s): ; Porifera, Demospongiae, *Astrosclera*; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Indo-Pacific^*Astrosclera willeyana* Lister 1900 is a pyriform-half spherical, predominantly bright orange colored, coralline demosponge with a mean size of about 20 mm in height and maximum head diameter. The habitat of *Astrosclera* is generally restricted to cryptic and light reduced environments of the Indo-Pacific, found mainly in reef caves, but sometimes also in the dim-light areas of cave entrances and overhangs, where it is green colored at the side towards the light. Caves of Indo-Pacific coral reefs were divided into four major facies zones, named 1 to 4 with decreasing light intensities. *Astrosclera* occurs in reef caves on a carbonate basement in Zone 2, 3, and 4, reaching maximum abundance in Zone 3 and the proximal part of Zone 4, but rare in the distal, very dark areas of Zone 4. Other abundant coralline sponges in reef caves are *Spirastrella* (*Acanthochaetetes*) *wellsi* and *Vaceletia crypta*. *Astrosclera* is the most common coralline sponge throughout the studied sites of the Indo-Pacific.^1";
- 4385 s[4382] = "TABACHNICK K.R., JANUSSEN D. (2004).- Description of a new species and subspecies of *Fieldingia*, erection of a new family *Fieldingidae* and a new order *Fieldingida* (Porifera; Hexactinellida);

- Hexasterophora).- Bolletino Mus. Inst. Biol. Univ. Genova 68 [M. Pansini, R. Pronzato, G. Bavestrello & R. Manconi (eds): Sponge Science in the New Millennium]: 623-637.- FC;P 33-2, p. 43, ID=1201Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: Indo-Pacific^Re-investigation of Fieldingia collected in the Indonesian Archipelago and described by Schulze (1887) as F. lagettoides and discovery of new similar specimens from the South China Sea and South Central Pacific enable Schulzes specimen to be confidently accepted as Fieldingia. A new species, F. valentini, and a new subspecies, F. valentini tizardi, are described. The presence of complete spicule sets allow settlement of the problems with both dictyonal framework construction and loose spicule specification of the poorly known genus. These data provide the basis for erection of the Fieldingidae, a new family with a single recent genus. Based on the unique construction of the dictyonal choanosomal and dermal skeletons together with some other characters of loose spicules, a new order Fieldingida is established.^1";
- 4386 s[4383] = "BAYER F.M. (1993).- Generic reassignments and affinities of *Symphodium salomonense* Thompson & Mackinnon (Coelenterata: Octocorallia).- Precious Corals & Octocoral Research 1: 14-19.- FC;P 23-1.1, p. 73, ID=4158Topic(s): taxonomy; Octocorallia, Corallium; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Chagos, Hawaii^*Symphodium salomonense* Thompson & Mackinnon 1910, from Chagos Archipelago is found to be a species of *Corallium* morphologically similar to *Corallium tortuosum* Bayer 1956, from the Hawaiian Islands. Sclerites of both nominal species have been compared and illustrated by scanning electron microscope and demonstrated to represent a single species. Owing to minor differences in sclerites and wide geographical separation of type localities, the Hawaiian population is here treated as a subspecies of the senior nominal species.^1";
- 4387 s[4384] = "SCHUHMACHER H. (1975).- Die Rolle der Weichkorallen (Alcyonacea, Octocorallia) innerhalb der Riffbiozoenosen des Roten Meeres und des australischen Grossen Barriereriffs.- Verh. Dtsch. Zool. Ges. 1974, 67: 380-384.- FC;P 10-2, p. 13, ID=6062Topic(s): ecology; Octocorallia, reef ecosystems; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Red Sea, Australia, Great Barrier Reef^^1";
- 4388 s[4385] = "CAIRNS S.D. (1989).- Discriminant analysis of Indo-west Pacific *Flabellum*.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 61-68.- FC;P 19-1.1, p. 12, ID=2523Topic(s): discriminant analysis; Scleractinia, *Flabellum*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indo-Pacific^^1";
- 4389 s[4386] = "WALLACE C.C. (1994).- New Species and a New Species-group of the Coral Genus *Acropora* (Scleractinia: Astrocoeniina: Acroporidae) from Indo-Pacific Locations.- Invertebr. Taxon. 8: 961-88.- FC;P 25-1, p. 43, ID=3039Topic(s): taxonomy, new taxa; Scleractinia, *Acropora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indo-Pacific^Eleven new species of the circum-tropical coral genus *Acropora* (Scleractinia: Astrocoeniina: Acroporidae) are described from material collected during a study of the biogeography of the genus worldwide. Previously known Indo-Pacific species of this genus mostly have broad distributions. The newly described species have been overlooked because they have more restricted distributions and in some cases they occur in deeper, rarely sampled, habitats; they thus contribute new information for assessment of the ecology and distribution patterns of the genus. Seven of the new species have low numbers of radial corallites relative to axial corallite number, a

phenomenon uncommon amongst wellknown (and widely distributed) species. It is suggested that this character would result in low reproductive output and may be responsible for the limited range of the species concerned. The new species are assigned to existing species-groups and a new species-group is suggested to accommodate two new species and three other valid species.^1";

- 4390 s[4387] = "STEFANI F., BENZONI F., PICHON M., CANCELLIERE C., GALLI P. (2008).- A multidisciplinary approach to the definition of species boundaries in branching species of the coral genus *Psammocora* (Cnidaria, Scleractinia).- *Zoologica Scripta* 37, 1: 71-91.- FC&P 36, p. 107, ID=6538^Topic(s): molecular data, taxonomy; Scleractinia *Psammocora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indo-Pacific^The Indo-Pacific coral genus *Psammocora* Dana (1846) has never been formally revised, and its phylogeny has only been partially explored. Several synonymies have been proposed for the 11 nominal species which have highly plastic branching growth forms. In the present study, the definition of genetic and morphologic boundaries among three currently recognized branching morpho-species, *Psammocora stellata*, *Psammocora contigua* and *Psammocora obtusangula*, is addressed through a joint morphometric and molecular study using corallite and branch measurements, and a portion of the β-tubulin gene as a marker. The results show a morphological and partial phylogenetic distinction between *P. stellata* specimens and a complex composed of *P. contigua* and *P. obtusangula*, which is interpreted as a synonym species of *P. contigua*. Among the factors that could be responsible for the lack of reciprocal monophyly of the three species, hybridization is considered the most likely, due to the presence of interspecific recombinant sequences. Type material of nominal species of branching *Psammocora* is examined and classified based on genetically defined groups, and compared with synonyms in the literature. Among the morphological characters used, corallite variables were best for discriminating between the two lineages and allow recognition of putative hybrid specimens. *Psammocora stellata* is reported for the first time in the western Indian Ocean (Mayotte), thus greatly extending its known distribution range. Finally, a hybrid swarm is identified in the Arabo-Persian Gulf, while no genetic structure is detected elsewhere in the Indo-Pacific region. [original abstract]^1";
- 4391 s[4388] = "RUTZLER K. (1972).- Principles of sponge distribution in Indo-Pacific coral Reefs: results of the Austrian Indo-west Pacific Expedition 1959/60.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 315-332.- FC&P 2-2, p. 13, ID=4775^Topic(s): distribution in coral reefs; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Indo-Pacific^^1";
- 4392 s[4389] = "MONTAGGIONI L. (2005).- History of Indo-Pacific coral reef systems since the last glaciation: Development patterns and controlling factors.- *Earth-Science Reviews* 71, 1-2: 1-75.- FC&P 34, p. 87, ID=1332^Topic(s): reefs, geohistory; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Indo-Pacific^A significant body of new information about the development of coralreefs during the 23 ka has been generated in the last three decades. TheIndo-Pacific province structures from a variety of geodynamic settingshave bee investigated using subsurface drilling and submersible diving.This paper is based principally on the re-examination of the core datasetfrom the literature, with reconversions of many previously publishedradiocarbon ages into calendar dates. [first fragment of an extensive summary]^1";
- 4393 s[4390] = "BATTISTINI R. et al. (1975).- Eléments de terminologie récifale indopacifique.- *Tethys* 7, 1: 1-111.- FC&P 5-1, p.

- 15, ID=5328^Topic(s): reefs, morphology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Indo-Pacific^Une étude détaillée de la morphologie des formations récifales observées dans divers types de complexes récifaux dans l'Océan Indien et le Pacifique, a permis de proposer une terminologie récifale valable pour l'Indo-Pacifique, recouvrant 125 éléments morphologiques majeurs. Chacun de ceux-ci est accompagné d'une définition et d'une illustration. Un glossaire des termes proposés en français, anglais, allemand, a pour but de faciliter la compréhension internationale.^1";
- 4394 s[4391] = "PREOBRAZHENSKIY B.V., LATYPOV Yu.Ya. (1980).- The Process of the regeneration of the coral-reefs ecosystem.- *Biologiya korallovykh rifov* [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 7-15, 5 figs.- FC&P 10-1, p. 61, ID=6029^Topic(s): reef ecosystems, recovery; reef ecosystems; Systematics: ; Stratigraphy: Recent; Geography: Indo-Pacific^An ability of the corals and coral reefs for restoration of damaged parts is examined. Research of coral ecosystems of different age shows their ability to partial or entire regeneration depending on degree of damage.^1";
- 4395 s[4392] = "PREOBRAZHENSKIY B.V. (1980).- On the modelling of coral-reef ecosystem.- *Biologiya korallovykh rifov* [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 16-28, 3 figs.- FC&P 10-1, p. 61, ID=6030^Topic(s): reef ecosystems; reef ecosystems; Systematics: ; Stratigraphy: Recent; Geography: Indo-Pacific^The history, signs, morphological features of the coral reef, possibility of modelling of reef on engineering hydrological, energetical and trophodynamical levels are considered.^1";
- 4396 s[4393] = "ZIBROWIUS H. (1973).- Revision des espèces actuelles du genre *Enallopsammia* Michelotti 1871, et description de *E. marenzelleri*, nouvelle espèce bathyale à large distribution: Océan Indien et Atlantique Central (Madreporaria, Dendrophyllidae).- *Beaufortia* 276, 21: 37-54.- FC&P 2-2, p. 11, ID=4745^Topic(s): revision, new taxa; Scleractinia, *Enallopsammia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Indian Ocean, Atlantic^The recent species of the genus *Enallopsammia* Michelotti (Madreporaria, Dendrophyllidae). Description of *Enallopsammia marenzelleri*, new bathyal species with wide range (Indonesia-Azores). Previously the new species had been confused together with *E. profunda* (Pourtales), the latter known only from the American Atlantic between Cuba and Georgia. Already collected by the "Siboga" at the Kei Islands in 1899 and by the "Valdivia" at the Nicobares in 1899, *E. marenzelleri* was more recently collected in the Eastern central Atlantic by the "Meteor" at the Great Meteor Seamount in 1967, and by the "Jean Charcot" at the Azores in 1971. The new species is compared with recent and fossil species here attributed to the same genus which is herewith revised.^1";
- 4397 s[4394] = "MERGNER H. (1977).- Hydroids as Indicator Species for Ecological Parameters in Caribbean and Red Sea Coral Reefs.- *Proc. 3rd Int. Coral Reef Symp. Miami* 1: 119-125.- FC&P 10-2, p. 12, ID=6054^Topic(s): ecology; Hydroidea; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Red Sea, Caribbean^^1";
- 4398 s[4395] = "MERGNER H. (1971).- Structure, Ecology and Zonation of Red Sea Reefs (in comparison with South Indian and Jamaican Reefs).- In *Regional Variation in Indian Ocean Coral Reefs* [D. R. Stoddart and Sir M. Yonge (eds): *Proceedings of the 28th Symposium of The Zoological Society of London*; published for The Zoological Society of London by Academic Press, London and New York]: 141-161.- FC&P 2-2, p. 12, ID=4751^Topic(s): reefs, structural comparisons; reefs; Systematics: ; Stratigraphy: Recent; Geography: Red Sea, India S, Jamaica^^1";
- 4399 s[4396] = "LEWIS J.B. (1974).- Settlement and growth factors influencing the contagious distribution of some Atlantic reef corals.-

In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 201-206.- FC&P 4-1, p. 18, ID=5019^Topic(s): reefs, settlement patterns; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Atlantic^1";

- 4400 s[4397] = "BUDD A.F., STOLARSKI J. (2009).- Searching for new morphological characters in the systematics of scleractinian reef corals: comparison of septal teeth and granules between Atlantic and Pacific Mussidae.- Acta Zoologica 90, 2: 142-165.- FC&P 36, p. 86, ID=6494^Topic(s): morphology, molecular data; Scleractinia Mussidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Atlantic, Pacific^Recent molecular analyses have challenged the traditional classification of scleractinian corals at all taxonomic levels suggesting that new morphological characters are needed. Here we tackle this problem for the family Mussidae, which is polyphyletic. Most of its members belong to two molecular clades composed of: (1) Atlantic Mussidae and Faviidae (except Montastraea) and (2) Pacific Mussidae (Cynarina, Lobophyllia, Scolymia, Symphyllia) and Pectiniidae. Other Pacific mussids (e.g. Acanthastrea) belong to additional clades. To discover new characters that would better serve as phylogenetic markers, we compare the skeletal morphology of mussid genera in different molecular-based clades. Three sets of characters are considered: (1) macromorphology (budding; colony form; size and shape of corallites; numbers of septal cycles), (2) micromorphology (shapes and distributions of septal teeth and granules), and (3) microstructure (arrangement of calcification centres and thickening deposits within costosepta). Although most traditional macromorphological characters exhibit homoplasy, several new micromorphological characters are effective at distinguishing clades, including the shapes and distribution of septal teeth and granules, the area between teeth, and the development of thickening deposits. Arrangements of calcification centres and fibres differ among clades, but the fine-scale structure of thickening deposits does not. [original abstract]^1";
- 4401 s[4398] = "VOGEL K., KIENE W., GEKTIDIS M., RADTKE G. (1996).- Scientific Results from Investigations of Microbial Borers and Bioerosion in Reef Environments.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 30, ID=3581^Topic(s): reef complexes, microbial borers, bioerosion; reef complexes; Systematics: ; Stratigraphy: Recent; Geography: Atlantic, Pacific^Experimental investigations at research sites in the Atlantic and Pacific have been designed to assess the factors that influence the distribution and abundance of microborers in reef environments. Results from the Bahamas indicate that site, depth, substrate type, and length of exposure period are important in controlling microborer populations and their rates of bioerosion. Cyanobacteria dominate intertidal limestones, a diverse assemblage of chlorophytes and cyanobacteria characterizes sites at depths between 2-30m, and the chlorophyte *Ostreobium quekettii* and heterotrophs are present from 100 to 300m water depth. Macrobioerosion by grazers and borers also show site and depth differences. Investigations of experimental nutrient enrichment on the Great Barrier Reef suggest that the impact of the treatments on bioeroders may be masked by the natural nutrient levels within the endolithic habitat.^1";
- 4402 s[4399] = "GILL G.A., LOREAU J.P. (1988).- 7. Jurassic coral genera from ODP site 639, Atlantic Ocean, west of Spain.- Proceedings of the Ocean Drilling Program, Scientific Results 103 [Boillot G., Winterer E. L. et al (eds)]: 89-103.- FC&P 18-1, p. 24, ID=2220^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: Atlantic

middle, odp site 639^1) The generic identification suggested for the corals studied in thin section from hole 639D includes *Stylosmilia*, *Enallhelia*, *Pseudocoenia*, *Trocharea*, *Microsolena*, cf. *Calamoseris*, cf. *Dimorphastraea*, *Fungiastraea*, cf. *Thecosmilia*, cf. *Calamophylliopsis*, cf. *Dermosmilia*, *Lochmaeosmilia*, and *Intersmilia*. 2) The sampling, though limited, emphasizes the importance of pennular and stylinid corals in the diversified coral collection. 3) The presence of *Stylosmilia pumila* (Quenstedt) indicates a Late Jurassic age, which does not contradict the presence of the other genera recorded. 4) The occurrence of the corals at hole 639D is episodic. At the base (cores 103-639D-13R through 103B-639D-11R, 103B-639D-8R, and 103-639D-7R), the corals are rare, tiny fragments that occur as oncoid nuclei or micritized grains. Their appearance indicates corrosion through transport from small colonies in muddy environments. In cores 103-639D-4R and 103-639D-5R, corals are common and are associated with calcareous and siliceous sponges, echinoderms, agglutinated benthic foraminifers, bivalves, and some calpionellids. They are in situ and although commonly heavily bored, definitely indicate that they were not transported. 5) The microfacies of the corals from cores 103-639D-4R and 103-639D-5R are characterized by a high content of mud; this mud seems to have been initially calcitic. 6) The corals do not reveal the proximity of a reef environment; rather, they were dwellers of soft muddy substrates below wave activity. In cores 103-639D-4R and 103-639D-5R, the associated organisms suggest a depth range from 30 to 70 m below sea level.^1";

4403 s[4400] = "BARON-SZABO R.C. (2005).- Remarks on the genus *Arctangia wells*, 1937, with the re-description of the type species *Thecocyathus nathorsti* Lindström, 1900 (Anthozoa: Scleractinia) from the Lower Cretaceous of Norway.- Proceedings of the Biological Society of Washington 118, 3: 479-482.- FC&P 34, p. 51, ID=1269^Topic(s): nomenclature; Scleractinia, Arctangia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Norway^The genus *Arctangia wells* is a poorly known group that consists of only the type species *Thecocyathus nathorsti* Lindström, 1900. The original description is the only documentation of the species. Including the first description of the genus *Arctangia* by wells (1937), all of the later interpretations of the species represent only adaptations of Lindström's original report. The present paper gives the re-description of the type species and also provides the first photographic images of this species based on newly discovered material.^1";

4404 s[4401] = "De MOL B., KOZACHENKO M., WHEELER A., ALARES H., HENRIET J.-P., OLU le ROY K. (2007).- Therese Mound: a case study of coral bank development in the Belgica Mound province, Porcupine Seabight.- International Journal of Earth Sciences (Geologische Rundschau) 96, 1: 103-120.- FC&P 35, p. 96, ID=2419^Topic(s): reefs, deep marine; reefs; Systematics: ; Stratigraphy: Oligocene - Quaternary; Geography: Atlantic, Porcupine Bight^High-resolution seismic profiles, swath bathymetry, side-scan sonar data and video imageries are analysed in this detailed study of five carbonate mounds from the Belgica mound province with special emphasis on the well surveyed Therese Mound. The selected mounds are located in the deepest part of the Belgica mound province at water depths of 950 m. Seismic data illustrate that the underlying geology is characterised by drift sedimentation in a general northerly flowing current regime. Sigmoidal sediment bodies create local slope breaks on the most recent local erosional surface, which act as the mound base. No preferential mound substratum is observed, neither is there any indication for deep geological controls on coral bank development. Seismic evidence suggests that the start-up of the coral bank development was shortly after a major erosional event of Late Oligocene-Quaternary age. The coral bank geometry has been clearly affected by the local topography of this erosional base and the

prevailing current regime. The summits of the coral banks are relatively flat and the flanks are steepest on their upper slopes. Deposition of the encased drift sequence has been influenced by the coral bank topography. Sediment waves are formed besides the coral banks and are the most pronounced bedforms. These seabed structures are probably induced by bottom current up to 1m/s. Large sediment waves are colonised by living corals and might represent the initial phase of coral bank development. The biological facies distribution of the coral banks illustrate a living coral cap on the summit and upper slope and decline of living coral populations toward the lower flanks. The data suggest that the development of the coral banks in this area is clearly an interaction between biological growth processes and drift deposition both influenced by the local topography and current regime.^1";

- 4405 s[4402] = "ALVINERIE J., ANTUNES M.T., CAHUZAC B., LAURIAT-RAGE A., MONTENAT C., PUJOL C. (1992).- Synthetic data on the paleogeographic history of Northeastern Atlantic and Betic-Rifian basin, during the Neogene (from Brittany, France to Morocco).- Palaeogeography, Palaeoclimatology, Palaeoecology 95, 3-4: 263-286.- FC&P 25-2, p. 19, ID=3081^Topic(s): geohistory; geohistory; Systematics: ; Stratigraphy: Cenozoic; Geography: Atlantic E^This paper presents the results of a synthetic compilation of the studies of Neogene marine deposits recognized on the northeastern Atlantic coast from Morocco to northern France. The shoreline fluctuations as well as the tectonic and climatic events are discussed [...] * Marine Upper Chattian is well represented in the Aquitaine Basin (France), with various facies formed in a tropical climate. * During the Aquitanian and the Burdigalian, the transgressions extended in wide neritic gulfs in France, Portugal, Spain and North of Morocco. * The Middle Miocene transgression is well pronounced in the different areas. In the Betic-Rifian realm, overthrusts are established and the flysch resorption is concluded at the end of that time. * During the Upper Miocene, the marine realm is locally back from the preceding one; outstanding events occurred in the tectonic Betic-Rifian basin, the eastern part of which was affected by the Mediterranean salinity crisis during the Messinian. * Finally, in the Pliocene, most of the features of the modern palaeogeography are evidenced, even when the coastal frontage of several areas is still affected by little transgressions. [excerpts from original abstract]^1";
- 4406 s[4403] = "LAURIAT-RAGE A., BREBION P., CAHUZAC B., CHAIX C., DUCASSE O., GINSBURG L., JANIN M.C., LOZOUET P., MARGEREL J.P., NASCIMENTO A., PAIS J., POIGNANT A., POUYET S., ROMAN J. (1993).- Palaeontological data about the climatic trends from Chattian to present along the Northeastern Atlantic frontage.- Ciencias da Terra 12: 167-179; Lisboa.- FC&P 25-2, p. 19, ID=3082^Topic(s): climatic trends; paleontology; Systematics: ; Stratigraphy: Oligocene - Recent; Geography: Atlantic, NE frontage^^1";
- 4407 s[4404] = "SCHERER M. (1975).- Cementation and replacement of Pleistocene Corals from the Bahamas and Florida: diagenetic influence of non-marine environments.- Neues Jb. Geol. Palaeontol. Abh. 149, 3: 259-285.- FC&P 4-2, p. 49, ID=5222^Topic(s): cementation, diagenesis; cementation diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: Bahamas, USA Florida^Diagenesis of Pleistocene Corals from the Bahamas and Florida was studied in four non-marine, present-day environments: littoral spray zone, mangrove swamp, vadose and phreatic fresh water environment. Depending on these environments, different cement features, fabrics, sequence as well as replacement features occur. On the basis of cements and replacement features it was possible to distinguish environmental conditions in Pleistocene reef rocks.^1";
- 4408 s[4405] = "MARTIN L., BITTENCOURT A.C.S.P., VILAS BOAS G.S. (1982).- Primeira ocorrencia de corais pleistocenicos da costa brasileira - datacao do maximo da penultima transgressao.- Ciencias da Terra 03:

- 16-17; Lisboa.- FC&P 13-2, p. 4, ID=0615^Topic(s): geochronometry; Scleractinia, Siderastrea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Brazil, Bahia^Radiometric dating of corals (Siderastrea sp.) from a Pleistocene coral reef near Olivenço, Bahia (Brazil) indicates ages ranging from 116,000 to 112,000 years. So far, this is the only known Pleistocene coral reef cropping out at the Brazilian coast.^1";
- 4409 s[4406] = "BOEKSCHOTEN G.J., WIJSMAN-BEST M. (1981).- Pocillopora in the Miocene reef at Baixo, Porto Santo (Eastern Atlantic).- Proc. Kon. Ned. Akad. Wetensch. (B) 84, 1: 13-20.- FC&P 11-1, p. 31, ID=1753^Topic(s): Scleractinia, Pocillopora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Atlantic E^1";
- 4410 s[4407] = "CHEVALIER J.P. (1972).- Les Scléractiniaux du Miocène de Porto Santo (Archipel de Madère). Etude paléontologique.- Annales de Paléontologie, Invertébrés 58: 141-160.- FC&P 1-2, p. 20, ID=3320^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene; Geography: Madeira^16 species of hermatypic and non hermatypic corals are described. There are two new species and three endemic ones. The fauna presents a great affinity with the corals of the mediterranean Vindobonian.^1";
- 4411 s[4408] = "LEAO Z.M.A.N., LIMA O.A.L. (1982).- Caracterização do substrato de recifes de corais holocênicos a partir de dados de sísmica de refração e de perfuração.- Revista Brasileira de Geociências 12, 4: 531-535.- FC&P 13-2, p. 3, ID=0612^Topic(s): reefs, structures; reefs; Systematics: Stratigraphy: Pleistocene; Geography: Brazil, Bahia^Four seismic refraction profiles on the Coroa Vermelha Reef, Abrolhos Bank, revealed the presence of a wave-velocity discontinuity. Diagenetic alteration observed on a drill core from the same site at about the depth of the discontinuity indicates that such a surface, developed on a limestone reef, is due to processes related to subaerial exposure. This evidence of subaerial exposure correlated with the last Pleistocene low stand of sea level, plus the morphology of the subsurface sequence as well as its faunal composition indicate that the underlying substrate of the Holocene Coroa Vermelha Reef is a reef limestone of a probable Pleistocene age. (Original abstract)^1";
- 4412 s[4409] = "LEAO Z.M.A.N. (1983).- Abrolhos - o refugio pleistoceno de uma fauna terciária de corais.- Ciências da Terra 8: 22-24; Lisboa.- FC&P 13-2, p. 3, ID=0611^Topic(s): reefs, structures, history; reefs; Systematics: Stratigraphy: Pleistocene Recent; Geography: Brazil, Abrolhos^The Abrolhos reefs, off the coast of Eastern Brazil, are the southernmost coral reefs in the Atlantic and are significantly different from the well known reefs in the Caribbean. These differences are in the reef-building organisms, the morphology, the surrounding sediments and the Quaternary history of the area. The reefs form two arcs which occupy a total area of approximately 6000 km². The basic element of most of the reefs is the &chapeiroses&, mushroom-shaped pinnacles. In the coastal arc, the top of the adjacent &chapeiroses& coalesces to form bank or platform reefs, 1 to 20 km long and with varied shapes. These bank reefs do not display the well marked zones of the Caribbean reefs. The outer arc, in waters 15 to 20 m deep, surrounds the volcanic island of the Abrolhos Archipelago and is formed by &chapeiroses& that do not coalesce.^1";
- 4413 s[4410] = "KUHNER H., PATZOLD J., SCHNETGER B., WEFER G. (2002).- Sea-surface temperature variability in the 16th century at Bermuda inferred from coral records.- Palaeogeography, Palaeoclimatology, Palaeoecology 179, 3-4: 159-171.- FC&P 31-2, p. 27, ID=1666^Topic(s): paleotemperatures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography:

Bermuda Records of skeletal $\delta^{18}O$ in monthly and Sr/Ca ratios in half-yearly resolution were obtained from a Bermuda coral (*Diploria labyrinthiformis*) for the time period 1520–1603 (± 15 yr) AD within the Little Ice Age. Annual and decadal averages of both sea-surface temperature proxies indicate temperature variabilities of 0.5°C (standard deviation) and 0.3°C, respectively. Both numbers are close to recent instrumental observations. Approximately 30% of the interannual time series variance of $\delta^{18}O$ is concentrated in broad bands centered at periods of ~ 30 , 16 and 7.8 yr, the last two reflecting the influence of the North Atlantic Oscillation. Although this large-scale climate signal is present in the record, there is no correlation with other contemporaneous northern hemisphere proxy data, resulting from spatial differences in climate variability.¹;

4414 s[4411] = "MOL B.de, RESBERGEN P.van, PILLEN S., HERREWEGHE K.van, ROOIJ D.van, MCDONELL A., HUVENNE V., IVANOV M., SWENNEN R., HENRIET J.P. (2002).- Large deep-water coral banks in the Porcupine Basin, southwest of Ireland.- *Marine Geology* 188, 1-2: 193-231.- FC;P 32-1, p. 33, ID=1738Topic(s):reefs coral banks; coral buildups; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Atlantic EThe Porcupine Basin, southwest of Ireland, was one of the earliest sites from where the deep-water corals *Lophelia* sp. and *Madrepora* sp. were recovered. These deep-water corals have since been found all along the Atlantic margins of Europe, in water depths ranging from 50 to more than 2000m. Recent geophysical studies have demonstrated the mound-building potential of deep-water corals. Available data indicate that three major provinces of coral bank occurrences can be identified in the Porcupine Basin: (1) high-relief surface mounds which have a dimension of 1 by 5km and a height up to 200m (Hovland mounds), flanked to the north by (2) a swarm of buried mounds, somewhat smaller (up to 90m), and with more irregular shapes than those recognised in area 1 (Magellan mounds), and (3) outcropping or buried, conical mounds (single or in elongated clusters, up to 150m high) occurring on the southeastern slope of the basin (Belgica mounds). As far as can be inferred from shallow cores, the surface lithology predominantly consists of an upper layer rich in foraminiferal sand and terrigenous silty clay with intercalations of biogenic rubble. The banks host a remarkable number of colonies of living and dead *Lophelia pertusa* and *Madrepora oculata*. The living and dead assemblages are underlain by a significant layer of coral debris in a muddy matrix. Deep-water coral debris together with a living association of the same species covers the surface of the Belgica and Hovland mounds, which may suggest that these corals have played a significant role in the development of the mound structures. The capacity for mound formation by scleractinian corals in the aphotic zone has been known for some time. Examples are found at different locations along the shelves and the continental margins of the North Atlantic. The role of the corals in these deep-water build-ups is still a point of debate. Though the genesis and initial control of mound settings in this basin might be related to hydrocarbon seeps, it appears that the major development of the Porcupine coral banks in recent geological times has most likely been controlled by oceanic circulation and dynamics in water masses and nutrient supply. [original abstract]¹";

4415 s[4412] = "WHEELER A.J., BEYER A., FREIWALD A., de HAAS H., HUVENNE V.A.I., KOZACHENKO M., OLU-LEROY K., OPDERBECKE J. (2006).- Morphology and environment of cold water corals carbonate mounds on the NW European margin.- *International Journal of Earth Sciences (Geologische Rundschau)* 96, 1: 37-56.- FC;P 35, p. 101, ID=2431Topic(s):reefs, coral mud mounds; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Quaternary; Geography: Atlantic NECold-water coral carbonate mounds, owing their presence mainly to the framework building

coral *Lophelia pertusa* and the activity of associated organisms, are common along the European margin with their spatial distribution allowing them to be divided into a number of mound provinces. Variation in mound attributes are explored via a series of case studies on mound provinces that have been the most intensively investigated: Belgica, Hovland, Pelagia, Logachev and Norwegian Mounds. Morphological variation between mound provinces is discussed under the premise that mound morphology is an expression of the environmental conditions under which mounds are initiated and grow. Cold-water coral carbonate mounds can be divided into those exhibiting "inherited" morphologies (where mound morphology reflects the morphology of the colonised features) and "developed" morphology mainly reflecting dominant hydrodynamic controls). Finer-scale, surface morphological features mainly reflecting biological growth forms are also discussed.^1";

4416 s[4413] = "LABOREL J.L. (1974).- West African corals, an hypothesis on their origin.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 425-443.- FC&P 4-1, p. 17, ID=5003^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Africa W^^1";

4417 s[4414] = "PEREZI C.D., COSTAL D.L., OPRESKO D.M. (2005).- A new species of *Tanacetipathes* from Brazil, with a redescription of the type species *T. tanacetum* (Pourtales) (Cnidaria, Anthozoa, Antipatharia).- *Zootaxa* 890: 1-12.- FC&P 33-2, p. 41, ID=1186^Topic(s): ; Anthozoa, Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Brazil^The type species of *Tanacetipathes* Opresko, 2001 is *Antipathes tanacetum* Pourtalès, 1880. Pourtalès did not designate a holotype for *A. tanacetum*, nor did he indicate which form he thought was the most "typical" of the species. Because of the similarities of some of the syntypes with other nominal species, it is necessary to select a lectotype from one of the two groups with predominantly uniserial pinnulation. A specimen with short curved primary pinnules was chosen because it has a very distinctive pinnulation pattern that has been previously associated with *Tanacetipathes tanacetum*. With a lectotype of *T. tanacetum* designated, potential new species of *Tanacetipathes* can now be evaluated and compared directly with the type species. This is the case for *T. paula* n.sp., which is described here from the littoral of Archipelago of Saint Peter and Saint Paul (Brazil). This species has a corallum pseudo-dichotomously branched, with primary pinnules arranged in four rows and in alternating biserial groups of two pinnules each. The primary pinnules are up to 1.9cm in length. The secondary pinnules usually occur bilaterally, on both sides of the primary pinnules, and often in subopposite pairs, especially near the base of the primary pinnules. There are usually 3-9 secondary pinnules per lateral primary pinnules. The anterior primary pinnules always with only two secondary pinnules arranged in subopposite pair nearer the base of primary. The axial spines are relatively large, conical, acute and slightly papillose; the polypar spines up to 0.25mm tall and abpolypar spines up to 0.17mm. Polyps are not present on the type specimen.^1";

4418 s[4415] = "URIZ M.-J., MALDONADO M. (1996).- The genus *Igernella* (Demospongiae: Dendroceratida) with description of a new species from the central Atlantic.- *Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie* 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 153-163.- FC&P 25-2, p. 30, ID=3110^Topic(s): new taxa; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Atlantic central^The genus *Igernella* Topsent, 1905 includes those dendroceratid sponges characterised by an irregularly reticulate skeleton arising from a spongin plate and the presence of diactinal, triactinal, or tetractinal spiculoids. To date, two species of this genus are

described : *Igernella mirabilis* Levi from the Indo-Pacific and *Igernella notabilis* (Duchassaing and Michelotti) from the central Atlantic. A re-examination of material previously assigned to the genera *Igernella* and *Darwinella* allowed us to detect the existence of a second species of *Igernella* in the central Atlantic. *Igernella vansoesti* sp.nov. is erected to include the specimens from the Cape Verde Islands assigned to *I. notabilis* by Van Soest (1993), and one specimen from the Gulf of Mexico formerly recorded under the name *Darwinella muelleri* Schulze by De Laubenfels. The specimen described as *Darwinella joyeuxi* Tosent by Little (1963) probably belongs to this species as well. The new species is distinguishable from *I. notabilis* by its massive growth habit -without conspicuous tubes-, a minutely conulose surface, small oscules, and a skeletal network, made of narrow primary and secondary fibres, denser than that of *I. notabilis*. There is an important amount of foreign material embedded in the mesohyl whereas it is scarce within the fibres or even absent. The absence of debris in the fibres of some species of *Igernella* suggests a close relationship between this genus and other genera of the family Darwinellidae. This is in agreement with a recent proposal of moving the genus *Igernella* from the family Dictyodendrillidae to the family Darwinellidae on the basis of their chemical affinities. [original abstract]^1";

4419 s[4416] = "HAJDU E., SOEST W.M.van (1992).- A revision of Atlantic *Asteropus* Sollas 1888 (Demospongiae), including a description of three new species, and with a review of the family Coppatiidae Topsent 1898.- *Bijdragen tot de Dierkunde* 62, 1: 3-19.- FC&P 22-2, p. 91, ID=3537^Topic(s): taxonomy; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Atlantic^Various records of *A. simplex* Carter 1879 from the Atlantic are assigned to three new species of the sponge genus *Asteropus* Sollas 1888, viz.: *A. brasiliensis* sp.n., *A. vasiformis* sp.n., and *A. niger* sp.n., whereas *A. simplex* s.s. is restricted to the Indo-Pacific. A worldwide study of *Asteropus* specimens resulted in the conclusion that two species groups exist, namely "simplex"-like species (with true sanidasters), and "sarasinorum"-like species (with spiny microrhabds), as previously observed by Bergquist (1965, 1968). A newly discovered microsclere complement of trichodragmata in the first group strengthens the need for generic distinction of both lineages, and accordingly the name *Meloplus* Thiele 1899 is reinstated for the "sarasinorum" species group. A key to the west Atlantic species of *Asteropus* is provided. The family allocation of *Asteropus* and associated genera in the Coppatiidae Topsent 1898 is discussed, with the conclusion that the family is undoubtedly a polyphyletic assemblage related to various astrophorid groups (Hooper 1986; van Soest 1991).^1";

4420 s[4417] = "MEHL D., REITNER J., REISWIG H.M. (1994).- Soft tissue organization of the deep water hexactinellid *Schaudinnia arctica* Schulze 1900 from the Arctic Seamount Vesterisbanken (Central Greenland Sea).- *Berliner geowissenschaftliche Abhandlungen* E13: 301-313.- FC&P 23-2.1, p. 60, ID=4416^Topic(s): histology; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: Arctics Vesterisbanken^Histology and ultrastructure of the hexactinellid arctic deep sea sponge *Schaudinnia arctica* are investigated. Various techniques of fluorescence microscopy proven to be very informative for the study of poriferan soft tissues are applied. These methods for use in sponge research are explained in detail. The histology shows that *Schaudinnia arctica* on the whole corresponds with earlier models of hexactinellid organization. However, the collagenous mesolamella are surprisingly thick compared with those of other hexactinellids described so far. Spectacular accumulations of granular cells with larger inclusions are observed throughout the entire sponge body. Transitional cell types indicate an ontogenetic succession from

archaeocytes to granular cells in *Schaudinnia arctica*. According to observations in UV-fluorescence microscopy with different staining methods, the large inclusions of these granular cells contain little glycogen, but high Ca²⁺-contents. According to comparisons with similar cells of demosponges, it is suggested that the granular cells may function as storage cells for lectins, which play an important role in the metabolism of sponges.^1";

4421 s[4418] = "WISSHAK M., LOPEZ CORREA M., ZIBROWIUS H., JAKOBSEN J., FREIWALD A. (2009).- Skeletal reorganisation affects geochemical signals, exemplified in the stylasterid hydrocoral *Errina dabneyi* (Azores Archipelago).- *Marine Ecology Progress Series* 397: 197-208.- FC&P 36, p. 135, ID=6598^Topic(s): geochemical signals; Hydrozoa, *Errina*; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Azores^The pure white fans of the stylasterid *Errina dabneyi* are a conspicuous feature on the upper bathyal slopes in Azorean waters and were documented and recovered alive with the aid of a submersible in the southern Faial Channel. Etched vacuum-epoxy-casts of the aragonite skeleton, studied by scanning electron microscopy, reveal the 3-dimensional internal architecture comprising coenosarc canal meshwork, dactylopores, gastropores and ampullae. Near the surface, the canals are narrow and interconnected in a regular 3-dimensional meshwork. Deeper inside, the canals are less abundant, more irregular and wider. This pattern implies that the skeletal architecture is modified during growth, with more central canals being enlarged by dissolution, and other canals, gastropores and dactylopores in turn being filled with aragonite reprecipitates. The skeleton is primarily composed of irregular spherulitic aggregates and overprinting during growth is evident from ghost structures in the form of successive semi-spherulitic infill of former canals. Due to differential dissolution and reprecipitation, this internal rebuild process inevitably involves an alteration of initial geochemical signatures such as stable isotope ratios (d18O and d13C), trace element signals and the distribution of radiogenic isotopes of carbon and uranium. This has to be taken into account when applying radiometric dating techniques and when using stylasterids as a geochemical archive. [original abstract]^1";

4422 s[4419] = "ZIBROWIUS H., THORSEN M. (1992).- The Stylasteridae (Cnidaria, Hydrozoa) of the BIOFAR project.- *Northurlandhusith arsrith* 1991-92: 78.- FC&P 22-1, p. 44, ID=3413^Topic(s): taxonomy; Hydrozoa, Stylasteridae; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Faroe Isls^Stylasteridae are calcified colonial hydroids. Their polyps are differentiated into gastrozooids (feeding polyps) and dactylozooids (defensive polyps) that are housed in the corresponding gastro- and dactylopores of the skeleton. Taxonomy is essentially based on these and other skeletal characters. There has been confusion of Stylasteridae with Bryozoa, and vice versa. Previous records of stylasterids are rare from around the Faroe islands and adjacent areas, where the earliest records date back to 19th century expeditions. BIOFAR has now provided abundant new information on the stylasterid fauna of Faroese waters. Four species have been collected from 54 stations (depth 133-1099m) around the islands: *Pliobothrus symmetricus* Pourtales 1868, *Stylaster erubescens* Pourtales 1868, *S. gemmascens* (Esper 1794), *S. norvegicus* (Gunnerus 1768). The two genera are morphologically very different, *Pliobothrus* having gastro- and dactylopores randomly arranged, *Stylaster* having gastro- and dactylopores arranged in cyclo systems. Although containing only these few species (previously recorded by the Danish INOOLF expedition in 1895/96 and studied by Broch in 1914), the BIOFAR collection is the richest and includes all species ever obtained in high latitudes of the N Atlantic. *S. gemmascens* and *S. norvegicus* occur only from Norway to Denmark Strait, Rockall plateau being the southern outpost. On the contrary, *P. symmetricus* recorded from Norway to SE of Iceland and S.

erubescens recorded from the Faroes to Denmark Strait, also occur at much lower latitudes in the N Atlantic and are even amphiatlantic in distribution, a pattern rare in this group of corals if compared with the scleractinians. The high latitude populations of *S. erubescens* differ in some details from the typical low latitude ones of the W Atlantic (Yucatan through Florida to South Carolina). Polynoid polychaetes and *Pedicularia* gastropods, known to be frequent symbionts of stylasterids world-wide, are absent from the high latitudes (northernmost occurrence of *Pedicularia* on *P. symmetricus* and *S. erubescens* at 48°38'N in the Celtic Sea). Distribution of stylasterids in relation with water masses in the N Atlantic deserves special attention. Previously available data on occurrence in high latitude suggested that stylasterids do not occur deep in the Arctic basin beyond a line connecting, roughly, Norway, the Faroes, Iceland and Greenland. [fragment of extensive abstract] ^1";

- 4423 s[4420] = "BAYER F.M. (2001).- New species of Calyptrophora (Coelenterata; Octocorallia: Primnoidae) from the western part of the Atlantic Ocean.- Proceedings of the Biological Society of Washington 114, 2: 367-380.- FC&P 33-1, p. 29, ID=7183^Topic(s): new taxa; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Atlantic W^^1";
- 4424 s[4421] = "BAYER F.M., CAIRNS S.D. (eds) (2004).- The unpublished plates for A. E. Verrill's unfinished report on the Alcyonaria of the A. Blake's expeditions.- Dept. of Zoology, National Museum of Natural History, Washington, DC; 8pp + 156 pls.- FC&P 33-1, p. 29, ID=7184^Topic(s): taxonomy, old drawings; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Atlantic W^This publication deals with a very limited set (50) of the unpublished octocoral plates of A. E. Verrill. Verrill (1839-1926) was one of the most prolific and influential marine invertebrate zoologists of the late nineteenth and early twentieth centuries, having published over 350 papers in which he described over 1000 new species pertaining to almost every marine group. When he died at the age of 87 he left behind an unfinished monograph on the western Atlantic octocorals consisting of over 1000 pages of text and 156 meticulously drawn plates, much of the artwork done by Verrill's son Alpheus Hyatt Verrill. The text was lost, but over the years Dr. Frederick (Ted) Bayer, curator emeritus in the Department of Zoology, accumulated a unique, complete set of plates and a copy of Verrill's captions to those plates, in which Verrill alludes to the names of several hundred new taxa. Bayer painstakingly reassembled the plates, transcribed and annotated the captions, and then had 55 copies of the work published for general distribution. Thus, 78 years after his death, at least a part of Verrill's magnum opus can be used to help illustrate the deep-water western Atlantic octocorals, this work constituting the last publication of this prolific naturalist. The plates alone constitute an invaluable resource on the taxonomy of this group, and should be consulted by any serious student of the group.^1";
- 4425 s[4422] = "CAIRNS S.D. (2001).- Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 1. The genus *Chrysogorgia*.- Proceedings of the Biological Society of Washington 114, 3: 746-787.- FC&P 33-1, p. 29, ID=7185^Topic(s): taxonomy; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Atlantic W^^1";
- 4426 s[4423] = "CAIRNS S.D., BAYER F.M. (2002).- Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 2. The genus *Callogorgia* Gray, 1858.- Proceedings of the Biological Society of Washington 115, 4: 840-867.- FC&P 33-1, p. 30, ID=7186^Topic(s): taxonomy; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Atlantic W^^1";
- 4427 s[4424] = "CAIRNS S.D., BAYER F.M. (2003).- Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 3. The genus *Narella* Gray,

- 1870.- Proceedings of the Biological Society of Washington 116, 2: 617-648.- FC&P 33-1, p. 30, ID=7187^Topic(s):taxonomy; Octocorallia; Systematics:Cnidaria; Octocorallia; Stratigraphy:Recent; Geography:Atlantic W^^1";
- 4428 s[4425] = "CAIRNS S.D., BAYER F.M. (2003).- Narella regularis (Duchassaing & Michelotti, 1860) (Coelenterata; Octocorallia: Primnoidae); proposed conservation of prevailing usage by a neotype.- Bulletin of Zoological Nomenclature 60, 4: 1-4.- FC&P 33-1, p. 30, ID=7188^Topic(s):nomenclature; Octocorallia; Systematics:Cnidaria; Octocorallia; Stratigraphy:Recent; Geography:Atlantic W^^1";
- 4429 s[4426] = "CAIRNS S.D., BAYER F.M. (2004).- Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 4. The genus Paracalyptrophora Kinoshita, 1908.- Proceedings of the Biological Society of Washington 117, 1: 174-199.- FC&P 33-1, p. 30, ID=7189^Topic(s):taxonomy; Octocorallia; Systematics:Cnidaria; Octocorallia; Stratigraphy:Recent; Geography:Atlantic W^^1";
- 4430 s[4427] = "CAIRNS S.D., BAYER F.M. (2004).- Studies on western Atlantic Octocorallia (Coelenterata: Anthozoa). Part 5. The genera Plumarella Gray, 1870; Acanthoprinoia, n.gen.; and Candidella Bayer, 1954.- Proceedings of the Biological Society of Washington 117, 4: 447-487.- FC&P 33-1, p. 30, ID=7190^Topic(s):taxonomy; Octocorallia; Systematics:Cnidaria; Octocorallia; Stratigraphy:Recent; Geography:Atlantic W^^1";
- 4431 s[4428] = "FRICKE H., MEISCHNER D. (1985).- Depth limits of Bermudan scleractinian corals: a submersible survey.- Marine Biology 88: 175-187.- FC&P 16-1, p. 69, ID=1986^Topic(s):bathymetry; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Recent; Geography:Bermuda^^1";
- 4432 s[4429] = "MIKKELSEN N., ERLKENUSER H., KILLINGLEY J.S., BERGER W.H. (1982).- Norwegian corals: radiocarbon and stable isotopes in Lophelia pertusa.- Boreas 11: 163-171.- FC&P 16-1, p. 70, ID=1992^Topic(s):Scleractinia, Lophelia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Recent; Geography:Norway^The ahermatypic coral Lophelia pertusa which produces aragonitic skeletons is widely distributed along the Norwegian coast. Specimens from a number of localities have been analyzed for oxygen and stable carbon isotope composition and 14C age. Stable isotope ratios of recent corals provide information on growth rate and seasonality of oceanographic conditions. Lophelia can be useful in paleoenvironmental reconstructions. 14C dates of fossil Lophelia from Dribak in the Oslofjord, collected from 20 m above and 40 m below present day sea-level, indicate regional extinction between 8700 and 7800 years ago. We suggest that the extinction resulted from the cut-off of deep waters by a rising sill in connection with the postglacial shoreline displacement. Radiocarbon dating of coral bushes suggests a fairly rapid growth rate as older and younger parts of recent corals do not reveal any difference in activity despite the short time scale of the history of bomb-produced 14C in the oceans.^1";
- 4433 s[4430] = "WYERS S.C. (1985).- Sexual reproduction of the coral Diploria strigosa (Scleractinia, Faviidae) in Bermuda; research in progress.- Proc. V Int. Coral Reef Congr. 4: 301-306.- FC&P 18-1, p. 28, ID=2226^Topic(s):sexual reproduction; Scleractinia, Diploria; Systematics:Cnidaria; Scleractinia; Stratigraphy:Recent; Geography:Bermuda^^1";
- 4434 s[4431] = "ZIBROWIUS H. (1992).- Scleractinia (Cnidaria, Anthozoa) of the Biofar project.- Northurlandhuith arsrut 1991-92: 78-79.- FC&P 22-1, p. 41, ID=3403^Topic(s):Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Recent; Geography:Faroe Isls^Previously published records of scleractinian corals from around the Faroe Islands are rare and include, as a curiosity, a West Indian brain coral (Diploria) found

attached to a stem of wood that floated into Westmanskjall during the month of March 1891. In addition, some species had been obtained by early expeditions (Lightning, Porcupine, Knight Errant, Triton, Michael Sars, etc.) in areas adjacent to the Faroes (Faroe Channel, Shetlands, Hebrides, northern end of Scotland). Biofar has now provided abundant new information on the scleractinian fauna of Faroese waters. Fifteen species have been collected from 51 stations (depth 180-1099m) around the islands: the solitary species *Caryophyllia abyssorum* Duncan 1873, *C. atlantica* (Duncan 1873), *C. seguenzae* Duncan 1873, *C. smithii* Stokes & Broderip 1828, *Desmophyllum cristagalli* Milne-Edwards & Haime 1848; *Flabellum macandrewi* Gray 1849, *Fungiacyathus fragilis* G.O. Sars 1872, *Leptopsammia britannica* (Duncan 1870), *Stenocyathus vermiformis* (Pourtales 1868), *Stepharocyathus moseleyanus* (Sclater 1886), *S. nobilis* (Moseley 1873), *Vaughanella concinna* Gravies 1915 and the colonial species *Lophelia pertusa* (Linnaeus 1758), *Madrepora oculata* Linnaeus 1758, *Solenosmilia variabilis* Duncan 1873. [first half of extensive summary]^1";

4435 s[4432] = "ALTUNA A. (1995).- El orden Scleractinia (Cnidaria, Anthozoa) en la costa vasca (Golfo de Vizcaya); especies batiales de la fosa de Capbreton.- *Munibe* 47: 85-96.- FC&P 26-2, p. 69, ID=3747^Topic(s): bathyal species; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Spain, Bay of Biscay^[Seven bathyal species dredged in the Capbreton canyon (SE of the Bay of Biscay) are described and their distribution is discussed]^1";

4436 s[4433] = "HOVLAND M., MORTENSEN P.B., BRATTEGARD T., STRASS P., ROKOENGEN K. (1998).- Ahermatypic Coral Banks off Mid-Norway: Evidence for a Link with Seepage of Light Hydrocarbons.- *Palaios* 13, 2: 189-200.- FC&P 27-1, p. 117, ID=3878^Topic(s): hydrocarbons seepage; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Norway^Large (up to 31-meter high) coral banks (or bioherms) occur on the continental shelf off mid-Norway at water depths between 220 and 310 meters. They are built up by the cold-water, ahermatypic, scleractinian coral *Lophelia pertusa* (L.). A 3-km-wide and 200-km-long traverse was mapped geophysically across a large part of the mid-Norway shelf. A total of 57 suspected individual banks were found. Although they occur in local clusters of up to 9 banks per km², the mean density along the whole transect is only 0.09 suspected banks per km², with the highest regional density (1.2 banks per km²) occurring above subcropping presumed Paleocene bedrock. A detailed investigation employing an ROV (remotely operated vehicle) was conducted of a cluster consisting of 9 individual banks. Based on geophysical, visual, geochemical, radiocarbon, and other analyses, we conclude that at least some of the coral banks have been forming at the same locality for over 8,000 years, and that there is a strong correlation between coral-bank occurrence and relatively high values of light hydrocarbons (methane, ethane, propane, and n-butane) in near surface sediments. To explain the structure and distribution of these coral banks, we propose a model where they form as a consequence of local fertilization that results from focused hydrocarbon micro-seepage of deep thermogenic hydrocarbons migrating to the surface along inclined, permeable sedimentary strata. A direct corollary of this model is that if and when the source of local fertilization is shut off, the bioherms die out. This possibly could be the reason why extinct bioherms are more common than live ones in some areas of the ocean.^1";

4437 s[4434] = "ZIBROWIUS H. (1974).- Redescription of *Sclerhelia hirtella* from Saint Helena, South Atlantic, and remarks on Indo-Pacific species erroneously referred to the same genus (*Scleractinia*).- *J. nat. Hist.* 1974, 4: 563-575.- FC&P 3-2, p. 35, ID=4927^Topic(s): taxonomy; Scleractinia, *Sclerhelia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Saint Helena^*Sclerhelia hirtella* (Pallas, 1766), type species of *Sclerhelia*,

is redescribed from samples from Saint Helena, South Atlantic, and referred to the family Caryophylliidae. Up to now there is no confirmation on the occurrence of *S. hirtella* at any locality other than Saint Helena. Here, the species lives in rather shallow water but it is unknown whether symbiotic zooxanthellae are present in the soft parts. * The species from the Maldives and Indonesia known as *Sclerhelia formosa* (Alcock, 1898) is not congeneric with *Sclerhelia hirtella* but close to *Madrepora oculata* Linné, a species conventionally placed in the family Oculinidae. * The species from the Marshall Islands, described by Wells (1954) as *Sclerhelia alcocki* is a dendrophylliid coral identical with *Dendrophyllia palita* Squires & Keyes, 1967, from New Zealand. The Maldives are the third area where this species is known (the original record having been confused with another dendrophylliid species).^1";

4438 s[4435] = "ZIBROWIUS H. (1974).- *Caryophyllia sarsiae* n.sp. and other Recent deep-water Caryophyllia (Scleractinia) previously referred to little-known fossil species (*C. arcuata*, *C. cylindracea*).- *J. mar. boil. Ass. U. K.* 54: 769-784.- FC&P 4-1, p. 27, ID=5088^Topic(s): deep water; Scleractinia, Caryophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Atlantic NE^Three deep-water species of the north-eastern Atlantic have been studied: *Caryophyllia abyssorum* Duncan 1873, *C. calveri* Duncan 1873, *C. sarsiae* n.sp. Of these only *C. abyssorum* has not been found in the Mediterranean.^1";

4439 s[4436] = "ZIBROWIUS H. (1974).- Révision du genre *Javania* et considérations générales sur les Flabellidae (Sclérectiniaux).- *Bulletin Inst. Océanogr.* 71, 1429: 1-48.- FC&P 4-1, p. 27, ID=5089^Topic(s): review; Scleractinia, Flabellidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Azores^Des représentants du genre *Javania*, essentiellement bathyaux, sont très répandus dans la faune actuelle du monde entier. Une nouvelle espèce, *J. pseudoalabastra*, est décrite d'après du matériel des Açores (récolté en partie en 1888, par le Prince Albert Ier de Monaco). Confondu longtemps avec le genre *Desmophyllum*, le genre *Javania* doit être attribué à la famille des Flabellidae. Jusqu'à présent, l'absence d'exosarque avait été considérée comme un caractère principal de cette famille. Or, cette conception est à modifier. Chez *Javania*, la fixation au substrat est renforcée par des couches massives concentriques de sclérenchyme qui entourent le pédoncule original. Un exosarque doit être à l'origine de ce sclérenchyme. * Les genres précédemment reconnus par les auteurs dans la famille des Flabellidae sont commentés; une proposition pour redistribuer en neuf groupes les formes actuelles de cette famille est faite. Un tableau comparatif résume les caractères principaux de ces groupes proposés qui pourraient avoir le rang générique.^1";

4440 s[4437] = "ZIBROWIUS H. (1974).- Capsules ovigères de Gastéropodes Turridae et corrosion du squelette des Sclérectiniaux bathyaux des Açores.- *Rev. Facult. Cienc. Lisboa*, 2a ser., C, 17, 2: 581-598.- FC&P 4-2, p. 50, ID=5228^Topic(s): skeletal corrosion; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Azores^Des capsules ovigères ont été souvent trouvées associées à des phénomènes de corrosion (tâches superficielles ou cupules plus profondes) sur le squelette des *Flabellum chunii* vivants ou morts entre 530 et 600m et exceptionnellement sur d'autres espèces de profondeur analogue ou supérieure.^1";

4441 s[4438] = "SCHAFER P., HENRICH R., ZANKL H., BADER B. (1996).- Carbonate Production and Depositional Patterns of BRYOMOL-Carbonates on Deep Shelf Banks in Mid and High Northern Latitudes.- *Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2* [Reitner J., Neuwiller F. & Gunke F. (eds): *Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution*]: pp ???.- FC&P

- 26-1, p. 28, ID=3575^Topic(s): carbonates; carbonates Bryozoa; Systematics: Bryozoa; Stratigraphy: Recent; Geography: Norway^Modern bryozoan-dominated communities and related BRYOMOL-carbonates on aphotic open shelf banks off the North Brittany coast and off Troms District, Northern Norway, are investigated with respect to Holocene development, ecology and carbonate production of benthic, suspension feeding communities as well as to processes of destruction and redeposition of skeletal carbonates as BRYOMOL-sediments.^1";
- 4442 s[4439] = "MORRI C., BIANCHI C.N. (1995).- Cnidarian Zonation at Ilha do Sal (Arquipelago de Cabo Verde).- Beiträge zur Paläontologie 20: 41-49.- FC&P 25-2, p. 72, ID=3177^Topic(s): bathymetry; Cnidaria; Systematics: Cnidaria; Stratigraphy: Recent; Geography: Cabo Verde Isls^A total of 19 conspicuous species was inventoried by scuba diving along 10 depth-transects, 0 to 33m depth. Multivariate analysis allowed the recognition of 5 cnidarian zones, namely: lower midlittoral zone, Millepora zone, mixed coral zone, overhang zone, gorgonian-antipatharian zone. Species substitution with depth is mainly related to gradients in light intensity and water movement; the possible role of competition and predation is also discussed. Although no true coral reefs exist at Sal, the observed zonation patterns are consistent with those typical of coral reef areas.^1";
- 4443 s[4440] = "VICENTE V.P. (1990).- Response of sponges with autotrophic endosymbionts during coral-bleaching episode in Puerto Rico.- Coral Reefs 8: 199-202.- FC&P 19-2.1, p. 43, ID=2782^Topic(s): ecology, coral-bleaching episode; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Puerto Rico^Lists of sponges with symbionts are included. 67% of them have cyanobacteria and 14% zooxanthellae. They were not affected when corals were bleached of their symbionts.^1";
- 4444 s[4441] = "WIEDENMAYER F. (1977).- Shallow-water sponges of the western Bahamas.- Experientia Supplementum 28: 336 pp., 43 pls, 180 textfigs, 52 tables; Birkhauser, Basel.- FC&P 6-2, p. 11, ID=5536^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Bahamas^[systematics, ecology and biogeography of Recent West Indian demosponges of reef environments]^1";
- 4445 s[4442] = "VOLKMER-RIBEIRO C., MOTTA J.F.M., CALLEGARO V.L.M. (1997).- Taxonomy and Distribution of Brazilian Spongillites.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6907^Topic(s): taxonomy, distribution; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Brazil^^1";
- 4446 s[4443] = "KUBLER B., BARTHEL D. (1999).- A carnivorous sponge, Chondrocladia gigantea (Porifera: Demospongiae), the giant deep-sea clubsponge from the Norwegian Trench.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 289-297.- FC&P 28-2, p. 8, ID=6960^Topic(s): carnivorous; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Norwegian Trench^^1";
- 4447 s[4444] = "LAZOSKI C., PEIXINHO S., RUSSO C.A.M., SOLE-CAVA A.M. (1999).- Genetic confirmation of the specific status of two sponges of the genus Cinachyrella (Porifera: Demospongiae: Spirophorida) in the Southwest Atlantic.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 299-306.- FC&P 28-2, p. 9, ID=6961^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Atlantic SW^^1";
- 4448 s[4445] = "MOTHES B., LERNER C.B., SELVA C.M.M.da (1999).- Revision of Brazilian Erylus (Porifera: Astrophorida: Demospongiae) with description of a new species.- Memoirs of the Queensland Museum 44

- [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 369-381.- FC&P 28-2, p. 9, ID=6968^Topic(s):new taxa; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Brazil^^1";
- 4449 s[4446] = "LEAO Z.M.A.N., ARAUJO, T.M.F., NOLASCO M.C. (1982).- Recifes de corais no Estado da Bahia.- Atlas do IV Simposio do Quaternario no Brasil 225-258.- FC&P 13-2, p. 4, ID=0613^Topic(s):reefs, muddy enviroment; reefs; Systematics: ; Stratigraphy: Recent; Geography: Brazil, Bahia^Contrasting with what is known about the growth of coral reefs in clear waters with minimal runoff of fresh water and sediment from land, the coastal reefs of Abrolhos, the fringing reefs around the Itaparica Island and the coral constructions at the Guarajuba Beach are surrounded and even infilled with muddy terrigenous sediments. Radiocarbon dates from a Holocene core boring revealed that the reefs accumulated at an average comparable with the average of growth of coral reefs in clear waters. This surprisingly demonstrated that the reef organisms, of the studied areas, are adapted to the previous accepted conditions of an unhospitable environment for reef growth. Yet, the growth forms of the reefs, the strong endemism of their coral fauna as well as the effects of the Quaternary history of the area, make these reefs quite different from the well known Caribbean models.^1";
- 4450 s[4447] = "LEAO Z.M.A.N., FERREIRA M.T.G.M., ARAUJO T.M.F. (1982).- Sedimentologia e estruturas biogenicas do recife de franja da Ilha de Itaparica, Bahia.- XXXII Congr. brasil. Geol. (Salvador, Bahia): 263-299.- FC&P 13-2, p. 4, ID=0614^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Brazil, Bahia^The Itaparica reef, in very shallow waters, has a flat top which stays exposed during low tides. The reef front lacks the "Spur and Groove" system and the back reef zone is represented by extremely shallow lagoons without patch reefs. Millepores and coralline algae contribute more to this reef than in the Caribbean reefs. In contrast with the predominance of carbonate sediments surrounding most reefs in the North Atlantic, the Itaparica reef is surrounded by sediments with a high amount of siliciclast components. An intensive activity of burrow and boring organisms is detected in the reef area, between the localities of Gamboa and Penha. Molluscs, annellids, sipunculids and arthropods produce distinctive boring structures on the reef structure and rock outcrops in the studied area. Communities of Decapoda (Crustacea), Gastropoda and Polychaeta are the major organisms responsible for excavations, pellets, fecal pipes and track dirts on the sandy and muddy substrates. The limitation of every of these communities can be easily defined, however, superpositions exist in the intertidal zone. [abridged original abstract]^1";
- 4451 s[4448] = "HUBBARD D.K., ZANKL H., HEERDEN van I., GILL I.V. (2005).- Holocene reef development along the Northeastern St. Croix Shelf, Buck Island, U.S. Virgin Islands.- Journal of Sedimentary Research 75, 1: 97-113.- FC&P 33-2, p. 44, ID=1204^Topic(s):geology; reefs; Systematics: ; Stratigraphy: Holocene; Geography: USA, Virgin Islands^Eight cores were recovered from Buck Island Underwater National Monument (U.S. Virgin Islands). Facies were defined based on recovered coral species, fabrics observed in core slabs and thin sections, and detailed notes on drilling character. Thirty-six radiometric dates constrained the timing of reef accretion. Together, these data provide a detailed history of reef development under varying regimes of sea-level rise and physical oceanography. [first part of a voluminous abstract]^1";
- 4452 s[4449] = "FREIWALD A., HUHNERBACH V., LINDBERG B., WILSON J.B., CAMPBELL J. (2002).- The Sula reef complex, Norwegian shelf.- Facies 47, 1: 179-200.- FC&P 31-2, p. 54, ID=1709^Topic(s):reefs, deep marine; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Atlantic NE^Cool-water carbonates in

the aphotic zone of deep shelf and continental margin settings in the Northeast Atlantic are produced by deep-water coral reefs with *Lophelia pertusa* as the major framework builder. Through a compilation of side scan sonar, airgun and manned submersible surveys from several cruises to the mid-Norwegian Sula Reef Complex (SRC), the facies pattern and zonation of one of the largest deep-water reefs in the Northeast Atlantic is described in relation to the overall seabed topography. The late glacial to early postglacial iceberg scour on the crest and shoulder of the Sula Ridge provides settling ground for the scleractinian corals already in the early Holocene. Since then coral growth continues until today but was supposed to be disturbed by an environmental hazard, the so-called second Storegga event. The distinct distribution pattern of individual *Lophelia* reefs on the Sula Ridge has stimulated a discussion on intrinsic environmental controls such as the benthic-pelagic coupling and the alternative hydrocarbon-based nutrition hypothesis.¹¹;

- 4453 s[4450] = "HUBBARD D.K., BURKE R.B., GILL I.P. (1986).- Styles of reef accretion along a steep, shelf-edge reef, St. Croix, U.S. Virgin Islands.- *Journal of Sedimentary Petrology* 56, 6: 848-861.- **FC&P 16-1**, p. 72, ID=2008^**Topic(s): reef accretion; reefs; Systematics: ; Stratigraphy: Recent; Geography: USA, Virgin Islands^Seven horizontal cores were taken from the reef-dominated margins of Salt River submarine canyon, St. Croix, U.S. Virgin Islands at water depths of 14-30 m. The pattern of east-to-west sediment transport in the area exerts a major control on present-day reef morphology, as well as accretionary styles recorded in the cores. Coral growth is inhibited by sedimentation on much of the eastern (heavily stressed) margin, and slopes are gentle. The regular pattern of alternating reef growth and sedimentary infill in the eastern cores reflects this highly variable environment. On the west wall, away from the source of incoming bedload sediment, coral cover is much greater, and a vertical reef wall forms the canyon margin. Slumping of the steep reef face has caused numerous repetitions of section and, in some instances, accretion rates higher than the growth rates of calcifying organisms occupying the present or past reef surface. This slumping process, along with the highly dissected character of the reef, results in larger sections of reef framework separated by open or sediment-filled vugs and caverns. 14C dates indicate that this complex constructional history has resulted in at least 24 m of lateral accretion during Holocene time. Average lateral-accretion rates in the cores varied from 0.84 to 2.55 m/1,000 yr, with the highest rate occurring in the core from deepest water. Intervals of rapid accretion within the cores were not generally related to patterns of in situ coral growth, but rather with intervals of allochthonous material slumped from the shallower portions of the reef complex. The character of the cores illustrates the potential importance of detrital material and late-stage reworking in the accretion of shelf-edge reefs. The high rates of accretion at depth highlight potential problems with reef models based on net accretion paralleling the abilities of the present-day surface organisms to produce calcium carbonate.¹¹;**
- 4454 s[4451] = "DORSCHER B., HEBBELN D., RUGGERBERGER A., DULLO C. (2007).- Carbonate budget of a cold-water coral carbonate mound: Propeller Mound, Porcupine Seabight.- *International Journal of Earth Sciences (Geologische Rundschau)* 96, 1: 73-83.- **FC&P 35**, p. 97, ID=2420^**Topic(s): reefs, carbonate mounds; carbonate mounds; Systematics: ; Stratigraphy: Quaternary; Geography: Atlantic, Porcupine Bight^High resolution studies from the Propeller Mound, a cold-water coral carbonate mound in the NE Atlantic, show that this mound consists of > 50% carbonate justifying the name 'carbonate mound'. Through the last ~ 3000,000 years approximately one third of the carbonate has been contributed by cold-water corals, namely *Lophelia pertusa* and *Madrepora oculata*. This coral bound contribution to the carbonate budget of Propeller Mound is**

probably accompanied by an unknown portion of sediments buffered from suspension by the corals. However, extended hiatuses in Propeller Mound sequences only allow the calculation of a net carbonate accumulation. Thus, net carbonate accumulation for the last 175 kyr accounts for only less than 0,3 g/cm²/kyr, which is even less than for the off-mound sediments. These data imply that Propeller Mound faces burial by hemipelagic sediments as has happened to numerous buried carbonate mounds found slightly to the north of the investigated area.¹;

- 4455 s[4452] = "LOGAN A. (1988).- Holocene Reefs of Bermuda.- Sediments 11: 1-62.- FC&P 18-2, p. 49, ID=2515^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Bermuda^Reefs of the Bermuda Pedestal, well north of the Carribean reef province, have interested scientists since Darwin. The attributes of these reefs, unique to the Atlantic-Carribean area, are well documented in this new guidebook. The text of this slim volume begins with six single spaced pages of introduction, regional geology, and previous studies followed by seven pages of description outlining the nature of the reefs themselves, their coelobite communities, and their relationship to Carribean reefs and concludes with six pages discussing the biotic factors which affect the reefs, their diagenesis, and their associated sediments. This is followed by a welcome 12 pages of references. The eight diagrams and 29 photographs (underwater and aerial closeups of the reefs) are on glossy paper and grouped together after the references. Appendix I outlines three whole-day reef trips with a description of each stop. Appendix II is a list of the corals in Bermuda while Appendix III is a key to the corals together with pictures of 18 corals which can be used for identification. This is a clearly printed and easily readable book. It is a scholarly work, an excellent source of up-to-date information on Bermuda reefs by someone who has studied these reefs for over a decade. As such it is both a handy guide and a handy reference. I would have liked slightly larger photographs and interwoven text and figures/photographs, but at this price who can complain. I am writing this review at the Bermuda Biological Station in the final days of a field trip with students and so have "field tested" this guide. If you are planning such a trip this book is a must, if you are at all interested in living reefs I highly recommend this inexpensive publication. [reviewed by Noel P. James]^1";
- 4456 s[4453] = "HENRICH R., REITNER J., SPIEGLER D. (1991).- Benthos-Gemeinschaften auf Vesterisbanken und Kuppen der Fracture Zones.- Berichte Polarforschung 80/91 (Exped. Arktis VII71 mit FS"Polarstern" 1990): 67-72.- FC&P 21-2, p. 50, ID=3348^Topic(s): benthos; benthic communities; Systematics: ; Stratigraphy: Recent; Geography: Greenland Sea^^1";
- 4457 s[4454] = "REITNER J., HENRICH R. (1992).- Benthos-Gemeinschaften des Vesterisbanken-Seamount in der NE-Gronland-See (FS-"Polarstern"-Expedition ARK VII/1, 1990).- Verhandlungen der deutschen zoologischen Gesellschaft 84: 507-508.- FC&P 21-2, p. 52, ID=3351^Topic(s): benthos; benthic communities; Systematics: ; Stratigraphy: Recent; Geography: Greenland Sea^^1";
- 4458 s[4455] = "FREDERIKSEN R. (1992).- The Fauna associated with the coral Lophelia pertusa around the Faroes.- Northurlandahuith arsit 1991-92: 79 pp.- FC&P 22-1, p. 39, ID=3399^Topic(s): reefs, biology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Faroe Isls^Banks of Lophelia pertusa have been recorded at several localities round the Faroe islands concentrated on the edges of the banks and the Faroe shelf at depths between 250 and 400m.Coral formations can exceed hundreds of metres in width and tens of metres in height. Lophelia pertusa is a colonial, branching, ahermatypic coral. The coral bank is inhabited by a rich associated fauna. We have examined more than 5700 individuals belonging to 301 species from 18kg of coral. Of the list of 301 associated species, 97

are new to "The Zoology of the Faroes". The associated fauna has a calculated Shannon-Wiener diversity index of 5,26. This is similar to that found on tropical coral species. This indicates that Lophelia coral banks has a link to productive high energy areas. The living part and the dead part of Lophelia pertusa house different species. Specialized species are capable of resisting the defence of the living coral. Typically, the number of individuals is much higher on dead coral blocks. Polychaete are the dominating group on the coral bank. We found 72 species and more than 1800 individuals. Sessile epibionts are the most numerous organisms on Lophelia pertusa. A lot of these are colonial species, which we have not quantified. The active filter feeders are the most numerous group of feeding types on the coral bank. Decomposition of the corals is carried out primarily by 2 species of boring sponges that erode the coral branches from inside. Comparing the fauna from Lophelia pertusa in the Faroe area with other studies on Lophelia fauna we find about the same number of species on Norwegian and French Lophelia banks. It appears that the associated fauna is rather facultative than being an obligate Lophelia fauna.^1";

4459 s[4456] = "HENRICH R., HARTMANN M., REITNER J., SCHAFER P., FREIWALD A., STEINMETZ S., DIETRICH P., THIEDE J., (1992).- Facies belts and communities of the Arctic Vesterisbanken Seamount (Central Greenland Sea).- Facies 27: 71-104.- FC&P 22-1, p. 53, ID=3427^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: Recent; Geography: Greenland Sea^The Arctic Vesterisbanken Seamount, situated far offshore in the central Greenland Sea, provides a unique facility for studying modern cold water siliceous carbonate deposits. A nearly year round sea ice cover, which retreats on average only during two months, and a rather constant temperature and salinity structure of the water column characterize the Arctic conditions of the area. Despite predominantly oligotrophic conditions with a pronounced food supply from the pelagic realm only during the ice-free season, the seamount is covered extensively by extended sponge-bryozoan constructions. Three distinct facies belts reveal a pronounced depth zonation which depends on variations in downslope food transfer and which is specifically effective due to the development of a Taylor current regime over the seamount. i) the crest facies from the summit at -133m to -260m, ii) the shallow slope facies from -260m to -400m, iii) the deep slope facies from -400m down to the abyssal plain at about -3000m. Different biogenic structures and communities are found within these facies belts, including widely extended biogenic mats, sponge-bryozoans-serpulid buildups with mounds, hedges, spurs and flatcake-like structures, bryozoan thickets and sponge-crinoid mounds. Depth zonation, internal structure and controlling parameters in the formation of these biogenic structures are discussed in the context of their significance as a modern end member of the Foramol facies and their implications for the fossil record. In addition, the younger volcanic and hydrothermal history of the seamount is presented with special reference to its bearing on Holocene biogenic colonization patterns.^1";

4460 s[4457] = "WHITTLE G.L., KENDALL C.G.S.C., DILL R.F., ROUGH L. (1993).- Carbonate cement fabrics displayed: A traverse across the margin of the Bahamas Platform near Lee Stocking Island in the Exuma Cays.- Mar. Geol. 110: 213-243.- FC&P 22-1, p. 54, ID=3431^Topic(s): carbonate cements; carbonate cements; Systematics: ; Stratigraphy: Recent; Geography: Bahama Platform^Consolidated friable carbonate rocks found in the Lee Stocking Island area in the Exuma Cays include: (1) reef rock, (2) channel stromatolites, (3) shallow-water hardgrounds, (4) beachrock rimming the islands and (5) Pleistocene bedrock. The most common cement fabrics observed are: aragonitic fibers, which include acicular fan-druse and square-tipped coarse fibers cementing beachrock and stromatolites; and an isopachous needle-fiber rim cementing hardgrounds and stromatolites. [first fragment of extensive summary]^1";

- 4461 s[4458] = "HENRICH R., FREIWALD A., WEHRMANN A., SCHAFFER P., SAMTLEBEN C., ZANKL H., (1996).- Nordic Cold-Water Carbonates: Occurrences and Controls.- Goettinger Arbeiten zur Geologie und Palaontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 24, ID=3567^Topic(s):carbonates; carbonates; Systematics: Stratigraphy:Recent; Geography:Atlantic N^Along a latitudinal transect from cool-temperate to Arctic environments, various carbonate production zones were investigated. Biogenic carbonate sediments formed on high latitudinal shelves of the northern Hemisphere became established during the last glacial to interglacial transition. Major sites of production are: 1) rocky coastal platforms with a complex morphology providing habitats for coralline algae and kelp forests, 2) the shallow shelf where intense mixing of nourished waters favors the formation of bryozoan- or barnacle-dominated biocoenoses, 3) the deep aphotic zone where topographically-guided gyres promote the development of azooxanthellate coral mounds. True polar carbonate factories exist along the flanks of the seamount Vesterisbank. Due to local downwelling, bryozoan-siliceous sponge buildups benefit from the benthic-pelagic coupling of food particle transfer. The largest open shelf carbonate platform, the Spitsbergenbank, western Barents Sea, is fringed by a distinct oceanographic frontal system, the Polar Front. This oceanographic boundary is a local high-productivity area releasing large fluxes of digestible particles which maintain huge quantities of filter feeding communities especially barnacles, bivalves, benthic foraminifera and bryozoans. Although carbonate production rates of specific framework-producing organisms, such as coralline algae and azooxanthellate scleractinians, fall in the magnitude of tropical reef systems, the accumulation rate of bioclastic carbonates is much lower. Generally, cool-temperate to Arctic carbonates consist of bioclastic sands and gravels and sometimes mud. Cementation of carbonate particles is sparsely developed and precipitation of internal sediments is almost linked to decay of organic matrixes. Therefore, the hydrodynamic regime and various forms of bioerosion play an intrinsic role in shaping the skeletal carbonate particles postmortally.^1";
- 4462 s[4459] = "ACEVEDO R., MORELOCK J., OLIVIERI R.A. (1989).- Modification of coral reef zonation by terrigenous sediment stress.- Palaios 04: 92-100.- FC&P 23-2.1, p. 64, ID=4423^Topic(s):reefs, ecology; reefs; Systematics: Stratigraphy:Recent; Geography:Puerto Rico^Four coral reefs near Ponce, Puerto Rico were examined for the effects of terrigenous influx into a reef environment. The four coral reefs are successively farther from a point source of frequently occurring, westward-moving terrigenous sediment plumes which are generated by resuspension of fine-grained sediments. The coral cover was measured from linear photographic transects parallel to each 5 meter depth. Living coral was marked on each photograph, the species identified, and area of cover was measured with a Jandel digitizer pad and SigmaScan program. Statistics were compiled for percent cover by species, total cover, and number of colonies. Total coral cover was reduced near the source of terrigenous sediment influx. Coral cover and diversity increased with distance from the source and amounts of sediment trapped on the reefs decreased, suggesting that the plume influx was an important factor contributing to the deterioration of these reefs. Sediment stress has drastically reduced the coral cover and number of species. The reefs with high sediment inputs showed decreased coral species diversity and percent cover. Sediment-resistant coral species tolerated this adverse environment and their percent of cover remained relatively constant. The effects from sediment influx include partial or total burial of coral colonies, bleaching, and colonization of the coral surface by filamentous blue-green algae and sponges. The reduced light levels resulted in domination of the community by deeper fore-reef coral.^1";

- 4463 s[4460] = "SCHRODER J.H., ZANKL H. (1974).- Dynamic reef formation: a sedimentological concept based on studies of Recent Bermuda and Bahama reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 413-428.- FC&P 4-1, p. 19, ID=5036^Topic(s): reefs, formation dynamics; reef sedimentology; Systematics: ; Stratigraphy: Recent; Geography: Bermuda, Bahamas^1";
- 4464 s[4461] = "SCOFFIN T.P., GARRETT P. (1974).- Processes in the formation and preservation of the internal structure in Bermuda patch reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 429-448.- FC&P 4-1, p. 19, ID=5037^Topic(s): reefs, internal structures; reefs; Systematics: ; Stratigraphy: Recent; Geography: Bermuda^1";
- 4465 s[4462] = "SCHRODER J.H. (1974).- Carbonate cements in recent reefs of the Bermudas and Bahamas - keys to the past.- Annales de la Societe geologique de Belgique 97, 1: 155-158.- FC&P 4-2, p. 49, ID=5223^Topic(s): reefs, carbonate cements; reefs, carbonate cements; Systematics: ; Stratigraphy: Recent; Geography: Bermuda, Bahamas^Les divers types de cimentation que l'on peut rencontrer dans les milieux récifaux actuels sont rapidement illustrés. Une comparaison avec un récif pleistocene des Bermudes montre qu'en l'absence de complications diagénétiques, ces divers ciments peuvent conserver, lors de la fossilisation, toutes les caractéristiques propres au milieu générateur.^1";
- 4466 s[4463] = "KUHN G. (1984).- Sedimentations-Geschichte der Bermuda North Lagoon im Holozän.- University of Gottingen, printed PhD dissertation: 271 pp., 51 figs, 17 tabs, 8 pls.- FC&P 14-1, p. 21, ID=6608^Topic(s): sedimentology; sedimentology; Systematics: ; Stratigraphy: Holocene; Geography: Bermuda, N Lagoon^[sedimentary history of the Bermuda North Lagoon during Holocene including Holocene reef development]^1";
- 4467 s[4464] = "BOURROUILH F. (1974).- Données géomorphologiques sur la région de Fresh Creek, Ile Andros (Bahama).- Marine Geology 16: 213-235.- FC&P 4-2, p. 44, ID=5206^Topic(s): geomorphology; Systematics: ; Stratigraphy: ; Geography: Bahamas^Sur l'île Andros, zone émergée du Grand Banc de Bahama, l'auteur montre l'existence d'une paléotopographie comprenant deux catégories de rides d'orientation différente et semblant fossilisée par une croûte calcitique récente et l'existence d'un karst aux formes jeunes, bien qu'héritage d'un karst holocène en voie de submersion. Ces formes sont des "blue holes" ou trous bleus circulaires (60 à 80m de diamètre) et peu nombreux, et des dolines, dites en baquet. Dans ces dolines se déposent actuellement des croûtes stromatolithiques calcitiques dont l'étude est faite par diffractométrie de rayons X et microscopie électronique à balayage.^1";
- 4468 s[4465] = "ZIBROWIUS H., CAIRNS S.D. (1992).- Revision of the northeast Atlantic and Mediterranean Stylasteridae (Cnidaria: Hydrozoa).- Mem. Mus. nat. Hist. Nat. Paris A 153; 136 pp.- FC&P 21-1.1, p. 54, ID=3263^Topic(s): revision; Hydrozoa, Stylasteridae; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Atlantic NE, Mediterranean^Stylasteridae are calcified and highly modified hydroids, occurring worldwide over a wide range of depth. Considerably less numerous in species, they are also less known than scleractinian corals. Some stylasterids resemble bryozoans and other colonial scleractinians, convergences that have caused confusion in recent and ancient faunas, and may also have limited our knowledge of their geological record. 20 species in 6 genera are known in the northeastern Atlantic, only one of which also

occurs in the Mediterranean. All are described in detail, with abundant illustrations of the colony shape and of the minute structures essential for identification (illustrations include SEM stereo views). In the study area various symbionts leave characteristic traces on the stylasterid skeleton or cause modifications: the gastropod *Pedicularia* (on 8 species) and polynoid and eunicid polychaetes (each on one species). The reliable record of fossil Stylasteridae is scarce in Europe and the Mediterranean basin (as it is elsewhere). It ranges from the Lower Paleocene to the Plio-Pleistocene whereas *Pedicularia*, an obligate symbiont of Stylasteridae, is known from the Messinian (Upper Miocene) and from the Lower Pleistocene.¹¹;

- 4469 s[4466] = "VERTINO A., ZIBROWIUS H., ROCCA M., TAVIANI M. (2010).- Fossil Coralliidae in the Mediterranean Basin.- NOAA Technical Memorandum CRCP-13 [Proceedings of the International workshop on Red Coral Science, Management, and Trade: Lessons from the Mediterranean; E. Bussoletti, D. Cottingham, A. Bruckner, G. Roberts, & R. Sandulli (eds); September 23-26, 2009, Naples, Italy]: 94-98.- FC;P 36, p. 111, ID=6546Topic(s): Octocorallia Coralliidae; Systematics: Cnidaria; Octocorallia; Stratigraphy: fossil; Geography: Mediterranean¹¹";
- 4470 s[4467] = "TURNSEK D., DROBNE K. (1998).- Paleocene corals from the Northern Adriatic platform.- Dela Opera SAZU 4. razr. 34, 2: 129-154.- FC;P 28-1, p. 45, ID=3979Topic(s): taxonomy, geography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleocene; Geography: Adriatic platform N^From the northern margin of the Adriatic platform 22 species of Paleocene corals belonging to 15 genera were systematically described. Two species (*Rhizangia padricensis* and *Goniopora hrpeljensis*) are new. * The most convenient circumstances for the beginning of coral growth were at the edge of the platform near to the open sea. Here in Dolenja was as first the local dendroid-phaceloid coral association thrived. Then, toward the hinterland, perhaps in more stages, toward Sopada, Padriciano, Hrpelje-Kozina, Golez to Breg, new generations of massive and phaceloid corals settled which built smaller or larger patch reefs. * Corals found in Adriatic platform can be compared with similar findings of species in the wide area from Greenland to Volga and Egypt.¹¹";
- 4471 s[4468] = "BARTA-CALMUS S. (1977).- Apercu de l''evolution des Madreporaires dans la province mediterranee occidentale au Nummultique.- Bureau Recherches Geologiques et Minieres Memoir 89: 353-358 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC;P 6-1, p. 27, ID=0078Topic(s): phylogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleogene; Geography: Mediterranean¹¹";
- 4472 s[4469] = "BOSELINI F.R., PERRIN C. (2008).- Estimating Mediterranean Oligocene-Miocene sea-surface temperatures: An approach based on coral taxonomic richness.- Palaeogeography, Palaeoclimatology, Palaeoecology 258, 1-2: 71-88.- FC;P 35, p. 103, ID=2433Topic(s): biodiversity, paleotemperatures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene Miocene; Geography: Mediterranean^During the Oligocene and Miocene, shallow-water carbonates of the Mediterranean region were rich in scleractinian corals thriving within various depositional settings, including different reef types. Their diversity patterns, although related to a complex interplay between a suite of environmental factors and palaeobiogeography, are considered to be strongly controlled by climate variability and changes in sea-surface water temperature. By using the quantitative relationship between present-day coral taxonomic richness and prevailing sea-water temperature, underlined by the so-called "energy hypothesis", we test zooxanthellate-coral generic richness values from a selection of 102 Oligocene-Miocene localities of the Mediterranean region as a proxy for relative

palaeotemperatures. For each Oligocene-Miocene stage, generic richness values per z-coral site are firstly examined, together with variations of the Mediterranean z-coral generic pool. For better testing the method and assessing its potential application, patterns of generic richness and inferred palaeotemperatures are then compared with global palaeoclimatic curves based on marine oxygen stable isotopes data or other climate proxies, such as palaeoclimatic records from European continental floras and from fossil coral linear extension rate. Results clearly show that fluctuations of coral richness-derived palaeotemperatures correspond relatively well with global changes of sea-water temperature especially for the entire Oligocene, the Chattian-Aquitainian boundary and the Late Miocene. The well known Mid-Miocene Climatic Optimum, however, is not recorded, suggesting that regional factors, acting together with important palaeogeographical changes, exerted a strong control on the generic richness of Mediterranean z-coral communities. A remarkable decline of taxonomic richness is recorded after the Burdigalian, together with a gradual decrease of palaeotemperatures in the region. From the Middle Miocene onwards to the Messinian, however, an increase in the temperature range of z-coral localities is clearly visible, indicating that z-coral communities were able to thrive and adapt to a wider temperature range, as the Mediterranean was gradually migrating northwards, outside the tropical belt. The "energy hypothesis", if used at global or regional scale, can be considered a promising and reliable method for estimating Cenozoic palaeotemperatures, from coral or other suitable fossil assemblages of shallow-water carbonates.¹;

4473 s[4470] = "BUDD A.F., BOSELLINI F.R., STEMANN T.A. (1996).- Systematics of the Oligocene to Miocene reef coral *Tarbellastraea* in the northern Mediterranean.- *Palaeontology* 39, 3: 515-560.- FC#038;P 25-2, p. 52, ID=1475^Topic(s): variability, numerical analysis; Scleractinia, numerical analysis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene Miocene; Geography: Mediterranean N^Multivariate statistical analyses are used to distinguish species of the common reef-building coral *Tarbellastraea* at Oligocene and Miocene localities within the Aquitaine Basin, western Mediterranean, and central Paratethys regions; and to trace their distributions through geological time. Thirteen measurements or counts are made on thin sections of 126 colonies collected at 13 widely scattered localities, whose geological ages are newly updated, The data are analyzed using average linkage cluster analysis and canonical discriminant analysis to distinguish clusters of colonies representing morphometric species. Names are assigned by qualitatively comparing measurements on the statistically recognized species with those of primary types of all previously described species of *Tarbellastraea*. The results show that *Tarbellastraea* originated during the Oligocene (Rupelian) and became extinct during the Early Messinian. A total of 12 species (including two new species from the Italian Oligocene, and two species described previously as varieties) lived in the investigated areas during Oligocene and Miocene time. Except during the Oligocene, all but one species (*T. ellisiana*) were widespread. Although species richness within the genus remained constant at 5-7 species throughout much of its stratigraphical range, morphological disparity decreased significantly through time. The observed constancy in richness contrasts with the decrease reported overall in the Mediterranean reef coral fauna. Species originations were highest during the Burdigalian, when temperatures across the region increased. Species extinctions remained constant until the latest Miocene, when the extinction rate increased as cold Atlantic waters entered the Mediterranean. New species described are *Tarbellastraea bragai*, *T. chevalieri*, *T. russoi* and *T. salentinensis*.¹;

4474 s[4471] = "REMI A., TAVIANI M. (2005).- Shallow-buried Pleistocene *Madrepora*-dominated coral mounds on a muddy continental slope, Tuscan Archipelago, NE Tyrrhenian Sea.- *Facies* 50, 3-4: 419-425.- FC#038;P

- 34
- , p. 90, ID=2429^Topic(s):reefs, coral mounds; reefs; Systematics:Cnidaria; Anthozoa; Stratigraphy:Pleistocene; Geography:Mediterranean, Tyrrhenian Sea^Subfossil azoxanthellate deep-sea coral mounds occur at 355-410m on the continental slope of the NE Tyrrhenian Sea between Gorgona and Capraia islands, Tuscan Archipelago. The shallow-relief patch reefs are at present buried by a thin muddy drape. Their age is latest Pleistocene. The colonial scleractinian Madrepora oculata is the major frame builder, in association with the solitary coral Desmophyllum dianthus and the colonial coral Lophelia pertusa. These NE Tyrrhenian Madrepora-dominated coral mounds represent one of the few known Mediterranean examples of deep-coral colonization of a muddy, low-gradient continental slope.^1";
- 4475 s[4472] = "DORNBOS S.Q., WILSON M.A. (1999).- Paleocology of a Pliocene coral reef in Cyprus: Recovery of a marine community from the Messinian Salinity Crisis.- N. Jb. Geol. Palaont. Abh. 213, 1: 103-118.- FC&P 28-2, p. 42, ID=4040^Topic(s):coral reefs, recovery; coral reefs; Systematics:Cnidaria; Anthozoa; Stratigraphy:Pliocene; Geography:Cyprus^Paleoecological analysis of the reef community shows that, apart from corals, it was dominated by epifaunal molluscs. It represents one of the most diverse fossil communities found on Cyprus following the Messinian Salinity Crisis (MSC), with 38 identified species of macrofossils and 8 species of foraminifera. When compared to patch reefs on Cyprus formed just prior to the MSC, this Pliocene reef shows both the biological devastation of the event and the quick and complete recovery of the reefal biodiversity.^1";

4476 s[4473] = "ZIBROWIUS H. (1991).- A propos des gorgonaires Isididae du Plio-Pleistocene de Mediterranee (Cnidaria, Anthozoa).- Atti Accad. peloritana dei pericolanti, Messina, Cl. Sci. fis., matem. e natur. 67, Suppl. 1 [Bonfiglio E. (ed.): Celebrazione del 1° centenario di G. Seguenza, naturalista e paleontologo. Convegno di paleontologia et stratigrafia, Messina - Taormina, 22-26 maggio 1989], 2: 159-179.- FC&P 20-1.1, p. 21, ID=2809^Topic(s):Octocorallia, Gorgonaria; Systematics:Cnidaria; Octocorallia; Stratigraphy:Pliocene Pleistocene; Geography:Mediterranean^^1";

4477 s[4474] = "ZIBROWIUS H. (1991).- Gorgonaires Primnoidae bathyaux a croutes calcaires massives dans le Plio-Pleistocene de la Mediterranee (Cnidaria, Octocorallia).- Atti Accad. peloritana dei pericolanti, Messina, Cl. Sci. fis., matem. e natur. 67, Suppl. 1 [Bonfiglio E. (ed.): Celebrazione del 1° centenario di G. Seguenza, naturalista e paleontologo. Convegno di paleontologia et stratigrafia, Messina - Taormina, 22-26 maggio 1989], 2: 473-481.- FC&P 20-1.1, p. 22, ID=2810^Topic(s):bathyal; Octocorallia, Gorgonaria; Systematics:Cnidaria; Octocorallia; Stratigraphy:Pliocene Pleistocene; Geography:Mediterranean^^1";

4478 s[4475] = "MERTZ-KRAUS R., BRACHER T.C., REUTER M. (2007).- Tarbellastraea (Scleractinia): A new stable isotope archive for Late Miocene paleoenvironments in the Mediterranean.- Palaeogeography, Palaeoclimatology, Palaeoecology 257, 3: 294-307.- FC&P 35, p. 109, ID=2442^Topic(s):stable isotopes, temperatures salinity; Scleractinia, stable isotopes; Systematics:Cnidaria; Scleractinia; Stratigraphy:Miocene; Geography:Mediterranean^Geochemical proxy records of sea surface temperature (SST) or sea surface salinity (SSS) variability on intra- and interannual time-scales in corals from geological periods older than Pleistocene are extremely rare due to pervasive diagenetic alteration of coralline aragonite. Very recently, however, stable isotope data (δ180, δ13C) from specimens of Porites of Late Miocene age (10 Ma) have been shown to preserve original environmental signatures. In this paper we describe new finds of the zooxanthellate corals Porites and Tarbellastraea in exceptional aragonite preservation from

the island of Crete in sediments of Tortonian (ca. 9 Ma) and Early Messinian (ca. 7 Ma) age. Systematic, comparative stable isotope analysis of massive *Tarbellastraea* and *Porites* sampled from the same beds and localities reveal identical stable isotope fractionation patterns in both genera. Therefore, extinct *Tarbellastraea* represents an additional environmental archive fully compatible and mutually exchangeable with *Porites*. Provided that seasonal variations in $\delta^{18}O$ reflect SST changes only, seasonal SST contrasts of 7.3 °C for the Tortonian and 4.8 °C for the Early Messinian are inferred, implying warmer summer and cooler winter SSTs during the Tortonian than during the Messinian. [first fragment of extensive summary]^1";

4479 s[4476] = "ZIBROWIUS H. (1995).- The $\delta^{18}O$; Southern $\delta^{18}O$; *Astroides calycularis* in the Pleistocene of the northern Mediterranean - an indicator of climatic changes (Cnidaria, Scleractinia).- *Geobios* 28, 1: 9-16.- FC#038;P 24-1, p. 72, ID=4502^Topic(s): climate indicator; Scleractinia ?, *Astroides*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Mediterranean^Although presently limited at 37°38'N on the coast of Spain and 40°48'N on the coast of Italy, *Astroides calycularis* lived on the continental coast of France at 43°42'N; -44°N and on the coast of Corsica at 42°58'N during part of the Pleistocene. Thus it has been found at Nice in the Upper Silician and at Monaco in the Upper Tyrrhenian (interstages, respectively, of the Riss and Wuerm glaciations), and at Cap Corse in the Tyrrhenian (Riss-Wuerm interglacial). The species apparently took advantage of slightly higher surface water temperatures than those prevailing now in the northern Mediterranean. Although present-day temperatures allow survival, for many years, of transplanted colonies, they are not suitable for successful reproduction.^1";

4480 s[4477] = "CHAIX C., SAINT-MARTIN J.-P. (2008).- Les faunes de scleractiniaires hermatypiques dans les plates-formes carbonatées méditerranéennes au Miocene supérieur.- *Geodiversitas* 30, 1: 181-209.- FC#038;P 36, p. 88, ID=6497^Topic(s): ; scleractinian reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Miocene Mess; Geography: Mediterranean^This work consists in a systematic revision of upper Miocene Mediterranean hermatypic scleractinian corals, concerning the whole perimediterranean area. An abundant material allowed an accurate and reliable analysis of the taxonomic characters. Eighteen specific attributions, belonging to eight genera, are proposed. Nomenclatural revisions were required because of the abundant, dispersed and qualitatively diverse literature on this subject. Comparisons with older works were made difficult because of ancient identifications and datings by precedent authors. The biogeographic and stratigraphic distributions are detailed. Discussions about paleoecological features allow a better understanding of this coral fauna evolution, particularly regarding the so-called $\delta^{18}O$; salinity crisis that affected the Mediterranean area at the end of the Miocene. [original abstract]^1";

4481 s[4478] = "ZIBROWIUS H. (1981).- Thanatocoenose pleistocene profonde a Spongiaires et Scleractiniaires dans la Fosse Hellenique.- *Journées d'études sur la systématique Evolutive et la biogéographie en Méditerranée*. Cagliari, 13-14 octobre 1980: 133-136.- FC#038;P 11-1, p. 27, ID=1750^Topic(s): thanatocoenosis; Scleractinia, Porifera; Systematics: Cnidaria Porifera; Scleractinia; Stratigraphy: Pleistocene; Geography: Mediterranean^^1";

4482 s[4479] = "ROUCHY J.-M., SAINT-MARTIN J.-P., MAURIN A., BERNET-ROLLANDE M.-C. (1986).- Evolution et antagonisme des communautés bioconstructrices animales et végétales à la fin du Miocene en Méditerranée occidentale: Biologie et Sédimentologie.- *Bulletin Centre Rech. Explor.-Prod. Elf-Aquitaine* 10, 2: 333-348.- FC#038;P 16-1, p. 56, ID=1945^Topic(s): reefs, biology, sedimentology; reefs ecology; Systematics: Animalia Plantae;

- 4483 Stratigraphy: Miocene; Geography: Mediterranean W^1";
s[4480] = "BRACHERT T.C., DULLO W.-C., STOFFERS P. (1987).- Diagenesis of siliceous sponge limestones from the Pleistocene of the Thyrrenian Sea (Mediterranean Sea).- Facies 17: 11-50.- FC&P 16-2, p. 26, ID=2058^Topic(s): diagenesis; Porifera; Systematics: Porifera; Stratigraphy: Pleistocene; Geography: Mediterranean^1";
- 4484 s[4481] = "BOSELINI F.R., RUSSO A., VESCOGNI A. (2002).- The Messinian reef complex of the Salento Peninsula (southern Italy): Stratigraphy, facies and paleoenvironmental interpretation.- Facies 47, 1: 91-112.- FC&P 31-2, p. 52, ID=1708^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Miocene Mess; Geography: Mediterranean^An integrated study of the early Messinian reef complex cropping out along the eastern coast of the Salento Peninsula (southern Italy), including stratigraphy, facies analysis and paleoecological aspects, is here presented. Fourteen facies types belonging to three main facies associations (back-reef and shelf. Shelf-edge, slope) have been recognized. They document a wide spectrum of depositional environments, reef building organisms and growth fabric, in response to depth and other environmental factors in different parts of the reef complex. The biotic structure of the reef is also described and discussed in detail. It consists of different types of reef building organisms and of their bioconstructions (mainly Porites coral reefs, Halimeda bioherms and vermetid-microbial "trottoirs"), that differs in composition and structure according to their position on the shelf edge-to-slope profile. Results indicate that the reef complex of the Salento Peninsula has strong similarities with the typical early Messinian reefs of the Mediterranean region. However, the recognition of some peculiar features, i.e. the remarkable occurrence of Halimeda bioherms and of vermetid-microbial "trottoirs", gives new insights for better understanding reef patterns and development of the reef belt during the Late Miocene in the Mediterranean.^1";
- 4485 s[4482] = "ESTEBAN M., BRAGA J.C., MARTIN J.M., SANTISTEBAN C.de (1996).- Regional overview: Western Mediterranean.- In: Franseen E., Esteban M., Ward B. & Rouchy J.M. (eds): Models for Carbonate Stratigraphy from Miocene Reef Complexes of the Mediterranean Regions; SEPM, Tulsa: 55-72.- FC&P 27-1, p. 9, ID=3782^Topic(s): reefs, distribution; reefs; Systematics: ; Stratigraphy: Miocene; Geography: Mediterranean W^This is a summary of the stratigraphic and (palaeo)geographic distribution of Miocene reefs in the Western Mediterranean, describing the changes in structure and composition of reefs during the considered time interval.^1";
- 4486 s[4483] = "MARTINELL J., DOMENECH R. (2009).- Commensalism in the fossil record: Eunicid polychaete bioerosion on Pliocene solitary corals.- Acta Palaeontologica Polonica 54, 1: 143-154.a pp.pan.pl/article/item/app54-143.html.- FC&P 36, p. 130, ID=6586^Topic(s): commensalism; commensalism, corals; Systematics: ; Stratigraphy: Pliocene; Geography: Mediterranean^Some solitary caryophylliid (Caryophyllia, Trochocyathus, and Ceratotrochus) and flabellid (Flabellum) scleractinian corals from Pliocene of Western Mediterranean exhibit long groove-shaped bioerosional structures running along the surface of the thecae. They are epigenic structures produced by an episkeletozoan and therefore, they are described as Fixichnia. Here we propose Sulcichnus as a new ichnogenus, with three new ichnospecies (Sulcichnus maeandriiformis, S. helicoidalis, and S. sigillum) to name these traces. Sulcichnus is attributed to the activity of polychaetes. Similar structures are recently produced by Lumbrineris flabellicola, a symbiotic eunicid which maintains a commensalistic relationship with solitary corals. In the fossil record, Sulcichnus occurs associated to shallow marine environments whereas their Recent counterparts are described on deep-marine corals. We interpret this as a consequence of

- a change in the environmental requirements of the coral/worm pair. [original abstract]^1";
- 4487 s[4484] = "WETZEL M., KESEL A.B. (2001).- Korallensterben auch im Mittelmeer.- Natur und Museum 131, 7: 211-217.- FC&P 30-1, p. 31, ID=1554^Topic(s): extinctions; Anthozoa extinctions; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Mediterranean^1";
- 4488 s[4485] = "PEIRANO A., SASSAREVI M. (1991).- Analisi delle cattenstiche distributive di alcune facies di substrate duro dei fondali delle Cinque Terre (Mar Liguri).- Atti del XII Congresso della Soc. ital. Biol. Marino, Cagliari: 20-24.- FC&P 25-1, p. 31, ID=3006^Topic(s): coral facies; coral facies; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Mediterranean, Ligurian Sea^The anaysis of distribution of some Anthozoa facies between 12 and 27 meters of depth is reported. The ecology of the species Lophogorgia ceratophyta is investigated. ^1";
- 4489 s[4486] = "KOUKOURAS A., KUHLMANN D.H.H. (1991).- Rasenkorallen als Biotope in der Aegaeis.- Naturwiss. Rdsch. 44, 11: 444-445.- FC&P 21-2, p. 58, ID=3359^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Aegean Sea^1";
- 4490 s[4487] = "BAVESTRELLO G., CALCINAL B., CERRANO C., PANSINI M., SARA M. (1996).- The taxonomic status of some Mediterranean clionids (Porifera: Demospongiae) according to morphological and genetic characters.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 185-195.- FC&P 25-2, p. 29, ID=3093^Topic(s): taxonomy; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Mediterranean^The taxonomic status of some Cliona species living sympatrically in two Ligurian localities has been studied on the basis of morphological (spicule shape and size, boring pattern, arrangement of choanocyte chambers studied by corrosion casts) and genetic analyses. Results from this study indicate a remarkable specificity in the choice of substrata by the Cliona larvae. This comprehensive approach confirmed distinct differences between C. viridis and C. nigricans. C. viridis is a superficial species boring only calcareous algae (alpha-stage), whereas the electrophoretic data demonstrate the identity of different growth forms of C. nigricans boring biogenic substrata or living in massive form on detritic bottoms and on Posidonia rhizomes (beta- and gamma-stages). The calcareous veins embedded in sedimentary rocks along the Ligurian coast are generally bored by C. celata but, in the same habitat, another species has been detected. This species, that shall be described afterwards on a wider lot of specimens coming from different localities, is very close to C. celata in spicule shape, but the spicules are smaller. Moreover the two species are clearly distinguishable on the basis of their boring pattern. Finally the genetic analysis ascertained that there is no gene flux between the two species. [original abstract]^1";
- 4491 s[4488] = "CORRIERO G., SCALERA LIACI L., PRONZATO R. (1996).- Two new species of Dendroxea Griessinger (Porifera: Demospongiae) from the Mediterranean Sea.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 197-203.- FC&P 25-2, p. 29, ID=3094^Topic(s): Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Mediterranean^1";
- 4492 s[4489] = "MALDONADO M., URIZ M.-J. (1996).- A new species of Sphinctrella (Demospongiae: Astrophorida) and remarks on the status of the genus in the Mediterranean.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and

documentation]: 175-184.- FC&P 25-2, p. 29, ID=3100^Topic(s): systematics; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Mediterranean^We describe in this study a new Mediterranean species of the genus Sphinctrella Schmidt. Sphinctrella aberrans sp.nov. is characterized by the presence of malformed ortho-plagiotriaenes and pseudocalthrops, a category of spirasters with a very thick central axis, microxeas with attenuate ringed ornamentation, and a very fine, pore-like fenestration of the ectosome of the exhalant sieves. Apart from S. aberrans, three other species of Sphinctrella are known from the Mediterranean according to the literature : Sphinctrella gracilis Sollas, Sphinctrella horrida Schmidt and Sphinctrella verrucolosa Pulitzer-Finali. However, the reexamination of the single Mediterranean individual claimed to be S. horrida made evident that this specimen was misidentified and the species actually does not exist in the Mediterranean. [original abstract]^1";

4493 s[4490] = "VACELET J., PEREZ T. (1998).- Two new genera and species of sponges without skeleton (Porifera, Demospongiae) from a Mediterranean cave.- Zoosystema 20: 5-22.- FC&P 27-2, p. 66, ID=3986^Topic(s): new taxa; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: Mediterranean^Two new genera and species of Demospongiae are described from a northwestern Mediterranean littoral cave characterised by cold homothermy, which shelters deep-sea invertebrates. The two new sponges have neither mineral nor fibrous skeleton. Their cytology is described using transmission electron microscopy. Thymosiopsis cuticulatus gen. et sp.nov. (Chondrillidae) shares some characters with Thymosia Topsent, but lacks the diagnostic spongin fibres. Myceliospongia araneosa gen. et sp.nov. is unusual in anatomy, cytology, and mode of growth. No clear relationship with any order of the Demospongiae is indicated and the sponge is classified as incertae sedis within the Demospongiae.^1";

4494 s[4491] = "TUNESI L., PEIRONO A., ROMEO G., SASSARINI M. (1991).- Problematiques de la protection des facies a gorgonaires sur les fonds cotiers de "Cinque terre" (Mar Ligure, Italie).- In: Boudouresque C.F., Avon M. & Graves V. (eds): Les Especies Marines a Proteger en Mediterranee; Publ. GIS Posidonie: 65-70.- FC&P 25-1, p. 32, ID=3009^Topic(s): environmental protection; Octocorallia, Gorgonaria; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Italy, Ligurian Sea^C.R.E. studied the gorgoniarian facies of the coastal bottoms of "Cinque Terre". for scientific and practical reasons; this zone was chosen by the Italian legislation for the creation of a Marine National Park. Gorgonians can be considered as the most important systematic group of the Cnidaria for the characterisation of the coralligenous and the presence of their different species allows environmental inferences (on irradiation, sedimentation rate, etc.). These benthic assemblages are of great importance for tourism (i.e. SCUBA divers) and, for a correct coastal management, they must be located with accuracy. This work analyses the main factors of distribution and the dangers that threaten the gorgonians in the area studied. Some proposals are made in order to guarantee the protection of the gorgonian facies in the Western Mediterranean Sea.^1";

4495 s[4492] = "PEIRANO A., MORRI C., BIANCHI C.N., RODOLFO-METALPA R. (2001).- Biomass, carbonate standing stock and production of the Mediterranean coral Cladocora caespitosa (L.).- Facies 44, 1: 75-80.- FC&P 30-2, p. 11, ID=1598^Topic(s): carbonate production; Scleractinia, Cladocora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mediterranean^The Mediterranean coral Cladocora caespitosa often occurs in large beds, i.e. populations of hemispherical colonies with stock densities varying between 1,9 and 4 colonies . m-2. Laboratory

measurements of volume, skeleton weight, surface and number of corallites per colony, coupled with mean annual growth rates evaluated through sclerochronology, allowed for the estimation of biomass, skeleton bulk density, calcimass (carbonate standing stock) and secondary production (both organic and inorganic) of two *C. caespitosa* beds at 4 and 9 m depth. The mean colony biomass varied between 0,73 and 0,99 kg dw . m⁻², corresponding to a calcimass between 2 and 5 kg CaCO₃ . m⁻². Organic secondary production was 215.5 - 305.4 g dw of polyps . m⁻² . y⁻¹, while the potential (mineral) production was 1.1 - 1.7 kg CaCO₃ . m⁻² . y⁻¹, for the year 11996-1997. These values show that *C. caespitosa* is one of the major carbonate producers within the Mediterranean and one of the major epibiontic species originating stable carbonate frameworks both in recent and past times.¹¹;

4496 s[4493] = "MORRI C., PEIRANO A., BIANCI C.N., SASSAREVI M. (1994).- Present-day bioconstructions of the hard coral *Cladocora caespitosa* (L.) (Anthozoa, Scleractinia), in the Eastern Ligurian Sea (NW Mediterranean).- *Biologia Marina Meditteranea* 1, 1: 371-372.- FC&P 25-1, p. 53, ID=3069^Topic(s): reefs; reefs, *Cladocora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Italy, Ligurian Sea^Cladocora caespitosa is the only hermatypic coral living in the Mediterranean. Large-sized formations were recorded between 1700 and 1900m in the Marseille region but presently this coral is found chiefly in the eastern Mediterranean: Gulf of Gabes, Tunisia, Aegean Sea, Jonian coasts of Calabria. During 1992, two massive bioconstructions of *C. caespitosa* were found in two Ligurian localities: Bonassola and Riomaggiore. Both were on coralligenous bottoms 26 to 29 m deep, with large amounts of siltation due to natural and / or anthropogenic causes. These bioconstructions have been mapped by Scuba diving using photomosaic techniques. In situ examination of the two structures and the analysis of the photographic maps led to estimate their surface area, volume, and carbonate mass. The two bioconstructions differ greatly in their morphology: that of Bonassola is oblong in shape and reaches a total length of over 3.5m, whereas that of Riomaggiore is smaller and looks like a stout pillar about 0.6m high. The inferred developmental patterns also differ. At Bonassola, the bank progresses chiefly in a horizontal way, through coalescence and fusion of satellite colonies, its growth in height is enhanced by the cementing action of sediment, filling interstices among corallites. The Riomaggiore formation has a prominent vertical growth through accretion of subsequent colonies, which makes its upper surface irregular. Both environmental (high turbidity) and topographic features (both bioconstructions occur in small grooves conveying sediments and currents) at the two sites are consistent with data from literature (Laborei 1961, Lumare 1966, Zibrowius 1980) which, however, always concern shallower zones.¹¹;

4497 s[4494] = "KUHLMANN D.H.H. (1996).- Preliminary Report on Holocene Submarine Accumulations of *Cladocora caespitosa* (L. 1767) in the Mediterranean.- *Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2* [Reitner J., Neuwiller F. & Gunkel F. (eds): *Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution*]: pp ???.- FC&P 26-1, p. 26, ID=3570^Topic(s): reefs; reefs, *Cladocora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Holocene; Geography: Aegean Sea^In the sublittoral of the North and Middle Aegean investigations of *Cladocora caespitosa* (L. 1767) (Anthozoa, Scleractinia, Faviidae) as scaffold of sedimental hard structures were undertaken by diving from 1990 to 1994. The structures appeared in two forms: first as ledges, which had been formed by many colonies of the coral (bioherms) around 5,900 to 3,200 years before present (yrs BP) according to AMS ¹⁴Cdatings and secondly as blocks which consisted of only one colony of coral (biochores) and had been formed 2,000 to 100 yrs BP. Both structures were exclusively formed by the densely dendroid, hemispheric growing form of *C. caespitosa*, whose corallites landing together

functioned as centers of sedimentation, where silt and biogenic hard particles could be established in between. On the *Cladocora caespitosa* ledges, living colonies of the same species are growing at present which show a continuous growth of the ledge surface. However, the ledges themselves already died out more than 3,000 yrs BP. For the so-called Atlantic time these ledges can be pointed as transitional structures between hermatypic [?] single corals and tropical coral reefs. Due to deteriorated environmental conditions in the Mediterranean, at present no more recent transitional structures exist compared to tropical coral reefs.^1";

4498 s[4495] = "PEIRANO A., MORRI C., BIANCHI C.N. (1999).- Skeleton growth and density pattern of the temperate, zooxanthellate scleractinian *Cladocora caespitosa* from the Ligurian Sea (NW Mediterranean).- Marine ecology progress series 185: 195-201.- FC&P 28-2, p. 20, ID=4016^Topic(s): skeletal growth, x-radiography; Scleractinia, Cladocora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mediterranean^X-radiographs of corallites of the zooxanthellate coral *Cladocora caespitosa* (L.), collected in the Ligurian Sea between 3 and 27m depth, were examined. *C. caespitosa* deposits 2 bands yr⁻¹; the high density band is deposited during winter (November to March) while the low density band is deposited in summer. Average growth rates ranged from 1.36 ± 0,58 to 4.42 ± 1,61 mm yr⁻¹. No differences in the timing of band deposition were found between shallow and deep colonies. A comparison of the band pattern with monthly temperature-irradiance measurements from the Ligurian Sea, and with literature data on the photosynthetic efficiency of zooxanthellae, led us to hypothesize a mechanism of growth with low dependency on autotrophy. ^1";

4499 s[4496] = "DUCLAUX G., LAFARGUE F. (1972).- Madréporaires de Méditerranée occidentale. Recherche des Zooxanthelles symbiotiques. Compléments morphologiques et écologiques.- Vie et Milieu, Sér. A: Biologie Marine 23, 1A: 45-63.- FC&P 3-1, p. 16, ID=4848^Topic(s): symbiotic Zooxanthellae; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mediterranean w^Parmi les Algues symbiotiques les Zooxanthelles occupent une place privilégiée. Un grand nombre de Zooxanthelles vivent associées aux Madréporaires hermatypiques des récifs coralliens. Cette association peut aussi exister dans nos mers tempérées. Cet article apporte à la fois des résultats nouveaux et complémentaires sur la biologie et la structure des Madréporaires et de leurs symbiotes éventuels en Méditerranée.^1";

4500 s[4497] = "ZIBROWIUS H. (1974).- *Oculina patagonica*, sclérectiniaire hermatypique introduit en Méditerranée.- Helgolaender wiss. Meeresunters. 26: 153-173.- FC&P 4-1, p. 28, ID=5090^Topic(s): introduced; Scleractinia *Oculina*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mediterranean^A large colony of *Oculina patagonica* growing on a cliff (depth 0,5 to 2m) about 1km from Savona harbour (Gulf of Genoa, Italy) was discovered in 1966 and was found prosperous and spreading when surveyed again in 1971 and 1972. Water temperature in the area was found to vary from about 11°C to about 26°C; during the greater part of the year it remains far below temperatures generally considered necessary for growth and even survival of hermatypic scleractinians. In spite of the local pollution which favours dense and prosperous populations of barnacles and ascidians, the encrusting colony of *O. patagonica* (now measuring 1,2m x 1,5m) tends to cover these other organisms. The Savona record of *O. patagonica* is the first one of a living colony since nothing was known on the actual range of the species, probably living on the Atlantic coast of South America. Previously, *O. patagonica* was known only from worn fragments, fossil or sub-fossil, from Argentina. Liberation of larvae (one of which settled on the surveyed cliff) by a mature colony that came to Savona waters on a ship bottom, is the only acceptable

- explanation for the highly surprising arrival of the exotic scleractinian in the Northwestern Mediterranean. Transplantation of samples of *O. patagonica* broken off the Savona colony to clean water off Marseilles has proven very successful. The discovery of *O. patagonica* in the Mediterranean has provided material for a detailed redescription of the species and an opportunity for a systematic and biogeographic survey of the genus *Oculina*, as well as for remarks on hermatypic corals in extra tropical waters.¹";
- 4501 s[4498] = "SALOMIDI M., ZIBROWIUS H., ISSARIS Y., MILIONIS K. (2010).- *Dendrophyllia* in Greek waters, Mediterranean Sea, with the first record of *D. ramea* (Cnidaria, Scleractinia) from the area.- *Mediterranean Marine Science* 11, 1: 189-194.<http://www.medit-mar-sc.net/>.- **FC#038;P 36**, p. 105, ID=6535**Topic(s):** taxonomy; Scleractinia *Dendrophyllia*; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Recent; **Geography:** Mediterranean^{In the Mediterranean Sea the genus *Dendrophyllia* Blainville 1830, is represented by two species known to form large branched colonies, *D. cornigera* (Lamarck 1816) and *D. ramea* (Linnaeus 1758). As is typical of Mediterranean scleractinia, both species are also represented in the north-east Atlantic. They differ significantly in morphology (especially colony organization), geographical distribution, and ecology (Zibrowius 1980). [introductory part of a short note]¹";}
- 4502 s[4499] = "SANDELLI R.S., BIANCHI C.N., COCITO S., MORGIGNI M., PEIRANO A., SGORBINI S., SILVESTRI.C., MORRI C. (1992).- Status of some *Posidonia oceanica* meadows on the Ligurian Coast influenced by the **Oil spill**.- *Atti del 10. Congresso A.I.O.L. Alassio*, 4-6, Novembre 1992: 277-286.- **FC#038;P 25-1**, p. 32, ID=3008**Topic(s):** oil spill damage; *Posidonia*; **Systematics:** algae; **Stratigraphy:** Recent; **Geography:** Italy, Ligurian Coast¹";
- 4503 s[4500] = "HOTTINGER L. (1984).- Bioconstructions récentes à corallinacées.- *Géologie et paléocéologie des récifs* [J. Geister & R. Herb (eds)]: 17.1-17.5.- **FC#038;P 13-1**, p. 11, ID=6330**Topic(s):** buildups; corallinacean buildups; **Systematics:** algae; **Stratigraphy:** Recent; **Geography:** Mediterranean^{En Méditerranée, il y a trois substrats principaux fournissant des quantités de corallinacées importantes comme source de sédiments. (1) Sur substrat solide et permanent, des croûtes biogènes sont formées. [8230;] (2) Sur substrat meuble, où le taux de sédimentation est réduit, des thalles souvent ramifiés de corallinacées forment un tapis (analogue à celui de coraux des tropiques) que l'on appelle maerl [8230;] (3) Dans les herbiers de *Posidonies*, les corallinacées couvrent les rhizomes des plantes formant une communauté importante pour le recrutement du benthos littoral. [selected fragments of a short note]¹";}
- 4504 s[4501] = "ROSELL D., URIZ M.-J. (2002).- Excavating and endolithic sponge species (Porifera) from the Mediterranean: species descriptions and identification key.- *Organisms, Diversity & Evolution* 2: 55-86.- **FC#038;P 31-1**, p. 76, ID=1660**Topic(s):** boring & endolithic, taxonomy, identification key; Porifera boring & endolithic; **Systematics:** Porifera; **Stratigraphy:** Recent; **Geography:** Mediterranean^{The present study is a review of the excavating and endolithic sponges present in the Mediterranean. A dichotomic key to 22 species is presented. Detailed species descriptions are provided based on newly collected material and previous descriptions from the literature. In the case of *Cliona viridis* (Schmidt, 1862), an in-depth histological study has also been performed. Discussions on problematic taxonomic issues are also included. *Dotona pulchella* Carter, 1880 subspecies *mediterranea* n.subsp. n. is described. The previously enacted synonymy between *Pione vastifica* Hancock, 1849 and *Pione lampa* (de Laubenfels, 1950) is restricted to those specimens identified as *forma occulta*; *Cliona amplicavata* Rützler, 1974 is recorded for the first time in the}

Mediterranean. *Clionba cretensis* Pulitzer-Finali, 1983 is proposed to be synonymous to *Cliona thoosina* Topsent, 1887. *Cliona copiosa* Sarr, 1959 and *Cliona tremitensis* Sarr, 1961 are considered synonymous to *C. viridis*. The spicule complement of *Scantilleta levispira* (Topsent, 1898), *D. pulchella* and *C. amplicavata*, is enlarged, and some spicule types are better described based on light microscopy and SEM observation. *Pione vastifica* shows great variability in the microrhabds, seemingly related to depth. Regarding excavating patterns, several species appear to selectively excavate particular substrate types, whereas others are not selective among calcareous material. *A. labyrinthica*, *P. vastifica*, *Cliona janitrix* Topsent, 1932, *C. viridis* and *C. lobata* Hancock, 1849 have asexual reproduction. Excavating ability, bud production and the way the sponge genus grows inside the substrate are biological features common to distant taxa such as Clionidae and *Aka* ssp. That may constitute convergent (analogous) characters.¹¹;

- 4505 s[4502] = "BROMLEY R.G., D'ALESSANDRO A. (1989).- Ichnological Study of Shallow Marine Endolithic Sponges from the Italian Coast.- *Rivista Italiana di Paleontologia e Stratigrafia* 95, 3: 279-314.- FC&P 19-1.1, p. 62, ID=2694^Topic(s): boring sponges; Porifera; Systematics: Porifera; Stratigraphy: Quaternary; Geography: Italy^Living boring sponges belonging to eight species of the genera *Siphonodictyon*, *Cliona* and *Cliothosa*, were collected from the limestone seafloor of the Apulian coast. Samples were taken in zero to -20 m water depth. Spicule preparations from the sponges, and epoxy casts of the borings, facilitated a comparison of the animal and its work. The borings were analyzed ichnotaxonomically and attributed to 11 ichnospecies of *Entobia*. Direct correlation between biospecies and ichnospecies was not found in all cases. Several ichnospecies are new, and some of these are named using Pleistocene material. The new ichnospecies are *Entobia gigantea*, *E. magna* and *E. parva*.¹¹;
- 4506 s[4503] = "VACELET J., BOURY-ESNAULT N. (1996).- A new species of carnivorous sponge (Demospongiae: Cladorhizidae) from a mediterranean cave.- *Bulletin de l'Institut royal des sciences naturelles de Belgique*, suppl. 66: 109-115.- FC&P 26-2, p. 76, ID=31111^Topic(s): carnivory; Porifera, Asbestopluma; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^A cladorhizid sponge which has been shown to be carnivorous, is described as a new species of *Asbestopluma*, *A. hypogea*. The sponge lives in a Mediterranean cave, 17 to 22m deep, between 15 to 60m inside from the cave opening, in a trapped mass of cold water (13 - 14.7°C). Preserved specimens differ significantly in shape from the living ones and variations also occur according to the feeding status. Forcep spicules are present only during spermatogenesis. The nearest species is *A. hydra* Lundbeck, from the Arctic (from 1847 to 2394m).¹¹;
- 4507 s[4504] = "VACELET J. (1996).- Deep-sea sponges in a Mediterranean cave.- *Biosystematics and Ecology Series 11* [Uiblein F., Ott J. & Stachowitsch M. (eds): *Deep-sea and extreme shallow-water habitats: affinities and adaptations*]: 299-312. [Austrian Academy of Sciences, Wien].- FC&P 26-2, p. 76, ID=3766^Topic(s): cave - dwellers; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^Submarine caves share several ecological features with deep-sea habitats and could be considered as a natural mesocosm of the bathyo-abyssal zone, in spite of differences in temperature. A unique Mediterranean cave which entraps a cold water mass, resulting in stable temperature conditions throughout the year, is a specially interesting "bathyal island" in the littoral zone. It has been colonized by deep-sea invertebrates, the likely source of propagules of which being a nearby canyon, 100 to 3000m deep. The example of sponges shows that various general problems of deep-sea biology could be successfully addressed to

in the cave. A representative of the deep-sea hexactinellid sponges reproduces here year round - enabling the first observations of larval behaviour and ultrastructure to be carried out on this phylogenetically important group of invertebrates, and opening the unknown area of larval ecology of deep-sea sponges. The presence of a species of the deepest known genus of sponges, *Asbestopluma* (at 8840m depth in the Central Pacific) is a fascinating opportunity to investigate the biology of the strange deep-sea cladorhizid sponges, which can live in the most oligotrophic abyssal basins. A highly unexpected result is that cladorhizids are non-filter-feeding 'sponges' with a carnivorous feeding habit.^1";

- 4508 s[4505] = "VACELET J. (1998).- L'eponge carnivore.- Film du CNRS Audiovisuel, 13 minutes. Version francaise et version anglaise.- FC&P 27-2, p. 66, ID=3936^Topic(s): carnivory; Porifera, *Asbestopluma*; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^A movie, 15 min long, illustrates the carnivorous sponge *Asbestopluma hypogea* and the Mediterranean cave in which it has been discovered. The cave entraps a cold water mass, resulting in stable temperature conditions throughout the year and in colonisation by deep-sea animals. Time lapse cinematography made in aquarium shows the capture and the digestion of the prey by the carnivorous sponge. Several other sponges from deep-sea origin are shown in their cave habitat, including *Oopsacas minuate*, a representative of the hexactinellids, and the recently described demosponge *Myceliospongia araneosa*.^1";
- 4509 s[4506] = "CALCINAI B., CERRANO C., BAVESTRELLO G., SARA M. (1999).- Biology of the massive symbiotic sponge *Cliona nigricans* (Porifera: Demospongiae) in the Ligurian Sea.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 77-85.- FC&P 28-2, p. 8, ID=6939^Topic(s): biology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^^1";
- 4510 s[4507] = "PRONZATO R., BAVESTRELLO G., CERRANO C., MAGNINO G., MANCONI R., PANTELIS J., SARA A., SIDRI M. (1999).- Sponge farming in the Mediterranean Sea: new perspectives.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 485-492.- FC&P 28-2, p. 9, ID=6979^Topic(s): farming; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^^1";
- 4511 s[4508] = "ILAN M., GUGEL J., GALIL B.S., JANUSSEN D. (2003).- Small bathyal (sponge) species from East Mediterranean revealed by new soft bottom sampling technique.- *Ophelia* 57, 3: 145-160.- FC&P 32-2, p. 77, ID=7162^Topic(s): taxonomy, ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean E^This first study of soft bottom sponges from the Levantine bathyal employed a device comprising a plankton net secured atop a Marinovich type semi-balloon trawl. All of the nearly 500 specimens collected were identified to four sponge species. All four species are of a very small body size. Sponges were not retained by the larger mesh Marinovich trawl net. The study describes a new polymastiid species *Tentorium levantinum* n.sp., and a new *Rhizaxinella shikmonae* n.sp. in addition to two Calcareans: *Sycon faulkneri* n.sp. and a *Plectroninia* sp. that appears to be a new species. These sponges, which inhabit soft bottom environments, have evolved morphological features such as unattached ground-based cones with a broad base (*Tentorium levantinum*), or a basal anchoring tuft (*Rhizaxinella shikmonae*). The absence of these species from previous records of the Mediterranean bathyal may have resulted either from overlooking the small sized species in soft bottom environments for lack of adequate collecting technique or scarcity of studies. It was thus impossible to confirm or reject the pattern of wide geographical distribution of deep-water sponges seen elsewhere, including the western Mediterranean. The new calcareous species was found at greater

- depths than most other calcareous sponges published so far, while *Plectroninia* sp. was found at greater depth than all but one record for this genus. It is expected that other small, benthic species may be discovered using the appropriate equipment. [original abstract]^1";
- 4512 s[4509] = "SCHUMANN-KINDEL G., BERGBAUER M., REITNER J. (1996).- Bacteria Associated with Mediterranean Sponges.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 29, ID=3578^Topic(s): poriferan bacterial associations; poriferan bacterial associations; Systematics: Porifera Bacteria; Stratigraphy: Recent; Geography: Mediterranean^Bacteria associated with the mediterranean sponges *Chondrosia reniformis* and *Petrosia ficiformis* were examined by cultivation and culture-independent analysis. On agar-plates, numerous culturable bacteria with distinct colony-morphologies could be observed. Further sponge associated bacteria were detected in situ and phylogenetically characterized by hybridization with 16S rRNA-directed fluorescent oligonucleotide probes. For both sponges, all bacteria detected by this method cluster in the gamma and alpha subclass of Bacteria. No Archaeobacteria nor member of the beta subclass of Proteobacteria could be found. Oligonucleotides complementary to probe-specific regions of the 16S rRNA of culturable and isolated bacteria were used for PCR amplification. Purified PCR products were taken for DNA sequence analysis.^1";
- 4513 s[4510] = "ROSELL D., URIZ M.-J. (1992).- Do associated zooxanthellae and the nature of the substratum affect survival, attachment and growth of *Cliona viridis* (Porifera: Hadromerida)? An experimental approach.- Marine Biology 114: 503-507.- FC&P 24-1, p. 75, ID=4507^Topic(s): ecology, symbiosis, survival; Porifera Hadromerida Cliona; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^Massive specimens of *Cliona viridis*, collected off the coast of Blanes (North-western Mediterranean Sea) in January, 1987, were exposed to different light (natural day-night irradiance/constant darkness) and substrata (calcareous/siliceous) conditions to assess their influence on growth, survival and attachment rates. Sponges cultured under natural irradiance displayed higher growth rates with increasing temperature; those cultured in the dark did not respond to increased temperature, but adapted faster to laboratory conditions. Differences in growth rates between these two culture conditions are ascribed to the presence of a healthy symbiotal zooxanthellae population on individuals cultured under conditions of natural irradiance. Attachment rates of the hut sides of the sponges which were in direct contact with the substratum, also increased with increasing temperature, whilst sponge survival was not significantly dependent on temperature. The chemical nature of the substratum clearly affected survival rates, which were higher on calcified than on siliceous substrata.^1";
- 4514 s[4511] = "GUILHERME M., BOURY-ESNAULT N., BEZAC C., VACELET J. (1996).- Cytological evidence for cryptic speciation in Mediterranean *Oscarella* species (Porifera, Homoscleromorpha).- Canadian Journal of Zoology 74: 881-896.- FC&P 26-2, p. 74, ID=3761^Topic(s): cryptic speciation; Porifera Homoscleromorpha; Systematics: Porifera; Stratigraphy: Recent; Geography: Mediterranean^Three new sponge species without a skeleton, *Oscarella viridis*, *O. microlobata*, and *O. imperialis*, were found in sublittoral caves and on vertical walls along the coast of Provence (western Mediterranean Sea, France). Their morphology, anatomy, and cytology are described and they are compared with the two other valid Mediterranean *Oscarella* species, *O. lobularis* and *O. tuberculata*. Reproductive and internal anatomical characters are uniform in the genus, but details of external morphology and especially cytological characters (mesohylar cells with inclusions) provide good

- diagnostic features at the species level. Careful observation of morphological and cytological characters is essential for clarifying the systematics of *Oscarella* and reveals an unexpected biodiversity of this genus in the Mediterranean Sea.¹";
- 4515 s[4512] = "KUHLMANN D.H.H., CHINTIROGHU H., KOUTSOUBAS D., KOUKOURAS A. (1991).- Korallenriffe im Mittelmeer? .- Naturwiss. Rdsch. 44, 8: 316.- FC&P 21-2, p. 59, ID=3361Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Mediterranean¹";
- 4516 s[4513] = "PAIRANO A., MORRI C., MASTRONUZZI G., BIANCHI C.N. (1998).- The coral *Cladocora caespitosa* (Anthozoa, Scleractinia) as a bioherm builder in the Mediterranean Sea.- Memorie descrittive della Carta geologica d'italia 52 (1994): 59-74.- FC&P 27-2, p. 63, ID=3931Topic(s): reef-builder; Scleractinia, Cladocora; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: Mediterranean¹";
- 4517 s[4514] = "ZIBROWIUS H. (1980).- Les Scléactiniaux de la Méditerranée et de l'Atlantique nord-oriental.- Mém. Institut Océanographique 11: 284 pp., 107 pls.- FC&P 10-1, p. 23, ID=5896Topic(s): ; scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Mediterranean, Atlantic NE¹ full systematic account is given of the Scleractinians collected between the tidal zone and abyssal depths in the Mediterranean and in the north-eastern Atlantic, from the coasts of Europe and Africa to Iceland, the Azores and the Cape Verde Islands. This includes a detailed discussion of their intraspecific variability due both to phenotypic variations and to environmental factors. Some modifications of the conventional classification are suggested. [first fragment of an extensive summary]¹";
- 4518 s[4515] = "FROST S.H., WEISS M.P. (1975).- Caribbean reef systems: Holocene and ancient - an overview.- FC&P 4, 1: 8-10.- FC&P 4-1, p. 8, ID=6282Topic(s): reefs; reefs; Systematics: ; Stratigraphy: living & fossil; Geography: Caribbean¹Thirty-four geologists and biologists participated in a symposium of 22 papers on Caribbean reef systems: Holocene and ancient, in Guadeloupe, French West Indies, in early July. The Symposium was arranged by S.H. Frost and M.P. Weiss, of Northern Illinois University, as part of the Vllth Caribbean Geological Conference convened by the French government and chaired by Roger Causse. Gatherings of geologists to consider carbonate materials and their genesis are a commonplace of recent years; although important and constructive, many failed to treat reefs as wholes. Modern treatments of reef morphology and history are also numerous, but many are only geologic and/or refer to the Indo-Pacific region. Much more cooperation is needed between geologists and biologists, one 2-day symposium cannot do the job, but a start was overdue. We also hoped to increase participation and interest in both modern and fossil reefs all over the Caribbean. [first part of a report, sent also to Geotimes]¹";
- 4519 s[4516] = "LOSER H. (2009).- Morphology, taxonomy and distribution of the Early Cretaceous coral genus *Holocoenia* (Scleractinia) and its first record in the Caribbean.- Revista mexicana de ciencias geológicas 26, 1: 93-103. [revision] - FC&P 36, p. 95, ID=6512Topic(s): ; Scleractinia *Holocoenia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: Caribbean¹Although ten species are currently assigned to the Early Cretaceous coral genus *Holocoenia*, its characteristics are poorly known. Using both material from the type locality of the type species *Astrea micrantha* along with described and undescribed material from France, Mexico, Poland and Spain, the genus is revised. It has a cerioid form with small calices, compact septa, a styliform columella, and an incomplete septothecal to synapticulothecal wall. Provisionally, it is assigned to the family *Thamnasteriidae*, being closely related to *Mesomorpha* and *Thamnasteria*. The genera *Stereocaenia* and *Paretallonia*

- are considered junior synonyms of *Holocoenia*. According to the present revision the genus contains only two species, which range from the Valanginian to the Aptian. *Holocoenia micrantha* is restricted to the central Tethys whereas *Holocoenia jaccardi* extends geographically from South America (Aptian of Argentina) and southern North America (Aptian of Puebla, Mexico) to the eastern Tethys (Hauterivian of Georgia). The indication of the genus in the San Juan Raya area in Puebla is the first indication in Central America. While the genus has been indicated in only eleven outcrop areas, making it rather rare, in many of these localities samples of *Holocoenia* are common. [original abstract]^1";
- 4520 s[4517] = "BARON-SZABO R.C. (2005).- Geographic and stratigraphic distributions of the Caribbean species of *Cladocora* (Scleractinia, Faviidae).- *Facies 51: 1-4: 185-196.*- FC&P 34, p. 50, ID=1268^Topic(s): distribution; Scleractinia, Faviidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous - Cenozoic; Geography: Caribbean^A complete account of the faviid genus *Cladocora* within the Caribbean is presented. In the Caribbean this genus represents an extant group that had its earliest occurrence during the Campanian-Maastrichtian of Jamaica. Recent forms have been reported throughout the Caribbean. The following forms were found (with stratigraphic ranges in the Caribbean): *C. arbuscula* (Pliocene-Recent), *C. debilis* (Pleistocene-Recent), *C. gracilis* (Middle-Upper Maastrichtian), *C. jamaicensis* (Campanian-Maastrichtian and Eocene), *C. johnsoni* (Pliocene), and *C. recrescens* (Middle-Upper Oligocene). The occurrence of the genus *Cladocora* in the Caribbean is largely continuous from the Campanian to Recent, during which the majority of the Caribbean species show affinities to European assemblages. For the time intervals Paleocene, Lower Oligocene, and Miocene the taxon has not been reported from the Caribbean.^1";
- 4521 s[4518] = "BUDD A.F., STEMMANN T.A., STEWART R.H. (1992).- Eocene Caribbean reef corals: A unique fauna from the Gatuncillo Formation of Panama.- *Journal of Paleontology* 66, 4: 570-594.- FC&P 21-2, p. 42, ID=3340^Topic(s): hermatypic, taxonomy; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Eocene; Geography: Panama, Caribbean^Forty-three species of 25 genera are described in a collection of 170 large, massive reef corals from the upper Eocene Gatuncillo Formation near Lago Alahuella in central Panama. Comparisons with type material for other Eocene Caribbean reef corals suggest that 27 of these species are new. Twenty-four of these species are named herein. Like other Eocene Caribbean reef-coral faunas, the fauna is rich in *Astrocoenia*, *Actinacis*, and *Astreopora* however, unlike other faunas, plocoid and meandroid members of the family Faviidae (e.g. *Montastrea*, *Agathiphyllia*, *Goniastrea*, and *Colpophyllia*) are abundant. Also present are the oldest known representatives of the genera *Meandrina*, *Coscinaraea*, *Alveopora*, *Helopora*, and *Pocillopora*, as well as the only recorded occurrences of *Coscinaraea* and *Cyathoseris* from the Caribbean. Comparisons with Oligocene and Recent Caribbean reef-coral faunas suggest that the generic composition of Cenozoic Caribbean reefs became established during the Eocene. With exception of the family Mussidae, much of the post-Oligocene history of the Caribbean is one of extinction at the generic level (19 of the 28 Eocene genera became extinct) and proliferation of species within the surviving genera.^1";
- 4522 s[4519] = "JOHNSON K.G. (2007).- Reef-coral diversity in the Late Oligocene Antigua Formation and temporal variation of local diversity on Caribbean Cenozoic Reefs.- *Schriftenreihe der Erdwissenschaftlichen Kommissionen der Österreichischen Akademie der Wissenschaften* 17: 471-491.- FC&P 35, p. 75, ID=2385^Topic(s): reefs, diversity; Scleractinia, diversity; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Caribbean^^1";
- 4523 s[4520] = "FROST S.H. (1977).- Oligocene reef coral biogeography - Caribbean and western Tethys.- *Bureau Recherches Geologiques et*

Minieres Memoir 89: 342-352 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 29, ID=0093^Topic(s): reefs, biogeography; reefs; Systematics: ; Stratigraphy: Oligocene; Geography: Caribbean^1";

- 4524 s[4521] = "EDINGER E.N., RISK M.J. (1994).- Oligocene-Miocene Extinction and Geographic Restriction of Caribbean Corals: Roles of Turbidity, Temperature, and Nutrients.- Palaios 9: 576-598.- FC&P 24-1, p. 55, ID=4462^Topic(s): extinctions, biogeography; Anthozoa extinction; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene Miocene; Geography: Caribbean^About half the Caribbean hermatypic corals died out in the Caribbean during the latest Oligocene through Early Miocene, about 24-16 Ma. The majority of those corals that died out in the Caribbean are extant in the Indo Pacific, i.e., they suffered geographic restriction, rather than extinction. The coral and coral associate faunas of three Upper Oligocene and three Middle Miocene fossil reefs in western Puerto Rico were compared. Coral genera at these sites suffered 50% regional extinction (extinction or restriction), equivalent to earlier reports of this Caribbean coral extinction/restriction event. Nearly all coral genera tolerant of both turbidity and cool water survived; those tolerant of cool water or turbidity alone survived in much lesser proportions. Corals occurring on both patch reefs and shelf edge reefs survived in much greater proportions than those occurring on only patch reefs or only shelf edge reefs. There are no shelf edge barrier reef complexes documented from the Early or Middle Miocene in the Caribbean; the uppermost Miocene shelf edge reefs of Mona Island are the only known Miocene shelf edge reef deposits in the Caribbean. Coral associates, the endolithic sponges, bivalves, worms, and barnacles that live in coral skeletons, were almost completely unaffected by this event. Likewise, reef and off-reef gastropods, bivalves, and echinoids suffered only insignificant reductions in diversity. Only corals and large benthic foraminifera were strongly affected by the extinction. It is significant that zooxanthellate organisms were the primary victims of this extinction. Miocene endolithic sponge borings are significantly larger than their Oligocene counterparts, suggesting more intense bioerosion on Miocene than Oligocene reefs. Bioerosion is generally correlated with nutrient levels, and the apparently more intense bioerosion of Miocene corals may indicate enhanced nutrient availability on Miocene Caribbean reefs. Extensive Miocene phosphorites throughout the Caribbean indicate enhanced upwelling in the region during the time of the coral extinction/restriction. Biogeographic evidence from corals, coral associates, and molluscs corroborates this pattern, along with the evidence from bioerosion levels. Enhanced upwelling could account for the extinction/restriction by generally increasing nutrient levels and cooling Caribbean coastal surface waters, thus restricting reef development to on-shelf patch reefs, where corals would be subject to more intense sedimentation. Modern reefs of the Eastern Pacific may provide a modern analogue to Miocene Caribbean reefs. This regional extinction was important in dividing a previously cosmopolitan reef fauna into several modern provincial faunas. This biogeographic separation was completed in the mid-Pliocene with the rise of the isthmus of Panama. Coral associates, which universally survived the Oligocene-Miocene event, also have much more cosmopolitan distributions than do corals.^1";
- 4525 s[4522] = "PLEYDELL S.M., JONES B. (1988).- Boring of various faunal elements in the Oligocene - Miocene Bluff Formation of Grand Cayman, British West Indies.- Journal of Paleontology 62, 3: 348-367.- FC&P 18-1, p. 45, ID=2285^Topic(s): reefs, bioerosion; reefs; Systematics: ; Stratigraphy: Oligocene Miocene; Geography: Cayman Isls^Molds of corals, bivalves, and gastropods in the Oligocene-Miocene Bluff Formation of Grand Cayman

Island contain casts of *Entobia* (nine ichnospecies including the new ichnospecies *E. dendritica*), *Trypanites* (three ichnospecies), *Gastrochaenolites* (two ichnospecies), *Maeandropolydora* (one ichnospecies), *Talpina* (one ichnospecies), and *Caulostrepsis* (one ichnospecies) as well as the new ichnogenus *Uniglobites*, indeterminate ichnogenus A, and a problematical boring. *Entobia* accounts for about 75 percent of the borings, while *Uniglobites* and *Trypanites* together account for 15 percent of the borings. Comparison of *Uniglobites* with modern borings of known affinity suggests that it was produced by adociid and/or clionid sponges while indeterminate ichnogenus A was probably formed by bivalves. The amount of boring, which ranges from 0 to 75 percent, varies from skeleton to skeleton or, in some cases, from branch to branch of the same coral colony. The branching coral *Stylophora* was particularly susceptible to boring, probably because of its small size and high surface area. The average boring of about 38 percent compares favourably with the amount of boring found in modern corals. Analysis of the borings suggest that sponges were responsible for most of the borings in the corals from the Bluff Formation. Comparison with bioerosion in modern reefs suggests that similar patterns of bioerosion were also occurring in Oligocene-Miocene times.¹;

4526 s[4523] = "EDINGER E.A., RISK M.J. (1995).- Preferential survivorship of brooding corals in a regional extinction.- *Paleobiology* 21, 2: 200-219.- FC&P 24-2, p. 76, ID=4553^Topic(s):extinctions; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: Caribbean^Approximately half of the Caribbean Oligocene reef coral fauna became locally extinct during the Early Miocene; roughly two thirds of the genera driven to local extinction still survive in the Indo-Pacific. Coral genera with lecithotrophic larvae (brooders) preferentially survived, over those with planktotrophic larvae (broadcasters). Among 37 genera for which we inferred reproductive mode, 73% of brooding genera survived the Oligocene / Miocene extinction events, while only 29% of the broadcasting genera survived. The proportion of brooders to broadcasters also increased markedly. During the late Oligocene, 47% of Caribbean reef coral genera were broadcasters, but in the middle Miocene, only 32% of the genera were broadcasters. Survivorship in Puerto Rican reefs was correlated with tolerance of cold and turbid conditions. Genera tolerant of both cold water and turbidity had much higher survival rates than those tolerant of turbidity alone. Only 25% of the genera that could tolerate neither cold water nor turbidity survived. Most of the eurytopic genera were brooders, while most of the stenotypic genera were broadcasters. We present two hypotheses that may account for the preferential survivorship of brooders: the recruitment hypothesis, and the dispersal hypothesis. The recruitment hypothesis holds that brooders survive preferentially because lecithotrophic larvae have higher recruitment success than do planktotrophic larvae in marginal habitats, such as upwelling zones. This is supported by the correlation of brooding and eurytopy. The dispersal hypothesis suggests that brooders survive preferentially because lecithotrophic larvae, which typically inherit zooxanthellae from the egg, have a longer larval lifespan and, hence, a wider potential dispersal range, than planktotrophic larvae, which typically capture zooxanthellae from the water column. Biogeographic range data, however, do not support this second hypothesis: modern Indo-Pacific brooding and broadcasting genera have nearly identical ranges, and many brooding species have narrower longitudinal ranges than do broadcasting species. Preferential survivorship of brooding corals contrasts sharply with survivorship patterns among molluscs during extinction events; among molluscs, broadcasters are favored over brooders. A major increase in upwelling at the Oligocene / Miocene boundary was probably responsible for this extinction / geographic restriction event. Preferential survival of brooding and mixed mode

- 4527 coral genera appears to be a product of their being better able to recruit and survive in marginal conditions such as upwelling zones.¹"; s[4524] = "FROST S.H. (1972).- Evolution of Cenozoic Caribbean coral Faunas.- Memoirs of the Vith Conf. Geol. Carib., Margarita, Venezuela: 461-464.- FC&P 4-1, p. 43, ID=4824Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: Caribbean^Examination of extensive new coral collections from the Lower Eocene-Lower Miocene of Chiapas, Mexico and the Middle Eocene-Pliocene of Jamaica plus the reevaluation of published studies of Duncan, Vaughan, wells, and others allows some generalizations to be made about ecological distribution and evolution of Caribbean Tertiary coral faunas: (a) Paleocene and Lower Eocene hermatypic and ahermatypic corals are rare in the Caribbean. In addition to the dominantly ahermatypic faunas of the Gulf Coast Paleocene and Lower Eocene, sparse Paleocene hermatypic corals occur in northern British Honduras (Belize) and in the Lower Eocene of Chiapas, Mexico; (b) Middle Eocene reefs existed in Chiapas, Mexico, possibly in Jamaica, and mixed hermatypic-ahermatypic assemblages are present in collections from St. Bartholomew and the Gulf Coast. Tethyan genera dominate the assemblages. (c) Upper Eocene mixed hermatypic / ahermatypic basin-slope faunas existed in Chiapas, Mexico, Gulf Coast and sparsely at other localities. By the end of the Eocene, most of the older elements of the Caribbean coral fauna had disappeared, leaving groups which still exist on modern reefs. (d) The greatest development of Tertiary hermatypic corals occurred in the Oligocene, where cosmopolitan genera such as *Diploastrea* and *Antiguastrea* of Vaughan's "Antiguan coral fauna" built fringing reefs in Chiapas, Mexico, and possibly Antigua, and patch reefs on the Gulf Coast, Puerto Rico, Cuba, Northeastern Mexico and Panama. This fauna is closely comparable to contemporaneous faunas which existed in the Mediterranean and Pacific. (e) Cosmopolitan elements of the hermatypic "Antiguan coral fauna" disappeared in latest Oligocene time. This apparently due to the cut off of access of the Caribbean to the Eastern Pacific equatorial counter current by the establishment of land barriers across Central America. Lower Miocene hermatypic faunas are dominated by *Montastrea* and *Porites* although some genera, now extinct in the Caribbean but living in the Indo-Pacific, persisted. (f) Middle Miocene through Upper Pliocene faunas are marked by the steady disappearance of genera still living in the Indo-Pacific. Many of the classic Miocene and Pliocene assemblages are hermatypic / ahermatypic deep fore-reef faunas and do not provide much insight into the species composition of reef-crest hermatypic assemblages. A change in the composition of reef-crest or reef-buttress assemblages is marked by the evolution of wave-resistant *Acropora palmata* in latest Pliocene or earliest Pleistocene time. Rapidly growing species of *Acropora*, *Porites*, and other genera appear to have increased greatly in species diversity and abundance since the Late Pliocene and appear to be well on their way to dominate the shallow water-high wave energy habitats of modern Caribbean reefs.¹";
- 4528 s[4525] = "BUDD A.F. (2010).- Tracing the long-term evolution of a species complex: Examples from the *Montastraea* "annularis" complex.- *Palaeoworld* 19, 3-4: 348-356.- FC&P 36, p. 85, ID=6493Topic(s): phylogeny; Scleractinia *Montastraea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: Caribbean^Recent molecular work has revealed numerous species complexes of scleractinian reef corals. Although species within complexes are distinct through much of their distribution, hybridization has been discovered at species margins, and has been hypothesized as playing an important role in mediating responses to changing environments. In the present study, I examine the long-term evolution of the *Montastraea* "annularis" complex over the past 5 million years to determine when speciation, extinction, and hybridization took place over the past 6.5 million years, with the

eventual aim of understanding how these events corresponded with environmental changes in the Caribbean region. The material consists of colonies collected in the Mio-Pliocene of the Dominican Republic and the Plio-Pleistocene of Costa Rica and Panama. Genetically characterized colonies from the Recent of Panama are included in the analyses for comparison. Species are distinguished in the fossil material using a landmark-based morphometric approach that focuses on the size and shape of architectural features within corallites in transverse thin sections. Evolutionary relationships among species are examined using phylogenetic analyses based on parsimony. Phylogenetic characters are derived from the results of multiple comparisons tests, which statistically evaluated differences among species using morphometric data. * The results show that the *Montastraea* *annularis* complex originated during late Miocene time, and consisted of 12 species during the Pliocene, with a maximum of 4-5 species co-occurring at any one time. The three modern species do not form a monophyletic group but belong to separate clades within the complex. The ranges of two of the three modern species may extend back to 2.9-3.5 Ma, indicating that they are survivors of the Plio-Pleistocene extinction event in which 80% of Caribbean reef coral species became extinct. Morphologic differences among species (disparity) were higher during the Pliocene than they are today. [original abstract]^1";

- 4529 s[4526] = "KLAUS J.S., BUDD A.F. (2003).- Comparison of Caribbean coral reef communities before and after Plio-Pleistocene faunal turnover: analyses of two Dominican Republic reef sequences.- *Palaios* 18, 1: 3-21.- **FC**;P 32-1, p. 31, ID=1737^Topic(s): Anthozoa communities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pliocene / Pleistocene; Geography: Caribbean^The extent to which origination and selective extinction influenced the structure and dynamics of Caribbean coral reef communities is evaluated by comparing the diversity and distributional patterns of coral species in two Dominican Republic reef sequences prior to an following late Cenozoic Caribbean faunal turnover. The two sequences consist of late Miocene Arroyo Bellaco reef of the Cibao Valley, northern Dominican Republic, and the late Pleistocene 125.ka reef terraces of the southern Dominican Republic. Samples were collected along 20-meter transects (10 Miocene, 10 Pleistocene), species identifications were made using standard sets of characters and morphometrics. In particular, species of *Montastraea annularis*-like corals were distinguished within each sequence using a 2-dimensional landmark technique involving average linkage cluster analysis, discriminant analyses, and non-parametric tests. Four Miocene and four Pleistocene species were recognized. Subsequent community analysis was two-fold: (1) whole coral community, and 2) distribution of *Montastraea* *annularis* complex. [first fragment of extensive summary]^1";
- 4530 s[4527] = "BUDD A.F. (1989).- Biogeography of Neogene Caribbean reef corals and its implications for the ancestry of eastern Pacific reef corals.- *Mem. Ass. Australas. Palaeontols* 8 [Jell P. A. & Pickett J. W. (eds): *Fossil Cnidaria* 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 219-230.- **FC**;P 19-1.1, p. 13, ID=2540^Topic(s): hermatypic; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Neogene; Geography: Caribbean^^1";
- 4531 s[4528] = "BUDD A.F., JOHNSON K.G., EDWARDS J.C. (1989).- Miocene coral assemblages in Anguilla, B.W.I., and their implications for the interpretation of vertical succession on fossil reefs.- *Palaios* 04: 264-275.- **FC**;P 23-2.1, p. 65, ID=4425^Topic(s): biostratigraphy; coral communities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Miocene; Geography: British West Indies^Three common coral assemblages have been quantitatively identified in the middle Miocene Anguilla Formation of Anguilla (Lesser

Antilles) using cluster analysis on three-dimensional coordinates derived from nonmetric multidimensional scaling. The data consisted of tallies of coral species identified at 25 points within 178 1-meter-square quadrats placed haphazardly across vertical exposures of coral-rich lenses at five localities. Eighteen species were recorded. The resulting clusters intergrade and are characterized by moderately high diversities which are not significantly different. They include: 1) a thick-branched assemblage dominated by *Porites porloricensis*, 2) a mound-shaped assemblage including *Porites waylandi*, *Siderastrea conferta*, *Goniopora hilli*, and *G. imperatoris*, and 3) a platy/thin-branched assemblage composed of *Porites macdonaldi* and *Porites baracoensis*. The results of chi-square tests show that the assemblages are randomly distributed, both in space and in stratigraphic sequence. The patchy, intergradational distribution of the assemblages, their equally variable but high diversities, and their association with calcareous sand lenses suggest that they probably all developed as small patch reefs or thickets of varying composition on a shallow, gently sloping backreef platform. The three assemblages developed under similar environmental conditions in one major reef zone on a platform subjected to frequent abiotic disturbance by shifting sand. The mere existence of distinctive assemblages of reef-building corals having different shapes, therefore, needs not in itself imply ecological succession or large-scale physical environmental gradients, as is commonly interpreted in many similar fossil reef sequences.¹¹;

4532 s[4529] = "JONES B., PEMBERTON S.G. (1988).- Lithophaga borings and their influence on the diagenesis of corals in the Pleistocene Ironshore Formation of Grand Cayman Island, British West Indies.- *Palaios* 03: 3-21.- FC&P 23-2.1, p. 72, ID=4441Topic(s): bioerosion; bioerosion; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: Cayman IslsCorals in the Pleistocene Ironshore Formation of Grand Cayman Island have been infested by Lithophaga sp. that formed borings up to 15 cm long and 4 cm in diameter. Although some of the borings were probably generated while the corals were alive most were formed after the corals had died. Some of the large coral heads (up to 1.5m diameter) of *Montastrea annularis* and *Diploria labyrinthiformis* have had a 14 to 15cm wide outer band almost totally transformed by the Lithophaga borings. The borings, which have a distinct clavate form, are assigned to the ichnospecies *Gastrochaenolites torpedo* Kelly & Bromley 1984. Many of the borings are lined with laminated, fluorescent cryptocrystalline calcite that may have been formed by the merger of peloids. Similar material also encrusts many of the Lithophaga shells. After death the borings were filled with (1) cryptocrystalline calcite, (2) porous cryptocrystalline calcite, (3) honeycombed cryptocrystalline calcite, (3) pelsparite, and (4) pelmicrite which locally contains small calcitic ostracod(?) shells. The cryptocrystalline calcite is always fluorescent and thus contrasts sharply with the nonfluorescent calcite of the shells and the spar cement. The corallites around the Lithophaga borings are partly or totally occluded by (1) first generation, non-fluorescent aragonite cement, (2) second generation, non-fluorescent spar calcite, (3) fluorescent peloids, and (4) featureless, fluorescent cryptocrystalline calcite. The fact that the cryptocrystalline calcite in the corallites has the same fluorescent character as the cryptocrystalline calcite in the Lithophaga borings suggests that the two may be genetically related. The infestation of the coral heads by Lithophaga played a major role in the evolution of the diagenetic fabric in the coral heads. It is evident that the Lithophaga borings can (1) substantially weaken the coral heads thereby making them more susceptible to erosion, (2) serve to bind the substrate together by virtue of the dense calcareous linings in the borings, (3) liberate substantial amounts of calcium carbonate from the coral heads, (4) increase the rock-area available for further bioerosion by sponges, algae and fungi, and (5) by virtue of the empty

- borings provide protected sites for sediment accumulation.¹";
- 4533 s[4530] = "JOHNSON K.G., BUDD A.F., STEMANN T.A. (1995).- Extinction selectivity and ecology of Neogene Caribbean reef corals.- *Paleobiology* 21, 1: 52-73.- **FC&P 24-2**, p. 78, ID=4556[^]**Topic(s):** ****extinctions, selectivity; **Systematics:** ****Cnidaria; Anthozoa; **Stratigraphy:** ****Neogene; **Geography:** ****Caribbean[^]We analyze a new compilation of Neogene to Recent (22-0 Ma) Caribbean coral occurrences to determine how ecological and life history traits at the population level affect long-term evolutionary patterns. The compilation consists of occurrences of 175 species and 49 genera in one continuous (> 5 m.y.) sequence and 22 scattered sites across the Caribbean region. Previous study of evolutionary rates using these data has shown that both extinction and origination were accelerated between 4 and 1 Ma, resulting in large-scale faunal turnover. Categories for three morphological and two reproductive variables (colony size, colony shape, and corallite size; and sex, and mode of embryonic development; respectively) are assigned to each species in the compilation. Comparisons of the ecological variables with evolutionary rates using randomization procedures and modified analysis of variance show that only colony size was strongly related to rates of extinction and origination during either normal background times or times of accelerated extinction. Extinction rates were lower in species with large colonies, because species with small massive colonies tend to live in small, short-lived populations with highly fluctuating recruitment rates. During turnover, extinction rates increased disproportionately in species with small colonies. Origination rates are found to be less related to ecological variables, although species with small massive colonies originated at higher rates prior to turnover. Accelerated turnover may have therefore involved an increase in local population extinction rates that caused increased rates of both species extinction and origination across the entire fauna. Since extinction rates accelerated disproportionately with respect to colony size, the overall result was a relative increase in species with large colonies. After severe disturbance, one might expect that populations of species with large colonies and high rates of fragmentation would be more likely to escape extinction, because of larger population sizes, longer generation times, and more constant rates of population increase. The modern Caribbean reef-coral fauna is therefore structured by large, long-lived colonies that are robust to regional environmental change. Many of the very taxa that allowed reef communities to escape collapse in the past are declining today in response to anthropogenic disturbances, suggesting that Caribbean reef communities may be less resilient in the future in response to ongoing environmental perturbations.¹";
- 4534 s[4531] = "DENNISTON R.F., ASMEROM Y., POLYAK V.Y., MCNEILL D.F., KLAUS J.S., COLE P., BUDD A.F. (2008).- Caribbean chronostratigraphy refined with U-Pb dating of a Miocene coral.- *Geology* 36, 2: 151-154.- **FC&P 36**, p. 124, ID=6574[^]**Topic(s):** ****geochronometry U-Pb; geochronometry, corals; **Systematics:** ****Cnidaria; Anthozoa; **Stratigraphy:** ****Miocene; **Geography:** ****Caribbean[^]An exceptionally well-preserved aragonitic coral of the extinct species *Goniopora hilli* was collected from late Cenozoic sedimentary deposits in the Dominican Republic and dated using U-Pb techniques. Nine coralline subsamples yielded a $^{238}\text{U}/^{206}\text{Pb}$ - $^{207}\text{Pb}/^{206}\text{Pb}$ three-dimensional (3-D) inverse linear concordia age of 5.52 ± 0.15 (2s) Ma, which, when coupled with $^{87}\text{Sr}/^{86}\text{Sr}$ ratios obtained from the same coral, allows for tighter constraints on temporal variability of marine species diversity prior to closure of the Central American Seaway. The recognition that pre-Quaternary aragonitic corals can be suitable for U-Pb dating creates new possibilities for refining the chronologies of late Cenozoic marine sedimentary sequences. [original abstract]¹";
- 4535 s[4532] = "PANDOLFI J.M., JACKSON J.B.C., GEISTER J. (2001).-"

- Geologically sudden natural extinction of two widespread Late Pleistocene Caribbean reef corals.- Evolutionary Patterns: Growth, Form, and Tempo in the Fossil Record [J.B.C. Jackson, S. Lidgard & F.K. McKinney (eds)]: 120-158; Chicago University Press, Chicago and London. ISBN 9780226389301. [book chapter] - FCP 30-2, p. 29, ID=1585Topic(s): extinctions; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Caribbean^1";
- 4536 s[4533] = "KELLER N.B., KRASNOV E.V. (1975).- On Late Cenozoic Madreporarian corals of Cuba.- Trudy dalnevostochn. nauchn. centr. Inst. Biol. Morya 4 [Ye.V. Krasnov (ed.): Paleobiology of bottom invertebrates of marine coastal zones]: 201-214; Vladivostok.- FCP 11-2, p. 43, ID=1873Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Neogene; Geography: Cuba^The description of the twelve species of colonial corals belonging to five genera, seven families, and three suborders from the Miocene, Pliocene and Pleistocene deposits of Cuba is given. The reduction of the connections between Atlantic and Pacific shallow water stony corals [occurred] in the post-Miocene [times]. [original summary]^1";
- 4537 s[4534] = "DULLO W.-C. (1987).- The Role of Microarchitecture and Microstructure in the Preservation of Taxonomic Closely Related Scleractinians.- Facies 16: 11-22.- FCP 16-2, p. 28, ID=2068Topic(s): preservation vs microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Barbados^The scleractinians Acropora palmata and Acropora cervicornis are common framebuilders in the various Pleistocene fringing reefs of Barbados. Both exhibit the same diagenetic fabrics, but the rate of diagenetic alteration varies considerably. A. cervicornis is dominated by dissolution with minor calcite precipitation or neomorphism. This leads to a drastic reduction of the fossil record in older terraces. In contrast, A. palmata still has relics of unaltered microstructure in the older reefs. This difference in record potential is a result of the genetically fixed diameter of the polycrystalline fibers comprising the spherulitic trabecular microstructure; these are distinctly thicker in A. palmata.^1";
- 4538 s[4535] = "FOSTER A.B., JOHNSON K.G, SCHULTZ L.L. (1988).- Allometric shape change and heterochrony in the freeliving coral Trachypora bilobata (Duncan).- Coral Reefs 7: 37-44.- FCP 17-2, p. 33, ID=2194Topic(s): allometry; Scleractinia, Trachypora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Neogene; Geography: Caribbean^Regression analysis has been used to study the relationship between age, size, shape, and surface area in two ancestral-descendant populations of the Neogene Caribbean coral Trachypora bilobata. Analyses of the relationship between size and age show that the relationship is isometric and that little difference occurs between populations in mean corallite length or height and in their rates of growth. Onset of columella growth is significantly earlier, however, in the descendant population. Studies of the relationship between size and shape show that growth is allometric, with shape change occurring in both corallum elongation and pinching of the corallite wall during ontogeny. In the descendant population, pinching and elongation initiate earlier in the ontogeny of the coral. These results suggest that the evolutionary development of the meandroid form in freeliving corals has been accomplished by heterochrony, involving a complex set of disassociated paramorphic changes in ontogeny accompanied by pedomorphic changes in astogeny. Further analyses show that the observed heterochronic changes serve to decrease corallum surface area which may in turn enhance sediment removal and nutrition in unstable habitats.^1";
- 4539 s[4536] = "DULLO W.-C., MEHL J. (1989).- Seasonal growth lines in Pleistocene scleractinians from Barbados: record potential and

diagenesis.- Paläontologische Zeitschrift 63, 3-4: 207-214.-
 FC&P 19-1.1, p. 19, ID=2566^Topic(s):
 sclerochronology, diagenesis; Scleractinia; Systematics:
 Cnidaria; Scleractinia; Stratigraphy: Pleistocene;
 Geography: Barbados^Growth line analysis of diagenetically
 altered scleractinians is only possible if carbonate diagenesis has
 followed the pathway of aragonite leaching and coeval formation of low
 magnesium calcite. All other possibilities of aragonite transformation
 into calcite exclude the preservation of this growth line banding.
 Examples of these diagenetic patterns are found in the Pleistocene of
 Barbados.^1";

4540 s[4537] = "JAMES N.P. (1974).- Diagenesis of Scleractinian Corals in
 the subaerial vadose environment.- Journal of Paleontology 48, 4:
 785-799.- FC&P 3-2, p. 33, ID=4919^Topic(s):
 diagenesis; Scleractinia; Systematics: Cnidaria;
 Scleractinia; Stratigraphy: Pleistocene; Geography:
 Barbados^Exoskeletons of scleractinian corals in the elevated late
 Pleistocene reefs on northern Barbados illustrate a series of
 diagenetic textures that document aragonite coral alteration under
 subaerial vadose conditions. Two major solution-precipitation processes
 are recognized: (1) concomitant solution - precipitation on a fine
 scale leading to preservation of coral microstructure, and (2) total
 leaching and destruction of the microstructure followed by later
 precipitation of void-filling spar. * The pathway of aragonite solution
 is similar in both processes, and is controlled by the original coral
 microstructure. Solution begins in the fine equant crystallites forming
 the axis (center of calcification) of each trabecula and moves outward
 into the surrounding zone of closely packed aragonite needles by
 preferential solution along the linear intercrystalline contacts
 between needles. This results in the friable aragonite "chalk"
 commonly observed in Pleistocene corals. * Aragonite "chalk" is
 also observed as a zone between aragonite and calcite in corals
 undergoing solution-precipitation on a fine scale. The coral
 microstructure is preserved by concomitant precipitation of calcite
 between separated aragonite needles adjacent to the calcite alteration
 front, incorporating minor impurities and irregularities of the
 original structure into the calcite crystals. This result is a new
 calcite texture that mimics the original aragonite one. * Corals
 completely altered to calcite by concomitant solution-precipitation on
 a fine scale exhibit a coarse mosaic of blocky calcite with a relict
 fibrous texture. The once dark trabecular axes are preserved as a clear
 central canal. A similar calcite trabecular texture is observed in
 certain Devonian tabulate corals and other fossil calcareous organisms,
 suggesting that their skeletons may have been aragonite, altered to
 calcite in a manner similar to that described above.^1";

4541 s[4538] = "DE BUISSONJE P.H. (1974).- Neogene and Quaternary geology of
 Aruba, Curaçao and Bonaire.- Natuurwetensch. Studietr. Suriname nederl.
 Antillen 78: 1 -293 (Thèse Univ. Utrecht, 1971).- FC&P 4-1,
 p. 42, ID=5162^Topic(s): geology; geology; Systematics:
 Cnidaria; Scleractinia; Stratigraphy: Neogene; Geography:
 Dutch Antilles^Description of the limestone formation of Serve Domi,
 the earliest one of Neogene in these three Islands. Description of 17
 species of Hexacorallia.^1";

4542 s[4539] = "BUDD A.F., WALLACE C. (2008).- First record of the
 Indo-Pacific reef coral genus Isopora in the Caribbean region: Two new
 species from the Neogene of Curaçao, Netherlands Antilles.-
 Palaeontology 51, 6: 1387-1401.- FC&P 36, p. 87,
 ID=6495^Topic(s): phylogeny, biogeography; Scleractinia Isopora;
 Systematics: Cnidaria; Scleractinia; Stratigraphy:
 Neogene; Geography: Caribbean^The coral genus Isopora, a
 sister group of the modern dominant Acropora until now only known from
 the Pliocene to Recent of the Indo-Pacific, is recorded in the
 Caribbean for the first time. Two new species, Isopora ginsburgi and

Isopora curacaoensis, are described from the Neogene Seroe Domi Formation of Curaçao, Netherlands Antilles. Study of large collections made systematically through the sequence indicates that Isopora first occurred in the Caribbean during the Mio-Pliocene, at approximately the same time as the origination of many modern Caribbean reef coral dominants including Acropora cervicornis. It last occurred in the region during the late Pliocene as part of a pulse of extinction, in which several genera that live today in the Indo-Pacific became extinct in the Caribbean. Throughout its Caribbean duration, Isopora co-occurred with the two abundant modern Caribbean species of Acropora, A. cervicornis and A. palmata. Comparisons with Neogene collections made elsewhere in the Caribbean indicate that Isopora was restricted in distribution to the southern Caribbean. Isopora species are viviparous, while Acropora are oviparous, and this difference in reproductive strategy may have played a role in the extinction of Isopora in the Caribbean. The occurrences of Isopora reported in this study are the oldest records to date of Isopora worldwide, and are important for understanding the biogeographic separation between reef coral faunas in the Caribbean and Indo-Pacific regions. [original abstract]^1";

4543 s[4540] = "PANDOLFI J. (2007).- A new, extinct Pleistocene reef coral from the Montastraea "annularis" species complex.- Journal of Paleontology 81, 3: 472-482.- FC&P 36, p. 101, ID=6527^Topic(s): taxonomy; Scleractinia Montastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: Caribbean^A new species of the Montastraea "annularis" species complex is herein described from Pleistocene coral reefs of the Caribbean Sea. The species, Montastraea nancyi n.sp., had a broad geographic distribution at mainly insular sites 125Ka. It has a fossil record extending from 600Ka (thousand years) to 82Ka, both first and last occurrences exclusively on the island of Barbados. It also had a broad environmental tolerance, occurring in fringing, windward back-reef and reef-crest, leeward reef-crest, and lagoonal patch-reef environments. In every habitat in which it lived, there are examples that it either dominated the coral fauna or shared dominance with Acropora palmata, a dominant shallow water coral in high-energy Pleistocene and modern reefs. The extinction of Montastraea nancyi resulted in evolutionary and ecological change in surviving members of the M. "annularis" species complex. [original abstract]^1";

4544 s[4541] = "CAIRNS S.D., WELLS J.W. (1987).- The Suborders Caryophylliina and Dendrophylliina (Anthozoa: Scleractinia).- Bulletins of American Paleontology 93, 328: 23-43.- FC&P 17-1, p. 35, ID=2145^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Neogene; Geography: Dominican Republic^The 20 species of Neogene Scleractinia in the suborders Caryophylliina and Dendrophylliina known from the Dominican Republic are revised and illustrated. This research was based on 1590 specimens obtained primarily from the collections of the Naturhistorisches Museum, Basel, Switzerland; National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.; and Tulane University, New Orleans, LA, U.S.A. Eight new records are reported for the Neogene of the Dominican Republic, including four new species: Antillocyathus allatus, Trochocyathus chevalieri, T. duncani, and Paracyathus sinuosus. Special attention is given to the genus Asterosmilina, since half (five) of the known species in this genus occur in the Dominican Republic. Most species described herein are assumed to constitute a deep-water fauna by analogy to depth ranges of the same or similar species known from the Recent. Certain localities and parts of formations are inferred to represent deep-water (> 200 m) facies. These inferences may aid in the paleoecological interpretation of other fossils collected from these areas.^1";

4545 s[4542] = "SCHUBERT C. (1977).- Pleistocene marine terraces of La Blanquilla island, Venezuela, and their diagenesis.- Proc. Third Int.

- Coral Reef Symposium, vol. 2 (geology): 149-154.- FC&P 6-2, p. 14, ID=5538^Topic(s): reefs morphology; reefs terraces; Systematics: ; Stratigraphy: Pleistocene; Geography: Venezuela^[description of Pleistocene coral reef terraces]^1";
- 4546 s[4543] = "GEISTER J. (1981).- Calm-water reefs and rough-water reefs of the Caribbean Pleistocene.- Acta Palaeontologica Polonica 25, 3-4: 541-556.- FC&P 10-1, p. 37, ID=5959^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Caribbean^^1";
- 4547 s[4544] = "GEISTER J. (1984).- Récifs pleistocenes de la mer des Caraïbes: Aspects géologiques et paléoécologiques.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 3.1-3.34.- FC&P 13-1, p. 10, ID=6316^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: Caribbean^Parmi les récifs fossiles les mieux préservés figurent les terrasses récifales soulevées du Pléistocène. Elles sont très répandues le long des côtes des mers tropicales. La composition taxonomique et la distribution de leur faune fossile ainsi que leur structure interne évoquent celles des récifs actuels de la même région. C'est pourquoi ils se prêtent particulièrement bien à des comparaisons actualistes… [first fragment of an introduction]^1";
- 4548 s[4545] = "BUDD A.F., STEMANN T.A., JOHNSON K.G. (1994).- Stratigraphic distributions of genera and species of Neogene to Recent Caribbean Reef corals.- Journal of Paleontology 68, 5: 951-977.- FC&P 24-1, p. 67, ID=4489^Topic(s): hermatypic, distribution; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Neogene Recent; Geography: Caribbean^To document evolutionary patterns in late Cenozoic Caribbean reef corals, we compiled composite Stratigraphic ranges of 49 genera and 175 species using Neogene occurrences in the Cibao Valley sequence of the northern Dominican Republic and faunal lists for 24 Miocene to Recent sites across the Caribbean region. This new compilation benefits in particular from increased sampling at late Miocene to early Pleistocene sites and from increased resolution and greater taxonomic consistency provided by the use of morphometric procedures in species recognition. Preliminary examination and quantitative analysis of origination and extinction patterns suggest that a major episode of turnover took place between 4 and 1 Ma during Plio-Pleistocene time. During the episode, extinctions were approximately simultaneous in species of all reef-building families, except the Mussidae. Most strongly affected were the Pocilloporidae (Stylophora and Pocillopora), Agariciidae (Pavona and Gardineroseris), and free-living members of the Faviidae and Meandrinidae. At the genus level, mono and paucispecific as well as more speciose genera became regionally extinct. Many of the extinct genera live today in the IndoPacific region, and some are important components of modern eastern Pacific reefs. Global extinctions were concentrated in freeliving genera. During the turnover episode, no new genera or higher taxa arose. Instead, new species originated within the surviving Caribbean genera at approximately the same time as the extinctions, including many dominant modern Caribbean reef-building corals (e.g., Acropora palmata and the Montastraea annularis complex). Excluding this episode, the taxonomic composition of the Caribbean reef-coral fauna remained relatively unchanged during the Neogene. Minor exceptions include. 1) high originations in the Agariciidae and free-living corals during late Miocene time; and 2) regional or global extinctions of several important Oligocene Caribbean reef builders during early to middle Miocene time.^1";
- 4549 s[4546] = "FOSTER A.B. (1985).- Variation within coral colonies and its importance for interpreting fossil species.- Journal of Paleontology 59, 6: 1359-1381.- FC&P 15-1.2, p. 37, ID=0833^Topic(s): variation, numerical taxonomy; Anthozoa variation; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Jamaica^Patterns of variations within colonies of two species of

- the reef-coral *Montastraea* are quantitatively described to determine if within-colony variation can be used to predict non-heritable, ecophenotypic variation between populations of colonial marine invertebrates. The samples were drawn from populations in four proximate, environmentally distinct habitats near Discovery Bay, Jamaica. The characters analyzed consist of linear measurements and counts on features commonly used in taxonomy to distinguish scleractinian species and genera.¹¹;
- 4550 s[4547] = "LATHUILIERE B., BUDD A. (1994).- Analyse d''image et analyse morphofonctionnelle des coraux.- C.R. Acad. Sci. Paris 318, serie II: 1273-1276.- FC&P 23-2.1, p. 50, ID=4219Topic(s): functional morphology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: JamaicaThe application of image analysis to transverse sections of recent corals from Jamaica reveal several new characters. These new characters are clearly related to the environment and their variation is mainly induced by the carbonate production of the colonies.¹¹;
- 4551 s[4548] = "MILLIMAN J.D. (1973).- Caribbean Coral Reefs.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 1-50.- FC&P 3-1, p. 22, ID=4862Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent?; Geography: Caribbean¹¹;
- 4552 s[4549] = "SCATTERDAY J.W. (1974).- Reefs and associated coral assemblages off Bonaire, Netherlands Antilles, and their bearing on Pleistocene and Recent reef models.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 85-106.- FC&P 4-1, p. 17, ID=5012Topic(s): reefs coral; reefs, coral assemblages; Systematics: Cnidaria; Anthozoa; Stratigraphy: Quaternary; Geography: Netherlands Antilles, Bonaire¹¹;
- 4553 s[4550] = "GERALDES F., BONNELLY de CALVENTI I. (1978).- Los arrecifes de coral de la Costa Sur de la Republica Dominicana. Ecologia y conservacion.- Publ. Univ. Autonoma Sto. Domingo, Coleccion Ciencia y Tecnologia 8 [I. Bonelly de Calventi (ed.): Conservacion y Ecodesarrollo]: 107-145.- FC&P 10-1, p. 30, ID=5936Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Dominican Republic¹¹;
- 4554 s[4551] = "GEISTER J. (1984).- Géomorphologie, écologie et faciès des récifs actuels des Caraïbes: Conséquences pour l''interprétation des récifs fossiles.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 1.1-1.14.- FC&P 13-1, p. 10, ID=6314Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: CaribbeanLes géologues et paléontologues qui abordent la recherche dans les récifs actuels, le font avec l''intention de pouvoir mieux interpréter les récifs fossiles après. Mais un des premiers résultats qui émergent de tels recherches est que les récifs récents se comparent assez mal avec la plupart des récifs fossiles. Pour être plus précis: * il existe une ressemblance assez étroite sur le plan structurel et géomorphologique entre récifs pleistocenes et actuels; * mais il existe aussi une dissemblance marquée entre récifs actuels et récifs pré-quaternaires. * La cause de ce changement brusque de la structure et de la géomorphologie des récifs est à chercher dans un changement du milieu marin dès le début du Quaternaire. Le changement le plus marqué était certainement dû aux oscillations abruptes et fréquentes du niveau de la mer associées aux glaciations et déglaciations du Quaternaire. Ces oscillations eustatiques ont connu des amplitudes de plus de 100 m. * Retenons que la plupart des récifs actuels se sont formés vers la fin de la transgression holocène. Pour cette raison les âges des récifs

holocènes dépassent rarement les 6000 années, ce qui contraste avec une durée de plus d'un million d'années chez beaucoup de complexes récifaux mésozoïques qui peuvent comprendre plusieurs zones biostratigraphiques. [original introduction]^1";

4555 s[4552] = "KLEEMANN K.H. (1984).- Lebensspuren von Upogebia operculata (Crustacea, Decapoda) in karibischen Steinkorallen.- Beiträge zur Paläontologie Österreichs 11: 35-57.- FC&P 15-2, p. 7, ID=6736^Topic(s): coral-borers; coral-borers; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Caribbean^[recorded in Caribbean stony corals: Stephanocoenia michelini, Montastrea annularis, Porites astreoides, Colpophyllia natans, Acropora palmate, Siderastrea siderea]^1";

4556 s[4553] = "OPRESKO D.M., SANCHEZ J.A. (2005).- Caribbean shallow water black corals (Cnidaria: Anthozoa: Antipatharia).- Caribbean Journal of Science 41, 3: 492-507.http:////caribjsci.org/dec05 special issue/41_492-507.pdf.- FC&P 34, p. 100, ID=1365^Topic(s): key & guide; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Caribbean^Our aim is to provide a complete key and guide to the species of black corals from the Caribbean reefs at depths shallower than about 100 m. The key to the species is mostly based on colonial features that are recognized in the field, although some closely related species can only be differentiated by microscopic skeletal features. Each species is illustrated with one or more photos showing the size and shape of the colony; many photos were taken in the natural environment to facilitate underwater identification. Additionally, a short description is provided of each species and their microscopic diagnostic characters are illustrated with the aid of the Scanning Electron Microscope (SEM). Fifteen black coral species are found in relatively shallow-water in the Caribbean, Gulf of Mexico, and other parts of the tropical western Atlantic; these belong to the families Myriopathidae [Tanacetipathes hirta (Gray), T. tanacetum (Pourtales), T. barbadosensis (Brook), T. thamnea (Warner), and Plumapathes pennacea (Pallas)]; Antipathidae [Antipathes lenta Pourtales, A. rubusiformis Warner and Opresko, A. furcata Gray, A. umbratica Opresko, A. atlantica Gray, A. gracilis Gray, A. caribbeana Opresko, Stichopathes lutkeni Brook, and S. occidentalis (Gray)]; and Aphanipathidae [Rhipidopathes colombiana (Opresko and Sánchez)]. We hope that this guide will facilitate research on black corals on Caribbean reefs, where population surveys are urgently needed to evaluate or modify conservation policies.^1";

4557 s[4554] = "WILLENZ P., POMPONI S.A. (1996).- A new deep sea coralline sponge from Turks and Caicos Islands: Willardia caicosensis gen. et sp.nov. (Demospongiae: Hadromerida).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 205-218.- FC&P 25-2, p. 31, ID=3114^Topic(s): new taxa; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: Recent; Geography: Turks & Caicos Isls^A new coralline sponge, willardia caicosensis, assigned to the family Timeidae, is described from the deep fore reef off the Turks and Caicos islands, tropical western Atlantic ocean, where it is common at depths ranging from 100 to 119m. Individuals vary up to 15-20cm in width. The relatively thin aragonitic skeleton is covered with delicate pillars up to + 1mm. The living tissue is restricted to the spaces between pillars and a thin sheet lying above the calcareous skeleton. Exhalant canals converge upon regularly spaced central oscules on the sponge surface. Siliceous spicules include tylostyles and amphiasters which are secondarily embedded in the aragonitic moiety of the skeleton. In addition, ultrastructural characters of the choanocytes, such as periflagellar sleeves are typical of the Order Hadromerida. Two types of cells with dense spherules are abundant in the mesohyl: spherulous cells packed

- with large heterogeneous inclusions, protruding at the surface of the sponge, and glycyocytes with smaller ovoid corpuscles, mainly grouped along the basal calcareous skeleton. Rough collagen fibrils extend in tracts from the base of the sponge to the ectosome. Sparse bacteria are scattered in the mesohyl. [original abstract]^1";
- 4558 s[4555] = "MERGNER H. (1972).- The influence of several ecological factors on the hydroid growth of some Jamaican coral cays.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 275-290.- FC&P 2-2, p. 13, ID=4773^Topic(s): ecology; Hydrozoa, Hydroidea; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: Jamaica^^1";
- 4559 s[4556] = "VERSEVELDT J. (1978).- On some Telestacea and Alcyonacea (Coelenterata: Octocorallia) from the West Indian region.- Zoologische Mededelingen 053, 4: 41-47.- FC&P 15-2, p. 40, ID=0730^Topic(s): Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4560 s[4557] = "KOCURKO M.J. (1987).- Shallow-water Octocorallia and related submarine lithification, San Andreas Island, Colombia.- The Texas Journal of Science 39, 4: 349-365.- FC&P 23-1.1, p. 75, ID=4167^Topic(s): lithification submarine; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Colombia, San Andreas Isl^Twenty species of octocorals are described from shallow-water environments around San Andreas Island, Colombia. The colony shape and size is compared to the habitat and probable influences are discussed.^1";
- 4561 s[4558] = "KOBLOUK D.R., LYSENKO M.A. (1987).- Southern Caribbean cryptic scleractinian reef corals from Bonaire, NA.- Palaios 02: 205-218.- FC&P 23-2.1, p. 50, ID=4387^Topic(s): cryptic corals; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Netherlands Antilles^At 14 sites along the west coast of the southern Caribbean island of Bonaire, Netherlands Antilles, 5045 living scleractinian corals in 1101 reef-growth-framework cavities over the depth range 12 m to 43 m were identified and counted. The sample comprises 28 hermatypic coral taxa, the ahermatype Tubastrea coccinea, and the hydrozoan Millepora alcicornis. Although there is no known fossil record of scleractinian reef corals in cavities, there is a record for the taxa living on the reef surface that also inhabit modern reef cavities. This permits speculation that the modern Caribbean cryptic scleractinian coral assemblage may have roots extending into the Tertiary, and at the family level, possibly into the Mesozoic. The common presence of 8 genera, amounting to 44% of the southern Caribbean cryptic coral assemblage, in reef cavities in both the southern Caribbean and the southwestern Pacific, supports the antiquity of the cryptic coral biota, by suggesting that at least those genera may have already been in cavities before the rise of the Isthmus of Panama.^1";
- 4562 s[4559] = "CONSTANZ B.R. (1995).- Skeletal organization in Caribbean Acropora ssp. (Lamarck).- Origin, Evolution, and Modern Aspects of Biomineralization in Plants and Animals [R.E. Crick (ed.)]: 175-199; Plenum Press, New York.- FC&P 24-2, p. 89, ID=4586^Topic(s): microstructure; Scleractinia, Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Caribbean^The size and morphology of calcium carbonate crystals of the exoskeletons of the Caribbean Scleractinian coral species of the genus Acropora are described. The fundamental units of the skeleton are the trabeculae, which are linearly aggrading spherulitic fans of polycrystalline aragonite fiber bundles. Each spherulitic fan originates from a center of calcification (Ogilvie 1896; wells 1956) that is composed of packets of submicron

- calcium carbonate crystals in an amorphous matrix. The nucleating packets appear to have an intracellular origin and their production stimulated by zooxanthellate photosynthesis.^1";
- 4563 s[4560] = "WELLS J.W. (1973).- *Guynia annulata* (Scleractinia) in Jamaica.- *Bulletin of Marine Science* 23, 1 [Coral Reef Project - Papers in Memory of Dr. T.F. Goreau. 3.]: 59-63.- FC&P 2-2, p. 11, ID=4744^Topic(s): ; Scleractinia, Guynia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Jamaica^The ahermatypic scleractinian coral *Guynia annulata* Duncan from Discovery Bay, Jamaica, is described and illustrated. * Although *Guynia annulata* Duncan, a minute, solitary, secretive, ahermatypic scleractinian coral, is now known to be widely distributed in the Mediterranean, Atlantic, and Caribbean, from relatively shallow water (3 meters) to nearly 600 meters, its iconography is still rather limited.^1";
- 4564 s[4561] = "BAK R. (1974).- Available light and other factors influencing growth of stony corals through the year in Curacao.- In *Proceedings of the Second International Symposium on Coral Reefs* (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 229-234.- FC&P 4-1, p. 18, ID=5021^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Curacao^^1";
- 4565 s[4562] = "KELLER N.B. (1975).- Ahermatypic Madreporarian Corals of the Caribbean Sea and Gulf of Mexico.- *Trudy Inst. Okeanologii AN SSSR* 100: 174-187.- FC&P 4-2, p. 46, ID=5214^Topic(s): ahermatypic, biogeography; Scleractinia, Ahermatypic; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Caribbean^22 species of ahermatypic corals belonging to 4 suborders, 7 families and 15 genera obtained on stations at the depths 50-1650m in the Gulf and Caribbean were studied. * Affinities of the examined corals to the ahermatypic madreporaria of the Northeastern Atlantic, Gulf of California, Pacific coasts of the USA were shown. They are slightly traced between those of the Caribbean and Gulf and those of the Mediterranean. * The examined fauna of the ahermatypic corals of the Caribbean was more closely related to the coral fauna of the Mediterranean during Miocene period than to the recent coral fauna of this region. * The taxonomic status of *D. italicus* and *D. agassizi* is given.^1";
- 4566 s[4563] = "FOSTER A.B. (1980).- Environmental variation in skeletal morphology within the Caribbean reef corals *Montastraea annularis* and *Siderastrea siderea*.- *Bulletin of Marine Science* 30, 3: 678-709.- FC&P 10-1, p. 58, ID=6010^Topic(s): environmental variation; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4567 s[4564] = "ZLATARSKI V.N., ESTALELLA N.M. (1982).- Les Sclérectiniaux de Cuba, avec des données sur les organismes associés.- *Académie bulgare des sciences, Sofia*: 472 pp., 136 figs, 6 tabs, 161 pls.- FC&P 12-1, p. 44, ID=6188^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Cuba^^1";
- 4568 s[4565] = "NEVES E.G., Da SILVEIRA F.L., PICHON M., JOHNSON R. (2010).- *Cnidaria, Scleractinia, Siderastreidae, Siderastrea radians* (Ellis & Solander, 1786): Hartt Expedition and the first record of a Caribbean siderastroid in tropical southwestern Atlantic.- *Check List* 6, 4: 305-510.www.checklist.org.br. [revision] - FC&P 36, p. 100, ID=6525^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Caribbean^Samples of *Siderastrea* collected by the geologist C. F. Hartt during expedition to Brazil (19th century), and deposited at the National Museum of the Natural History, Smithsonian Institution, have been re-examined. Taxonomical analyses resulted in the identification of a colony of *S. siderea* from offshore northern Bahia state. Following

- recent studies, the occurrence of Caribbean siderastreids to western South Atlantic provides new criteria to assess intra- and interpopulational morphological variation of the endemic *S. stellata*, refuting historical trends of synonymizations possibly biased by long-term taxonomical misunderstandings. [original abstract]^1";
- 4569 s[4566] = "WILLENZ P., HARTMAN W.D. (1985).- Skeletal growth rates of Caribbean sclerosponges.- Proceedings 5th International Coral Reef Conference, Tahiti 2: 404.- FC&P 14-2, p. 45, ID=0910^Topic(s): growth rates; Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4570 s[4567] = "WILLENZ P., HARTMAN W.D. (1989).- Micromorphology and ultrastructure of Caribbean sclerosponges. I *Ceratoporella nicholsoni* and *Stromatospongia norae* (Ceratoporellidae; Porifera).- Marine Biology 103: 387-401.- FC&P 22-1, p. 49, ID=2705^Topic(s): structures; Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Recent; Geography: Caribbean^Fine structural analysis of living tissue of the sclerosponges *Ceratoporella nicholsoni* (Hickson) and *Stromatospongia norae* Hartman collected near Discovery Bay, Jamaica, between 1984 and 1996, was carried out using transmission and scanning electron microscopy (TEM and SEM). The thick dermal membrane of these spongiae is covered by exopinacocytes having a "T" shape in sections perpendicular to the surface. A dense complex glycocalyx is produced at the surface of these cells. Choanocyte chambers are diplodal and unusually small. The inhalant and exhalant canals of both species are characterized by the presence of valvules, made by transverse lamellipodial processes of the endospinacocytes lining them. An abundant and diversified bacterial community occupies almost 20% of the mesohyl. A single layer of active basipinacocytes lines the mesohyle at the interface between the living tissue and the aragonitic skeleton. Sclerocytes and spongocytes are abundant in the vicinity of the siliceous spicules. Typical lophocytes releasing smooth collagen fibrils are common in the dermal membrane as well as in the choanosome where they can be grouped in bundles. Uniquely, *C. nicholsoni* elaborate rough intercellular fibrils [are] characterized by periodically spaced thickenings. The endolithic algae *Ostreobium* sp. is present in the most apical zones of the aragonitic skeleton, but does not seem to interfere with its development. The striking micromorphological resemblances between both species are discussed and compared to demosponges.^1";
- 4571 s[4568] = "KELLER N.B., NAUMOV D V., PASTERNAK F.A. (1975).- Bottom deep-sea Coelenterata from the Gulf and Caribbean.- Trudy Inst. Okeanologii AN SSSR 100: 147-159.- FC&P 4-2, p. 46, ID=5215^Topic(s): biogeography; Cnidaria deep sea; Systematics: Cnidaria; Stratigraphy: Recent; Geography: Caribbean^This report is based on a collection of bottom Coelenterata obtained by r/v "Akademik Kurchatov" in the Caribbean Sea, Gulf of Mexico and Puerto-Rican trench in 1973. 39 species of Coelenterata from the depth exceeding 1000m (6 Hydrozoans, 1 Scyphozoan and 32 Anthozoa) were collected. A new species of Pennatularia (*Kophobelemnon irregulatus*) is described. A characterization of this fauna including the discussion of its affinities to the fauna of deep-sea Coelenterata of the Atlantic and the Pacific is given.^1";
- 4572 s[4569] = "LEHNERT H., FISCHER H. (1999).- Distribution patterns of sponges and corals down to 107m off North Jamaica.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 307-317.- FC&P 28-2, p. 9, ID=6962^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Jamaica^^1";
- 4573 s[4570] = "PILE A.J. (1999).- Resource partitioning by Caribbean coral reef sponges: is there enough food for everyone?.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th

- International Sponge Symposium]: 457-462.- FC&P 28-2, p. 9, ID=6975^Topic(s): resource partitioning; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4574 s[4571] = "PISERA A. (1999).- Lithistid sponge *Setidium obtectum* Schmidt, 1879, rediscovered.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 473-477.- FC&P 28-2, p. 9, ID=6977^Topic(s): nomenclatorial note; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4575 s[4572] = "WEYRER S., RUTZLER K., RIEGER R. (1999).- Serotonin in Porifera? Evidence from developing *Tedania ignis*, the Caribbean fire sponge (*Demospongiae*).- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 659-666.- FC&P 28-2, p. 10, ID=6997^Topic(s): serotonin?; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4576 s[4573] = "WILLENZ P., HARTMAN W.D. (1999).- Growth and regeneration rates of the calcareous skeleton of the Caribbean coralline sponge *Ceratoporella nicholsoni*: a long term survey.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 675-686.- FC&P 28-2, p. 10, ID=6999^Topic(s): skeletal growth; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4577 s[4574] = "GEISTER J. (1977).- The influence of wave exposure on the ecological zonation of Caribbean coral reefs.- In: D.L. Taylor (ed.) *Proceedings of Third International Coral Reef Symposium* vol. 2: *Geology. Rosenstiel School of Marine and Atmospheric Science, Miami, Florida*, p. 23-29.- FC&P 6-1, p. 29, ID=0094^Topic(s): reefs, ecological zonation; reefs; Systematics: ; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4578 s[4575] = "GEISTER J. (1983).- Holozane westindische Korallenriffe: Geomorphologie, Oekologie und Fazies.- *Facies* 9: 173-284.- FC&P 13-1, p. 13, ID=0383^Topic(s): reefs, geomorphology, ecology; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Caribbean^Holocene West Indian coral reefs: Geomorphology, ecology and facies.^1";
- 4579 s[4576] = "CORTES J., RISK M.J. (1984).- El arrecife coralino del Parque Nacional Cahuita, Costa Rica.- *Revista de Biología Tropical (Costa Rica)* 32, 1: 109-121.- FC&P 14-2, p. 22, ID=0938^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Costa Rica^The coral reef at Parque Nacional Cahuita, Limon, Costa Rica, is a reef under stress due to siltation. The amount of suspended sediments is high and resuspension of bottom sediments is also high. Growth rates of corals, live coral coverage and diversity were low. Colonies are generally larger than in other areas studied, and recruitment of planulae seems to be low. Most of the corals present are good at rejecting sediments and morphologies of some change to better resist the sediments (vertical fronds of *Agaricia agaricites*) or to receive more light (shingles of *Montastrea annularis* and *Porites astreoides*).^1";
- 4580 s[4577] = "GISCHLER E. (2000).- Riffentwicklung in Belize (Mittelamerika) im späten Quartär.- *Natur und Museum* 130, 12: 401-415.- FC&P 29-1, p. ???, ID=1513^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Belize^^1";
- 4581 s[4578] = "GEISTER J. (2001).- Un viaje a través del tiempo en los arrecifes de la Isla de San Andrés (Mar Caribe, Colombia).- *Proceedings IX Congreso Latinoamericano sobre Ciencias del Mar (COLACMAR)*, San Andrés Isla (Colombia), 18 de Septiembre 2001: 66-68.- FC&P 30-2, p. 31, ID=1582^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Colombia^In a few

selected reef stations of San Andrés Island time-series of submarine photographs were taken during a period of up to 33 years. Reviewing these photographs we shall virtually drift with time from 1968 to present, recognizing changes in the composition of reef associations, development of diseases, effects of bleaching, algal invasions, hurricane impact and the process of bioerosion. It can shown that the degradation of Acropora thickets and soft algal invasions began already in the 1970s, long before, and thus not related to the mass bleachings of 1983/84 and the 1983 die-off of the grazing urchin *Diadema antillarum*.^1";

4582 s[4579] = "GEISTER J. (1999).- 30 Jahre im Leben eines karibischen Korallenriffes - Thirty years in the life of a Caribbean coral reef.- Profil 16: 1-11.- FC&P 28-2, p. 45, ID=1610^Topic(s):reefs; reefs; Systematics:; Stratigraphy:Recent; Geography:Caribbean^A lush and picturesque shallow-water coral patch at Little Reef, San Andres Island (western Carribean Sea, Colombia) has been revisited and photographed episodically for over 30 years. The corals were observed to be flourishing between 1969 and 1979. A return visit to the site in 1994 showed heavy degradation with extreme mortality rates, especially among the *Acropora palmata* colonies. At the time of this visit *Diploria strigosa* was under full attack by the "Blackband Disease". Coral mortality increased further until 1996, as indicated by the demise of most of the remaining *Porites porites* stands. In 1998 more corals were found dead, with their skeletons attacked by boring organisms and heavily overgrown by soft algae. However, encouraging signs of local recovery of reefs since 1993 (especially of *Acropora palmata* thickets) from elsewhere on the San Andres shelf suggest that degradation has essentially come to an end and we may look forward to a decade of renewal and restructuring of the local reef ecosystem. The sequence of events that led to the extensive destruction of this formerly flourishing coral patch is recorded by a time series of underwater photographs. These were taken from the site from westerly and southwesterly directions. Two major *Diploria strigosa* colonies are marked on the pictures for better comparison of differently orientated shots. The life and death chronicle of the coral patch at "Riffstation C" between spring 1969 and summer 1998 are fixed by "word and picture".^1";

4583 s[4580] = "GEISTER J. (2001).- Coral life and coral death in a Recent Caribbean coral reef: a thirty-year record in photographs.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 114-124.- FC&P 30-1, p. 20, ID=1611^Topic(s):reefs, ecology, geohistory; reefs; Systematics:; Stratigraphy:Recent; Geography:Caribbean^A series of underwater photographs, taken between 1968 and 1999, at five reef stations of San Andres Island (western Caribbean Sea, Colombia), document and date the following biotic changes and processes in the reef environment: the presence and absence of corals and accompanying reef fauna, increase and decrease of live coral coverage, partial and total coral mortality, impact of coral diseases, storm fragmentation of corals, growth and regeneration of coral colonies, bioerosion of coral heads and invasion of soft algae into the reef environment. * The photographs indicate that degradation of *Acropora palmata* and *Acropora cervicornis* thickets had already begun in the 1970s, considerably preceding the well recorded mass bleaching events of the 1980s. Encroachment by soft algae in the reef and lagoon environment was first noticed in 1973, but increased in the following years. Extensive algal proliferation witnessed in Caribbean reefs since the 1980s was apparently not caused by, but was accelerated by the 1983 die off of the grazing urchins *Diadema antillarum*. A series of photographs of reef biotopes over time permits retrospective analysis of changes that otherwise would go unnoticed. [original abstract]^1";

4584 s[4581] = "BROWN B.E., DUNNE R.P. (1980).- Environmental controls of patch-reef growth and development.- Marine Biology 56: 86-96.-

- FC&P 18-2, p. 42, ID=2495^Topic(s): reefs, ecology, current velocities; reefs; Systematics: ; Stratigraphy: Recent; Geography: British Virgin Isl^The effects of predominant currents on the morphology of coral reefs has been studied in the leeward patch reefs of Anegada, British Virgin Islands. Measurements of current velocity and direction and sediment characteristics together with mapping of approximately 31 patch reefs within a 2 km2 area suggest that even under relatively low but constant velocities (surface current to 20 m sec-1) the major reef-building corals show definite distribution patterns on the reef. The currents also appear to be responsible, in part, for marked orientation and elongation of patch reefs in a north-west / south-east direction and for a gradation of patch-reef type across the study area.^1";
- 4585 s[4582] = "ACKER K.L., STEARN C.W. (1989).- Biological and sedimentological changes across a carbonate-siliciclastic transition, northeast Barbados, W. I.- Proceedings of the 6th International Coral Reef Symposium, Townsville, vol. 3: 319-324.- FC&P 19-1.1, p. 24, ID=2588^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Barbados^^1";
- 4586 s[4583] = "ACKER K.L., STEARN C.W. (1990).- Carbonate-siliciclastic facies transition and reef growth on the northeast coast of Barbados, West Indies.- Journal of Sedimentary Petrology 60, 1: 18-25.- FC&P 19-1.1, p. 24, ID=2589^Topic(s): reefs, ecology; reefs; Systematics: ; Stratigraphy: Recent; Geography: Barbados^^1";
- 4587 s[4584] = "PRAHL H.von, BRANDO A. (1989).- Arrecifes del Caribe.- Villegas Editores, Bogota (Colombia) 226 pp. [in Spanish].- FC&P 19-1.1, p. 27, ID=2591^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Colombia^This large (25x34 cm) colourful reef volume (text by H. von Prah1, submarine photos by A. Brando) gives an excellent visual introduction to the beauty of the Colombian reefs. There are many bright and colourful close-ups of interesting reef organisms accompanied by an easily accessible explanatory text. This is not a highly technical book, but may be welcome also to specialist because of the features shown on the plates. It is aimed to introduce a wider public in Latin America to the beauty of the endangered coral reefs. The senior author, Professor Henry von Prah1, was the leading Colombian reef scientist. He died tragically toward the end of last year. [book review by Joern Geister]^1";
- 4588 s[4585] = "KOBLOK D.R., LYSENKO M.A. (1992).- Storm features on a southern Caribbean fringing coral reef.- Palaios 7: 213-221.- FC&P 23-2.1, p. 66, ID=4428^Topic(s): reefs, storm impacts; reefs; Systematics: ; Stratigraphy: Recent; Geography: Caribbean^Although there have been many studies that have documented various effects of storms in coral reefs, to date there have been no systematic studies of the depth distribution of storm features and few discussions of the potential for preservation of evidence of storm activity in reefs. After hurricane Gilbert and tropical storm Joan passed through the Caribbean late in 1988, an opportunity became available to study storm features and to relate them to water depth in the leeward reefs of the southern Caribbean island of Bonaire. In January 1989, sixty indicators of storm impact on the reefs of Bonaire were found over the depth range 1.5m to 37m at 5 localities. These are grouped in 3 broad categories, comprising effects on sediment, effects on reef-dwelling organisms, and the deposition of terrestrial vegetation on the reef. Damage to the reef consisted of direct damage due primarily to wave impact and surge, and indirect damage by secondary factors such as burial by sediment. The evidence of direct physical damage was pronounced in the shallow parts of the reef, and indirect damage dominated in the middle and deeper parts of the reef. Taking all storm features together 3 to 4 months after the storms, the greatest number of storm-related features (66%) was in the

11m to 20m depth range, so that although during the storms the greatest physical damage to the reef was in the shallower parts, the post-storm distribution of identifiable storm-related features did not reflect this. The depth distribution of potentially preservable storm features (45% of the total) is almost the same as the depth distribution of all storm features. However, the proportion of potentially preservable features is greatest in the shallowest (83%) and deepest (60%) parts of the reef. Therefore, following a short period of adjustment after storms Gilbert and Joan: 1) the remaining storm-related features were not evenly distributed with respect to depth, 2) the greatest number of storm-related features remaining were in intermediate water depths, 3) the greatest number of potentially preservable storm features were also in intermediate depths.^1";

4589 s[4586] = "MAZZULLO S.J., ANDERSON-UNDERWOOD K.E., BURKE C.D., BISCHOFF W.D., (1992).- Holocene coral patch reef ecology and sedimentary architecture, northern Belize, Central America.- Palaios 7: 591-601.- FC&P 23-2.1, p. 66, ID=4429^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Holocene; Geography: Belize^The biotic composition, growth and relationship to sea level history, and diagenetic attributes of a representative Holocene patch reef ("Elmer Reef") in the Mexico Rocks complex in northern Belize are described, and compared to those of Holocene patch reefs in southern Belize. Elmer Reef has accumulated in shallow (2.5m) water over the last 420 yr, under static sea level conditions. Rate of vertical construction is 0.3-0.5 m/100 yr, comparable to that of patch reefs in southern Belize. A pronounced coral zonation exists across Elmer Reef, with Montastrea annularis dominating on its crest and Acropora cervicornis occurring on its windward and leeward flanks. The dominance of Montastrea on Elmer Reef is unlike that of patch reefs in southern Belize, in which this coral assumes only a subordinate role in reef growth relative to that of Acropora palmata. Elmer Reef locally is extensively biodegraded and marine, fibrous aragonite and some bladed high-magnesium calcite cements occur throughout the reef section, partially occluding corallites and interparticle pores in associated sands. Patch reefs in southern Belize have developed as catch-up and keep-up reefs in a transgressive setting. In contrast, the dominant mode of growth of Elmer Reef, and perhaps other patch reefs in Mexico Rocks, appears to be one of lateral rather than vertical accretion. This style of growth occurs in a static sea level setting where there is only limited accommodation space because of the shallowness of the water, and such reefs are referred to as "expansion reefs". [original summary; comments on this paper are given by William F. Precht in Palaios 8, 1993: 499-502]^1";

4590 s[4587] = "GISCHLER E. (1994).- Sedimentation on Three Caribbean Atolls: Glovers Reef, Lighthouse Reef and Turneffe Islands, Belize.- Facies 31: 243-254.- FC&P 24-1, p. 85, ID=4520^Topic(s): reefs, sedimentation; reefs; Systematics: ; Stratigraphy: Recent; Geography: Caribbean^The chief mode of carbonate sedimentation on the Belizean atolls Glovers Reef, Lighthouse Reef and Turneffe Islands is the accumulation of organically-derived particles. Variations in the distribution of the composition and grain-sizes of surface sediments, collected along transects across the atolls, are environmentally controlled. Two major sediment types may be distinguished. (1) Reef and fore reef sediments are dominated by fragments of coral, coralline algae and Halimeda. Mean grain-sizes range from 1-2mm. (2) Back reef sediments contain more mollusk fragments, more fine-grained sediment (<125µm) and appear to have fewer Halimeda fragments. In addition, sediments from inner platforms and shallow lagoonal parts of Glovers and Lighthouse Reefs comprise non-skeletal grains, namely fecal pellets. Sediments from lagoonal patch reefs may contain up to 20% coral fragments. Mean grain-sizes range from 0.1-1mm and are finest on the inner platform and lagoon floor of the backreef environment. Within the reef and fore reef

environments, it is not possible to distinguish sub-environments on the basis of textural and compositional differences of the sediments. Sediments from patch reefs contrast with those from back reef lagoons and inner platforms and are similar in terms of grain-sizes and compositions to reef and fore reef surface sediments. Non-skeletal grains forming in shallow parts of the back reef in Glovers and Lighthouse Reefs are interpreted to be indurated by interstitial precipitation of calcium carbonate from warm, supersaturated water flushing the sediment. The lack of hardened non-skeletal particles in the back reef sediments of Turneffe Islands is most probably due to the abundance of muddy, organic-rich sediment in the well protected lagoon. Fine sediment is less permeable and organic films prevent cement overgrowth on particles. ^1";

- 4591 s[4588] = "MAZZULLO S.J., BISCHOFF W.D., TEAL C.S. (1995).- Holocene shallow-subtidal dolomitization by near-normal seawater, northern Belize.- *Geology* 23, 4: 341-344.- FC&P 24-2, p. 101, ID=4611^Topic(s): dolomitization, normal seawater; dolomitization; Systematics: ; Stratigraphy: Holocene; Geography: Belize^Calcic dolomite cements compose an average of 5% of the upper 4.3m of subtidal deposits <5600 yr old in the Cangrejo shoals in Belize. Mean δ180 (+2%) compositions of the high-Sr dolomites (mean 1000 ppm), together with near-normal salinity and inherently normal Mg/Ca ratio of pore fluids, suggest precipitation from near-normal seawater. Tidal and wind-driven circulation of seawater through the sediments supplies most of the Mg for dolomitization, which appears to be promoted by elevated pore-water alkalinity resulting from bacterially mediated oxidation of organic matter and, locally, early stages of methanogenesis. Rapid dolomitization here supports the idea that significant quantities of dolomite can form syndepositionally, from normal seawater, in shallow subtidal deposits. ^1";
- 4592 s[4589] = "KUHLMANN D.H.H. (1974).- The coral reefs of Cuba.- In *Proceedings of the Second International Symposium on Coral Reefs* (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 69-83.- FC&P 4-1, p. 17, ID=5011^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Cuba^^1";
- 4593 s[4590] = "LAND L.S. (1974).- Growth rate of a west Indian (Jamaican) reef.- In *Proceedings of the Second International Symposium on Coral Reefs* (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 409-412.- FC&P 4-1, p. 19, ID=5035^Topic(s): reefs, growth rates; reefs; Systematics: ; Stratigraphy: Recent; Geography: Jamaica^^1";
- 4594 s[4591] = "GOREAU T.F., LAND L.S. (1974).- Fore reef morphology and depositional processes, North Jamaica.- *SEPM Special Publication 18* [L. Laporte (ed.): *Reefs in Time and Space*]; 77-89.- FC&P 4-1, p. 20, ID=5059^Topic(s): reefs, morphology, processes; reefs; Systematics: ; Stratigraphy: Recent; Geography: Jamaica^^1";
- 4595 s[4592] = "KUHLMANN D.H.H. (1974).- Die Korallenriffe Kubas III. Riegelriffe und Korallenterrasse, zwei verwandte Erscheinungen des Bankriffes.- *Int. Revue ges. Hydrobiol.* 59, 3: 305-325.- FC&P 4-1, p. 23, ID=5077^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: Cuba^Aqualungs were used for the study of the coral reefs of Cuba, about which comparatively little has been known so far. Their small dimensions and their position close to the coastline or in the central part of the island plateau, instead of along the shelf edge, can be attributed to the inhibiting and delaying influence of glacial periods. The different types of reefs and other coral habitats originated as a result of geological, hydrological and biological factors, while the formation of coral associations was dependent on the prevailing physical and chemical features of the environment. The following is a description of

- the cross-bar reef and the coral terrace, two coral habitats. The present work continues earlier articles related to the subject and published in this periodical.¹";
- 4596 s[4593] = "LEWIS J.B. (1975).- A preliminary description of the coral reefs of the Tobago Cays, Grenadines, West Indies.- Atoll Research Bulletin 178: 9 pp., 5 figs; Smithsonian Institution, Washington.- FC&P 4-2, p. 47, ID=5216Topic(s): structures; reefs; Systematics: ; Stratigraphy: Recent; Geography: West Indies, Tobago Cays^[description of Horseshoe Reef and distribution of shallow water communities around the islands]^1";
- 4597 s[4594] = "SCHUBERT C. (1976).- Formacion Blanquilla, Isla La Blanquilla (Dependencias Federales): Informe preliminar sobre terrazas cuaternarias.- Acta cient. Venezolana 27: 251-257.- FC&P 6-2, p. 14, ID=5537Topic(s): reefs morphology; reefs terraces; Systematics: ; Stratigraphy: Quaternary; Geography: Venezuela^[description of Pleistocene coral-bearing deposits forming three terraces on La Blanquilla island, Venezuela]^1";
- 4598 s[4595] = "SCHUBERT C., VALASTRO S.jr (1976).- Quaternary geology of La Orchila Island, central Venezuelan offshore, Caribbean Sea.- Geol. Soc. Amer. Bull. 87: 1131-1142.- FC&P 6-2, p. 14, ID=5540Topic(s): reefs geology; reefs geology; Systematics: ; Stratigraphy: Quaternary; Geography: Venezuela^[description of extensive terrace formed by late Pleistocene coral rubble]^1";
- 4599 s[4596] = "PRAHL H.von (1983).- Notas sobre las formaciones de manglares y arrecifes coralinos en la Isla de Providencia, Colombia.- Memories del Seminario Internacional sobre Desarrollo y Planificación Ambiental, Islas de San Andrés y Providencia; FIPMA & Ministerio de Agricultura, Bogota; 58-67.- FC&P 14-2, p. 21, ID=6706Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: Recent; Geography: Colombia, Isla Providencia^^1";
- 4600 s[4597] = "BARNES M. (1986).- Book review: Reefs and Banks of the North-western Gulf of Mexico (by Rezak, Bright & McGrail 1985).- FC&P 15, 2: 49.- FC&P 15-2, p. 49, ID=6749Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: Mexico Gulf NW^The authors have aptly described the purpose of this book in their preface "… to provide a synthesis of scientific information regarding the geology, biology, and physical oceanography of the Texas-Louisiana Outer Continental Shelf". [...] The book is carefully written, profusely illustrated, and well produced. The authors have attempted what should be the ultimate aim of all scientists namely the reporting of the results of their scientific endeavours in terms understandable to the general public. In this they have been successful. They have produced an excellent synthesis of work so far carried out in the Northwestern Gulf of Mexico and have shown the direction for future research. [initial and final fragments of a review]^1";
- 4601 s[4598] = "ZANKL H. (1993).- The origin of High-Mg-Calcite Microbialites in Cryptic Habitats of Caribbean Coral Reefs - their Dependence on Light and Turbulence.- Facies 29, 1-2: 55-60.- FC&P 23-1.1, p. 87, ID=6847Topic(s): microbialites; cryptic microbialites; Systematics: ; Stratigraphy: Recent; Geography: Caribbean^^1";
- 4602 s[4599] = "RUTZLER K., RICHARDSON S. (1996).- The Caribbean spicule tree: a sponge-imitating foraminifer (Astrorhizidae).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 143-151.- FC&P 25-2, p. 30, ID=3105Topic(s): sponge like; Foraminifera Astrorhizidae; Systematics: Foraminifera; Stratigraphy: ; Geography: Caribbean^An unusually large agglutinated foraminifer was found to be common in semishaded habitats on Caribbean coral reefs. The

tree-shaped organism attains 50 mm in height and builds its test using siliceous sponge spicules exclusively. A new genus and species, *Spiculidendron coralicolum*, are established in the Textulariina family Astrorhizidae. The new taxon is characterized by a complexly branching tubular test that is attached to hard substrate and has a simple wall lacking septae and apertures. Electron microscopy shows a spongin-like organic cement and various cell organelles and inclusions, including dinophycean symbionts. Cytoplasm resides in substrate cavities and in the hollow base of stem and branches that form the test. Observations suggest that in life cytoplasm flows also outside the test along its thin distal branches where it cements new spicules in place and takes up food (pseudopodia). [original abstract]^1";

- 4603 s[4600] = "REZAK R., BRIGHT T.J., MCGRAIL W. (1985).- Reefs and Banks of the Northwestern Gulf of Mexico: Their Geological, Biological, and Physical Dynamics.- Wiley-Interscience, New York; 259 pp. [book] - FC&P 15-2, p. 42, ID=0736^Topic(s): reefs, geology, biology; reefs; Systematics: ; Stratigraphy: ; Geography: Caribbean, Mexico Gulf^[reviewed by M. Barnes (1986)]^1";
- 4604 s[4601] = "SAROOP H.C. (1979).- Genesis and anatomy of a tropical atoll - Turks and Caicos Islands.- Trinidad Naturalist 2, 11: 14-16.- FC&P 9-1, p. 11, ID=5737^Topic(s): reefs atolls; reefs, atolls; Systematics: ; Stratigraphy: ; Geography: Turks & Caicos Isls^Atolls are the product of a wide range of variables, including hurricanes, isostatic movements, and biosynthesis. Processes of atollization encompass saponification, enzymatic effects of odours, and carbonate cementation. A new theory, the storm-tide theory, conceives of sea-floor spreading away from nodal centres, as being the mechanism by which atollization is effected. Turks and Caicos Islands are located in that part of Orbis terrarum known as the Tropics, where ecosystems are particularly affected by the saltations of the Earth in its lunar-solar journey in the Plane of the Ecliptic.^1";
- 4605 s[4602] = "COATES A.G., FOSTER A.B. (1982).- Selected bibliography of systematic publications on Cretaceous North American and Caribbean Scleractinia.- FC&P 11, 1: 41-45.- FC&P 11-1, p. 41, ID=6118^Topic(s): bibliography; bibliography, Scleractinia; Systematics: ; Stratigraphy: Cretaceous; Geography: Caribbean, America N^[annotated bibliography on Upper Cretaceous North American corals is by B.F. Perkins (1951): An annotated bibliography of North American Upper Cretaceous corals 1785-1950; Fondren Science Series, Southern Methodist University Press, Dallas, No. 3; 47 pp.]^1";
- 4606 s[4603] = "WELLS J.W. (1973).- New and old Scleractinian Corals from Jamaica.- Bulletin of Marine Science 23, 1 [Coral Reef Project - Papers in Memory of Dr. T.F. Goreau. 2.]: 16-58.- FC&P 2-2, p. 10, ID=4743^Topic(s): monograph; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: Jamaica^The underwater studies of Jamaican reefs carried out during the past 17 years by the late T.F. Goreau and his colleagues have turned up a number of new species of scleractinian corals and disclosed the common occurrence at depth of several species previously thought to be rare. The new forms include one species of *Madracis*, one of *Agaricia*, three of *Mycetophyllia*, one of *Gardinieria*, and new forms of *Eusmilia fastigiata* and *Agaricia fragilis*. Earlier named but poorly known species discussed and figured are: *Agaricia undata* (Ellis & Solander), *Agaricia lamarcki* Milne Edwards & Haime, *A. tenuifolia* (Dana), *Helioseris cucullata* (Ellis & Solander), *Colpophyllia breviserialis* Milne Edwards & Haime, *Mycetophyllia danaana* Milne Edwards & Haime, and *Dichocoenia stellaris* Milne Edwards & Haime.^1";
- 4607 s[4604] = "KLEEMANN K.H. (1986).- Lithophagines (Bivalvia) from the Caribbean and the Eastern Pacific.- Proc. 8th Int. malacolog. Congr.

- (Budapest 1983): 113-118.- FC&P 15-2, p. 7, ID=6737^Topic(s): lithofagous; lithofagous Bivalvia; Systematics: Mollusca; Stratigraphy: Recent; Geography: Caribbean, Pacific E^1";
- 4608 s[4605] = "WULFF J.L. (1996).- Do the same sponge species live on both the Caribbean and eastern Pacific sides of the Isthmus of Panama? .- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 165-173.- FC&P 25-2, p. 31, ID=3115^Topic(s): biogeography; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Panama, Caribbean, Pacific^1";
- 4609 s[4606] = "BOHM F., JOACHIMSKI M.M., LEHNERT H., MORGENROTH G., KRETSCHMER W., VACELET J., DULLO W.-C. (1996).- Carbon isotope records from extant Caribbean and South Pacific sponges: evolution of $\delta^{13}C$ of surface water DIC.- Earth and Planetary Science Letters 139, 1-2: 291-303.- FC&P 26-2, p. 54, ID=3729^Topic(s): stable isotopes, C13; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Caribbean, Pacific S^1Stable isotope records of demosponges from the Caribbean and Coral Sea are described for the purpose of studying the influence of fossil fuel CO₂ on the carbon isotopic composition of dissolved inorganic carbon (DIC) in surface water. The slow-growing sponges precipitate calcium carbonate in isotopic equilibrium with ambient sea water and are used to detect changes in $\delta^{13}CDIC$ from pre-industrial times (early 19th century) to the present. We observed similar shapes and ranges in $\delta^{13}C$ curves measured on Caribbean specimens collected from water depths of 25, 84 and 91m as well as [in] a specimen collected in shallow waters off New Caledonia. The records reveal a highly significant correlation with atmospheric $\delta^{13}CCO_2$. $\delta^{13}CDIC$ values for Caribbean and Coral Sea surface waters were calculated using the $\delta^{13}C$ sponge records. While $\delta^{13}C$ of atmospheric CO₂ decreased by about 1.4% from the early 19th century to 1990, $\delta^{13}CDIC$ of Caribbean and Coral Sea surface waters decreased by $0.9 \pm 0.2\%$ and $0.7 \pm 0.3\%$, respectively. No isotopic equilibrium between surface water DIC and atmospheric CO₂ was observed, either during the pre-industrial steady state or during the last 100 years. The lower amount of depletion in the surface water $\delta^{13}CDIC$ with respect to the atmospheric anthropogenic signal is explained by the dilution of the surface waters by biologically altered subsurface water DIC. The lower $\delta^{13}C$ decrease in the Coral Sea points to a stronger influence of the subsurface water source compared to the Caribbean. [original abstract]^1";
- 4610 s[4607] = "PORTER J.W. (1974).- Community structure of Coral Reefs on opposite sides of the Isthmus of Panama.- Science 186: 543-545.- FC&P 4-2, p. 48, ID=5218^Topic(s): reef biocoenoses; reef biocoenoses; Systematics: ; Stratigraphy: Recent; Geography: Panama, Caribbean, Pacific^1Competition for space among reef corals includes interspecific destruction by extracoelenteric digestion, rapid growth, and overtopping. No Caribbean species excels in all strategies, and on western Caribbean coral reefs, there is a positive correlation between coral abundance and diversity. On eastern Pacific coral reefs, however, Pocillopora damicornis excludes other corals, and on these reefs there is an inverse relation between coral abundance and diversity, except in areas where disturbances, such as Acanthaster predation, offset space monopolization.^1";
- 4611 s[4608] = "DODGE R.E., THOMPSON J. (1974).- The natural radiochemical and growth records in contemporary hermatypic corals from the Atlantic and Caribbean.- Earth and Planet. Sci. Letters 1974, 23: 313-322.- FC&P 4-1, p. 22, ID=5068^Topic(s): sclerochronology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: Caribbean, Atlantic^1";

- 4612 s[4609] = "GRASSHOFF M. (1979).- Zur bipolaren Verbreitung der Oktokoralle *Paragorgia arborea* (Cnidaria: Anthozoa: Scleraxonia).- *Senckenbergiana maritima* 11, 3/6: 115-137.- FC&P 10-1, p. 29, ID=5927^Topic(s): bipolar distribution; Octocorallia, Paragorgia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Polar (bipolar)^1";
- 4613 s[4610] = "FEARY D.A., JAMES N.P. (1995).- Cenozoic biogenic mounds and buried Miocene(?) barrier reef on a predominantly cool-water carbonate continental margin - Eucla basin, western Great Australian Bight.- *Geology* 23, 5: 427-430.- FC&P 25-1, p. 52, ID=3063^Topic(s): reefs, cool water; reefs; Systematics: ; Stratigraphy: Cenozoic; Geography: Australia, Great Australian Bight^The southern continental margin of Australia is the largest area of cool-water carbonate shelf deposition on the globe. Interpretation of 5495km of air gun seismic-reflection data in the western part of the Great Australian Bight indicates that the 700m thick Cenozoic section of the offshore Eucla basin was deposited largely as a prograding cool-water, middle- to high-latitude carbonate ramp, characterized by widespread development of broad, low-relief, biogenic (bryozoan? - sponge), shelf and upper-slope mounds. The succession also contains a spectacular and extensive (>475km long) buried middle Miocene barrier reef (the Miocene Little Barrier Reef) parallel to the modern shelf edge. This rimmed carbonate platform margin represents an episode of warm-water sedimentation during a global climatic optimum, probably coupled with strong eastward flow of a proto-Leeuwin Current. The late Miocene eustatic sea-level fall produced an areally restricted debris-apron sequence at the foot of the reef escarpment. The carbonate platform is capped by a Neogene cool-water carbonate ramp succession typified by aggradational to sigmoidal sequences, punctuated by periods of cold-water, sea-floor erosion. Interpretation of this succession in the light of global and local tectonic and oceanographic events illustrates the dominant influence of water temperature on carbonate platform and reef growth throughout the Cenozoic.^1";
- 4614 s[4611] = "JANUSSEN D., TABACHNICK K.R., TENDAL O.S. (2004).- Deep-sea Hexactinellida (Porifera) of the Weddell Sea.- *Deep-Sea Research Part II: Topical Studies in Oceanography* 51, 14-16: 1857-1882.- FC&P 33-2, p. 42, ID=1192^Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: Antarctica^New Hexactinellida from the deep Weddell Sea are described. This moderately diverse hexactinellid fauna includes 14 species belonging to 12 genera, of which five species and one subgenus are new to science: *Periphragella antarctica* n.sp., *Holascus pseudostellatus* n.sp., *Caulophacus* (*Caulophacus*) *discohexactinus* n.sp., *C. (Caulodiscus) brandti* n.sp., *C. (Oxydiscus) weddelli* n.sp., and *C. (Oxydiscus)* n.subgen. So far, 20 hexactinellid species have been reported from the deep Weddell Sea, 15 are known from the northern part and 10 only from here, while 10 came from the southern area, and five of these only from there. However, this apparent high &endemism&; of Antarctic hexactinellid sponges is most likely the result of severe undersampling of the deep-sea fauna. We find no reason to believe that a division between an oceanic and a more continental group of species exists. The current poor database indicates that a substantial part of the deep hexactinellid fauna of the Weddell Sea is shared with other deep-sea regions, but it does not indicate a special biogeographic relationship with any other ocean. [original abstract]^1";
- 4615 s[4612] = "SALOMON D., BARTHEL D. (1990).- External Choanosome Morphology of the Hexactinellid Sponge *Aulorossella vanhoeffeni* Schulze & Kirkpatrick 1910.- *Senckenbergiana maritima* 21, 1/4: 87-99.- FC&P 20-1.1, p. 75, ID=2868^Topic(s): soft tissue SEM study, systematics; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent;

- Geography: Antarctic seas^At the 1989 "EPOS" Antarctic Expedition hexactinellid sponges of the species Aulorossella vanhoeffeni were obtained. Soft tissue samples of these sponges, especially the choanosome, are investigated at SEM. The choanomeres of their large flagellate chambers comprise central flagella and groups of about 40 microvilli arising from the primary reticulum with collagenous material accumulated at its base. The secondary reticulum can be observed; probably an autapomorphy of the Hexactinellida. Clusters of small spherical objects might be spermatocytes from the sponge.^1";
- 4616 s[4613] = "REISWIG H.M. (1992).- First Hexactinellida (Porifera; glass sponges) from the great Australian Bight.- Rec. S. Aust. Mus. 26, 1: 25-36.- FC&P 22-2, p. 92, ID=3540^Topic(s): taxonomy; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: Australia, Great Australian Bight^The four species of Hexactinellida described are the first members of the class reported from southern Australian shelf and slope waters. The large vasiform Phoronema amphorae n.sp. is the first known member of the genus outside the Atlantic region bearing a well-developed annulus. Euplectella regalis, previously known only from the holotype, is represented by two new individuals. A very large specimen of Regadrella okinoseana, exhibiting the extremely rare feature of sieve plate fusion, offers new data which permits synonymization of all stauractin-bearing regadrellids.^1";
- 4617 s[4614] = "BARTHEL D., TENDAL O.S. (1994).- Antarctic Hexactinellida.- Theses Zoologicae 23 [Weagele J. W & Sieg J. (eds): Synopsis of the Antarctic Benthos, Vol. 6]; 154 pp., 53 text-figs., 20 plates; Champaign (Koeltz Scientific Books), ISBN 3-87429-3 59-9.- FC&P 24-1, p. 93, ID=4530^Topic(s): biology; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: Antarctic seas^This handy book gives a very good introduction into the topical knowledge about biology and terminology, e.g. spicule types, of the recent Hexactinellida. The taxonomic system followed is that of Ijima (1927) with some revisions from Bergquist (1978), Burthorn (1929), Hartman (1982), and Levi (1964) included. The diverse antarctic assemblage of Hexactinellida described here includes 16 genera with 26 species distributed in 8 families. The descriptions are illustrated with drawings after Schulze and Kirkpatrick and supplied with maps of antarctic distribution of the various species. This book is a must for anyone working with Antarctic fauna, or with Hexactinellida. By far the largest number of samples of Antarctic hexactinellids comes from the shelf. There are only two records from the slope (800-2000m), and 17 from depths around 2000m and downwards. The Antarctic hexactinellid fauna comprises 28 species as treated here, and a further 10 may be considered in the distribution analysis because they have been recorded close to the Antarctic convergence, mainly in deep water. There is a distinct vertical division into a shelf group of species and a deep water group. The relatively few species on the shelf are present in high numbers and give rise to large biomasses. By species number, however, hexactinellids are a predominantly deep-sea group in Antarctica, as they are in other oceans.^1";
- 4618 s[4615] = "CASAS C., RAMIL F., OFWEGEN L.P.van (1997).- Octocorallia (Cnidaria Anthozoa) from the Scotia Arc, South Atlantic Ocean. 1: The genus Alcyonium Linnaeus, 1758.- Zoologische Mededelingen 71, 26: 299-311.- FC&P 27-2, p. 57, ID=3919^Topic(s): taxonomy; Octocorallia Alcyonium; Systematics: Cnidaria; Octocorallia; Stratigraphy: Recent; Geography: Antarctic seas^Three new species of Alcyonium collected by the Spanish Antarctic Expeditions "Antartida 8611" and "Bentart 95" are described and figured: Alcyonium paucilobulatum, A. grandis and A. southgeorgiensis. Another two species, A. antarcticum wright & Studer, 1889, and Alcyonium sollasi wright & Studer, 1889, were

- also collected in the same area.^1";
- 4619 s[4616] = "VETTER W., JANUSSEN D. (2004).- Pop-like halogenated natural products in Antarctic sponges.- Organohalogene Compound 66: 405-410.- FC&P 33-2, p. 44, ID=1203^Topic(s): chemistry, organohalogenes; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Antarctica^1";
- 4620 s[4617] = "JANUSSEN D. (2003).- Auf Schwammsuche in der Tiefe der Antarktis.- Natur und Museum 133, 2: 49-54.- FC&P 32-2, p. 77, ID=1425^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Antarctica^1";
- 4621 s[4618] = "JANUSSEN D. (2002).- Hunting for Antarctic deep-sea sponges: Porifera of the ANDEEP II-Expedition to the Weddell Sea.- FC&P 31, 1: 77-79.- FC&P 31-1, p. 76, ID=1661^Topic(s): research outline; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Antarctica^The ANDEEP II-expedition took place during the time 28.02.-1.04.2002 as part of the Antarctic deep-sea benthos research program, ANDEEP, initiated by Prof. Dr. Angelika Brandt (University of Hamburg). First purpose of this expedition was a taxonomic and molecular inventory of the deep Weddell Sea, which is one of the least known marine areas of the world. [initial part of extensive summary]^1";
- 4622 s[4619] = "DEBRENNE F., ROZANOV A.Yu., WEBERS G.F. (1984).- Upper Cambrian Archaeocyatha from Antarctica.- Geological Magazine 121, 4: 291-299.- FC&P 13-2, p. 49, ID=0578^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian U; Geography: Antarctica^Reconnaissance geological mapping (1962-75) followed by detailed geological investigations (1979-80) in the Ellsworth Mountains of west Antarctica have established the existence of extensive Middle and Late Cambrian strata. Forms tentatively referred to Archaeocyatha have been examined by F.D. and A.R., who concluded that, despite the commonly held opinion that the phylum became extinct at the boundary of the Lower and Middle Cambrian, the Ellsworth Mountains' forms represented Irregularian Archaeocyatha which survived in protected niches into the Late Cambrian. The age of the fauna containing the archaeocyaths is firmly dated by abundant trilobites including species of Homagnostus, Pseudagnostus, Kormagnostella, Erixanium and Onchopeltis.^1";
- 4623 s[4620] = "MORYCOWA E., RUBINOWSKI Z., TOKARSKI A.K. (1982).- Archaeocyathids from a moraine at Three Sisters Point, King George Island / South Shetland Islands, Antarctica.- Studia Geologica Polonica 74: 73-80.- FC&P 12-1, p. 21, ID=1885^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian ?; Geography: Antarctica erratics^1";
- 4624 s[4621] = "DEBRENNE F., KRUSE P.D. (1986).- Shackleton limestone archaeocyaths.- Alcheringa 10: 237-278.- FC&P 16-1, p. 78, ID=2025^Topic(s): taxonomy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Antarctica^Thirty one species of Archaeocyaths are described from measured sections of the Nimrod Glacier area, which confirm earlier correlations of Shackleton limestone faunas with the Botomian stage of Siberia. Archaeocyatha from a section in Byrd Glacier area are Botomian or early Toyonian in age. Ten further archaeocyath species are added to the six species already known to be common both for Antarctica and Australia, confirming the existence of a Gondwana supercontinent in early Palaeozoic.^1";
- 4625 s[4622] = "DEBRENNE F., KRUSE P.D. (1989).- Cambrian Antarctic archaeocyaths.- Geological Society Special Publication 47: 15-28.- FC&P 19-1.1, p. 18, ID=2563^Topic(s): biogeography; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Antarctica^Most Antarctic archaeocyaths have been collected as allochthonous blocks,

but some in situ collections provide stratigraphic control. All existing collections are taxonomically revised. Strong faunal affinities are evident at the species level with in situ Early Cambrian faunas in South Australia and allochthonous faunas in South Africa and Antarctica. This allows the recognition of an Early Cambrian Gondwana province and confirms the existence of a Gondwana supercontinent throughout the Paleozoic.¹;

- 4626 s[4623] = "WRONA R., ZHURAVLEV A.Yu. (1996).- Early Cambrian archaeocyaths from glacial erratic of King George Island, west Antarctica.- *Palaeontologia Polonica* 55 [Gazdzicki A. (ed.): *Palaeontological Results of the Polish Antarctic Expedition. Part H.*]: pp?.- FC&P 25-2, p. 23, ID=3086Topic(s): erratics; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Antarctica, King George Isl^Twenty six species of archaeocyaths, including one *Naimarkcyathus elenae* gen. et sp.nov. representing a new family Naimarkcyathidae, are described from the Cambrian limestone erratics of the glacial-marine sediments of the Oligocene Polonez Cove and Early Miocene Cape Melville formations on King George Island (South Shetland Island, West Antarctica). They are accompanied by coralomorphs and calcified cyanobacteria. The archaeocyathan assemblage closely resembles allochthonous ones from the Weddell Sea and Whicaway Nunataks. Current reconstructions of icestream movement and iceberg drift and similarities in species composition suggest the source of these erratics to be the Argentina Range limestone. Some species, namely, *Stapicyathus stapipora*, *Prethmophyllum subacutum*, *Aporosocyathus mucroporus*, "*Mennericyathus*"*dissitus*, *Paranacyathus sarmaticus* and *Archaeopharetra irregularis* are added to the list of common species for Antarctica and Australia. The archaeocyaths of King George Island, and all other allochthonous and in situ Early Cambrian Antarctic archaeocyathan assemblages (with exception for the Mt Egerton in the Byrd Glacier area) are of the uppermost Botomian age (*Syringocnema favus* beds) as found in South Australian strata. This means that archaeocyaths did not reach Antarctica until latest Botomian time. Blocks containing archaeocyaths represent different reef facies comparable to the Kooliwurtie Limestone Member of the Yorke Peninsula. The occurrence of small shelly fossils typical of the upper Kulpara Formation-lower Parara Limestone, of archaeocyaths of *Syringocnema favus* beds, and of *Hadimopaneella antarctica* and certain brachiopods in erratics of different lithologies suggests a very similar faunal and facies succession for Antarctica and South Australia and therefore probably a comparable basin history.¹;
- 4627 s[4624] = "DEBRENNE F. (1992).- The archaeocyathan fauna from the Whiteout Conglomerate, Ellsworth Mountains, West Antarctica.- *Mem. geol. Soc. Amer.* 170 [Webers G.F., Craddock C. & Spletstoeser J.F. (eds) - *Geology and Paleontology of the Ellsworth Mountains, West Antarctica*]: 279-284.- FC&P 22-2, p. 96, ID=3553Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: Antarctica, W¹;
- 4628 s[4625] = "ENDERSON R.A., DEBRENNE F., ROWELL A.J., WEBERS G.F. (1992).- Brachiopods, archaeocyathids and pelmatozoa from the Minaret Formation of the Ellsworth Mountains, West Antarctica.- *Mem. geol. Soc. Amer.* 170 [Webers G.F., Craddock C. & Spletstoeser J.F. (eds) - *Geology and Paleontology of the Ellsworth Mountains, West Antarctica*]: 249-267.- FC&P 22-2, p. 97, ID=3557Topic(s): ; paleontology; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L?; Geography: Antarctica, W, Ellsworth Mts¹;
- 4629 s[4626] = "WEBERS G.F. (1981).- Cambrian rocks of the Ellsworth Mountains, West Antarctica.- *US Geol. Surv. Open File Report* 81-743 [Second International Symposium on the Cambrian System, Golden, Colorado]: 236-237.- FC&P 11-1, p. 56, ID=6129Topic(s):

- geology; paleontology, geology; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian U; Geography: Antarctica, w[fauna of the Minaret Formation includes tilobites, articulate and inarticulate brachiopods, pelmatozoans, rostrochonchs, holithids, monoplacophorans and algal structures, of late Cambrian age; presence of Archaeocyatha in association with this fauna is now confirmed after critical examination by F. and M. Debrenne and A. Yu. Rozanov; through some middle Cambrian enigmatic forms, the Archaeocyatha, thought to be exclusively lower Cambrian in age (Rozanov & Debrenne 1974), might have survived as relicts up to the end of the Cambrian (Debrenne, Rozanov and Webers in press)]^1";
- 4630 s[4627] = "DEBRENNE F., DEBRENNE M., WEBERS G. (1983).- Upper Cambrian Archaeocyathans: new morphotype.- Proceed. 4th Internat. Symp. on Antarctic Earth Sci. (Adelaide, S. Australia, 1982): 280.- FC&P 13-1, p. 51, ID=6350^Topic(s): Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian U; Geography: Antarctica^Confirmation of the extension of the group up to the Upper Cambrian; despite some differences (lack of individualised walls) these sponge-like forms belong to the family Archaeocyathidae. They sometimes consist of composite colonial bodies, branching cups evolving into catenulate forms. It is probably because of their plasticity and primitive development that they were able to survive in restricted niches up to the Upper Cambrian.^1";
- 4631 s[4628] = "OLIVERO E.B., AGUIRRE-URRETA M.B. (1994).- A new tube-builder hydractinian, symbiotic with hermit crabs, from the Cretaceous of Antarctica.- Journal of Paleontology 68, 6: 1169-1182.- FC&P 24-1, p. 73, ID=4503^Topic(s): symbiosis, hermit crabs; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous; Geography: Antarctica^An Upper Cretaceous (early Maastrichtian) tube-building hydractinian (Psammoactinia antarctica n.gen. and sp.) from Sanctuary Cliffs, Snow Hill Island, believed to live in association with hermit crabs, is described for the first time from Antarctica. Psammoactinia forms thick, concentric, globular colonies that encrust gastropod shells and extend the shell aperture by forming an open spiral tube. The colony consists of concentric layers with chambers and pillars made of silt and very fine sand grains agglutinated by cellophane, which is interpreted as a diagenetic modification of an original chitinous phosphatic material. On the basis of the additional finding of isolated claws of pagurid crabs, assigned to Paguristes sp., the functional analysis of the hydractinian structure, and a comparison with modern and fossil analogous structures it is concluded that the peculiar hydractinian tube is a carcinoecium that housed a symbiotic hermit crab. Paleoenvironmental and paleoecological inferences suggest that the Psammoactinia-Paguristes association is mainly controlled by a fine-grained substrate and by a lack of abundant gastropod shells of different sizes. These factors do not necessarily correlate with absolute water depth, and favorable environments could include either offshore, relatively deep water or shallow restricted depositional settings. ^1";
- 4632 s[4629] = "FILKORN H.F. (1994).- Fossil Scleractinian Corals from James Ross Basin, Antarctica.- Antarctic Research Series 65; 96 pp. ISBN 0-87590-8497.- FC&P 24-1, p. 98, ID=6862^Topic(s): paleoclimates; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U - Paleocene; Geography: Antarctica, Seymour isl^[the book] examines the significance and characteristics of sixteen scleractinian species found in the Upper Cretaceous and Paleocene strata of Seymour and Snow Hill islands, Antarctica. This fossil scleractinian material has revealed nine species described as new, some representing four newly established genera of Turbinoliidae. The objective of this book is to classify the taxa to species level and examine their occurrences with regard to

- paleoenvironmental and paleogeographic implications. The scleractinian fauna provides a rare opportunity to study both a taxonomic and an ecologic group which apparently was not adversely affected by the Cretaceous to Tertiary transition. [book presentation]^1";
- 4633 s[4630] = "STOLARSKI J. (1996).- Paleogene corals from Seymour Island, Antarctic Peninsula.- *Palaeontologia Polonica* 55 [Gazdzicki A. (ed.): *Palaeontological Results of the Polish Antarctic Expeditions II*]: 51-63.- FC&P 26-1, p. 72, ID=3558^Topic(s): taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleogene; Geography: Antarctic Peninsula^From the Sobral Formation (Paleocene) of Seymour Island solitary coralla of ?*Aulocyathus* Marenzeller, 1904 (suborder Caryophylliina) and branch fragments of *Madrepora sobral* Filkorn, 1994 (suborder Faviina) are described. In the overlying strata of the La Meseta Formation (Eocene) scleractinian coral fauna comprises solitary Caryophylliina (*Crispatotrochus antarcticus* sp.n., *Caryophyllia* sp., *Flabellum* sp.) and colonial *Dendrophylliina* (*Tubastraea* sp.). Reported are also octocoral holdfasts. The genera recorded from both formations are known also from modern seas. *Crispatotrochus antarcticus* sp.n. is the earliest representative of the genus. ?*Aulocyathus* and *Tubastraea* have no other fossil record. [original abstract]^1";
- 4634 s[4631] = "STOLARSKI J. (1998).- *Conopora* (Stylasteridae, Hydrozoa) from the Eocene of Seymour Island.- *Antarctic Science* 10, 4: 501-506.- FC&P 27-2, p. 15, ID=3896^Topic(s): Hydrozoa, Stylasteridae; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Eocene; Geography: Antarctic Peninsula^^1";
- 4635 s[4632] = "RONIEWICZ E., MORYCOWA E. (1985).- Fossil *Flabellum* (Scleractinia) of Antarctica.- *Acta Palaeontologica Polonica* 30, 1-2: 99-106.<http://www.a pp.pan.pl/article/item/app30-099.html>.- FC&P 14-2, p. 23, ID=0943^Topic(s): new taxa; Scleractinia, *Flabellum*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Antarctica^A new ahermatypic scleractinian coral, *Flabellum rariseptatum* sp.n., belonging to the *Flabellum thouarsii*-group of species, has been described from Tertiary glacio-marine sequence of the Cape Melville Formation cropping out at the King George Island, South Shetland Islands, Antarctica.^1";
- 4636 s[4633] = "STOLARSKI J., TAVIANI M. (2002).- Oligocene scleractinian corals from CRP-3 drillhole, Victoria Land Basin, Antarctica.- *Terra Antarctica* 8, 4: 435- 438.- FC&P 32-1, p. 30, ID=1734^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Oligocene; Geography: Antarctica^The solitary scleractinian coral *Flabellum rariseptatum* Roniewicz & Morycowa, 1985 has been identified in CRP-3 drill core within mudstone lithologies in Unit LSU 3.1. The coral-bearing macrobenthic assemblages include infaunal and epifaunal suspension feeders suggesting a deep muddy shelf environment, characterized by moderate hydrodynamism and turbidity and enrichment in organic matter. *Flabellum rariseptatum* belongs to the Recent *Flabellum thouarsii* group and has a known stratigraphic range extending from the early Oligocene to the early Miocene of Antarctica. This is the first known occurrence of *Flabellum rariseptatum* from the Antarctic mainland.^1";
- 4637 s[4634] = "RONIEWICZ E., MORYCOWA E. (1987).- Development and variability of Tertiary *Flabellum rariseptatum* (Scleractinia), King George Island, West Antarctica.- *Palaeontologia Polonica* 49: 83-103.- FC&P 17-2, p. 34, ID=2103^Topic(s): biology; Scleractinia, *Flabellum*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleogene; Geography: Antarctica, W^The paper presents results of studies on *Flabellum rariseptatum* Roniewicz et Morycowa 1985 from the Cape Melville and Destruction Bay Formations (Tertiary) of King George Island, Antarctica. The corals are mainly from thin bedded shales, siltstones and fine sandstone of the glacio-marine Cape Melville Formation, most probably of Lower Miocene

- age. All post-larval skeletal stages are represented beginning with basal plate with initial septal apparatus composed of 12 protosepta up to large individuals with complete six septal cycles and some septa of higher cycles (S7 and S8). The corals are characterized by variable shape from conical to flabellate, thin pedicel, and low septal density; at the adult stage they are unattached but stand vertically in soft sediment. Corallum morphology, shape of septa and feeble development of columella as well as an initial twelve-septal stage in ontogeny link this species to Recent Flabellum thoursii-group of species known from the Antarctic and sub-Antarctic regions.^1";
- 4638 s[4635] = "GAZDZICKI A., STOLARSKI J. (1992).- An Oligocene record of the coral Flabellum from Antarctica.- Polish Polar Research 13, 3/4: 265-272.- FC&P 22-2, p. 28, ID=3483^Topic(s):taxonomy; Scleractinia, Flabellum; Systematics:Cnidaria; Scleractinia; Stratigraphy:Oligocene; Geography:Antarctica^Solitary corals of the genus Flabellum are described from the Lower Oligocene glaciomarine strata of the Polonez Cove Formation of King George Island, West Antarctica. This is the oldest record of the genus from Antarctica. [original abstract]^1";
- 4639 s[4636] = "WOOD R.A., EVANS K.R., ZHURAVLEV A.Yu. (1992).- A new post-early Cambrian archaeocyath from Antarctica.- Geological Magazine 129: 491-495.- FC&P 21-2, p. 22, ID=3310^Topic(s):Archaeocyatha; Systematics:Porifera; Archaeocyatha; Stratigraphy:???; Geography:Antarctica^^1";
- 4640 s[4637] = "LIAO Wei-Hua (1995).- An outline of Antarctic Devonian and its comparison with the Chinese Devonian.- Antarctic Research (Chinese Edition) 7, 2: [pp?].- FC&P 24-2, p. 41, ID=4543^Topic(s):geology, regional; Systematics: Stratigraphy: Geography:Antarctica, China^^1";
- 4641 s[4638] = "PANDEY D.K., FURSICH F.T. (1993).- Contribution to the Jurassic of Kachchh, Western India. I. The coral fauna.- Beringeria 8: 3-69.- FC&P 23-1.1, p. 77, ID=4171^Topic(s):monograph; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Jurassic Bath - Oxf; Geography:India, Kachchh^The coral fauna from Bathonian-Oxfordian strata of Kachchh, Western India, originally described by Gregory (1900), is reviewed. Based on large own collections, 52 taxa of corals are described including Cryptocoenia wegeneri sp.nov. By far the most prolific coral locality lies within the upper part of the Patcham Formation (Late Bathonian / Early Callovian) at the center of Jumara Dome and yielded 41 taxa. The distribution of the various taxa within the Kachchh Basin is given, as is information on the major coral concentrations.^1";
- 4642 s[4639] = "FURSICH F.T., PANDEY D.K., OSCHMANN W., JAITLEY A.K., SINGH I.B. (1994).- Ecology and adaptive strategies of corals in unfavourable environments: Examples from the middle Jurassic of Kachch Basin, Western India.- Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen 194, 2/3: 269-303.- FC&P 24-2, p. 38, ID=4538^Topic(s):ecology, unfavourable environments; Anthozoa ecology; Systematics:Cnidaria; Anthozoa; Stratigraphy:Jurassic M; Geography:India, Kachchh^^1";
- 4643 s[4640] = "PANDEY D.K., McROBERTS C.A., PANDIT M.K. (1999).- Dimorpharaea de Fromentel, 1861 (Scleractinia, Anthozoa) from the Middle Jurassic of Kachchh, India.- Journal of Paleontology 73, 6: 1015-1028.- FC&P 29-1, p. 63, ID=1501^Topic(s):morphometry, taxonomy; Scleractinia, Dimorpharaea; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic M; Geography:India, Kachchh^The current classification of scleractinian corals based upon gross morphological features has been found unsatisfactory due to additional information from skeletal microarchitecture and microstructure. It is necessary to investigate microstructural details and limits in morphologic variation within and between different coral clades before a revised classification is

constructed. Variations in morphologic characters and microstructural details from a population of *Dimorpharaea* de Fromentel, 1861 (Family *Microsolonidae*) from Upper Bathonian (Jumara Dome) strata in Kachchh are described. The data used include the diameter (D) and height (U) of the corallum, number of corallites in the colony (NC), number of septa in the mother corallite at the center of the colony (NS), minimum distance between centers of central corallite and corallite of the inner ring (CI), minimum distance between corallite centers of the outer ring (C2), septal density (DS) and trabecular density (DT). The principal components analysis reveals that most of the variation is explained by size-related characters (D and H) while corallite density (NC and CI) and septal structures (DS and DT) contribute to the second and third principal component axes, respectively. The microarchitecture and distribution of characters observed in the Kachchh *Dimorpharaea* require a re-evaluation of familial-specific concepts and suggest that the population belongs to a single species, *Dimorpharaea stellans* Gregory, 1900, rather than four nominal species (*D. stellans*, *D. distincta*, *D. continua* and *D. orbica*) as has been assumed. [original abstract]^1";

4644 s[4641] = "PANDEY D.K., FURSICH F.T. (2001).- Environmental distribution of scleractinian corals in the Jurassic of Kachchh, Western India.- *Journal of the Geological Society of India* 57: 479-495.- FC#038;P 30-2, p. 28, ID=1583^Topic(s):environmental distribution; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic Bath - Oxf; Geography:India, Kachchh^Scleractinian corals commonly occur at specific horizons and localities, in carbonate and in siliciclastic sediments, throughout the Jurassic (Bajocian to Oxfordian) of Kachchh as meadows, biostromes, boulder beds and as scattered specimens. In many cases they are part of the autochthonous benthic fauna and in others they suffered short intra-basinal transport. Cerioid forms of low diversity (*Amphiastraea*, *Isastraea*, etc.) abound in high-energy siliciclastic sediments. High diversity coral faunas, which include thamnasterioid (*Microsolena*, *Dimorpharaea* and *Kobya*) and solitary (*Trocharaea* and *Trochoplegma*) taxa with fenestrate septa and plocoid forms (*Stylina*), dominate in carbonate sediments deposited in low energy, deeper-water environments. The solitary *Montlivaltia* exhibits a great physiological tolerance of environmental stress. In all, eight coral assemblages have been recognized within the ?Early Bajocian to Late Callovian sediments of the Kachchh basin. * The distribution of scleractinian coral assemblages has been governed mainly by the rate of sedimentation and particularly by the influx of coarse siliciclastic material. As a consequence the distribution pattern reflects onshore-offshore gradients and the general deepening of the Kachchh basin towards the Oxfordian. [original abstract]^1";

4645 s[4642] = "PANDEY D.K., LATHUILIERE B. (1997).- Variability in *Epistreptophyllum* from the Middle Jurassic of Kachchh, western India: an open question for the taxonomy of Mesozoic scleractinian corals.- *Journal of Paleontology* 71, 4: 564-577.http://www.jstor.org/pss/1306577.- FC#038;P 26-2, p. 5, ID=3665^Topic(s):taxonomy; Scleractinia, *Epistreptophyllum*; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic M; Geography:India, Kachchh^*Epistreptophyllum cornutiformis* Gregory, 1900, is the name assigned to a Middle Jurassic population of scleractinian corals from Kachchh, western India. Measurements of ten variables from 84 specimens of this population have been statistically examined by means of univariate and multivariate analyses. A wide range of variation in corallum shape, septal perforation, lateral septal surface ornamentation, nature of the endotheca, and that of the columella is observed. The great majority of specimens are solitary. The wide range of gradational variation observed in this population corresponds to and includes the morphological characters described for various scleractinian genera

- such as *Protethmos* Gregory, *Metethmos* Gregory, *Frechia* Gregory, and *Epistreptophyllum* Milaschewitsch. The assignment of these genera to this later senior synonym genus is supported by the description of a well-preserved toptype from Nattheim. The ornamentation of the septa in *Epistreptophyllum* is detailed and distances it from typical pennular corals. [original abstract]^1";
- 4646 s[4643] = "BEAUVAIS L. (1978).- Revision des toptypes de Madreporaires bathoniens de Cutch (Inde). Collection Gregory, British Museum de Londres.- *Annales de Paleontologie (Invertebres)* 64, 1: 44-77.- FC&P 8-1, p. 12, ID=5672^Topic(s): revision of type material; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Bath; Geography: India, Kachchh^La révision des 25 toptypes de Madréporaires du Dogger de Cutch de la collection Gregory conservée au British Museum de Londres a permis: (1) de reclasser seize espèces dans des genres différents de ceux qui leur avait été attribués par cet auteur, (2) d'en ranger six dans la synonymie d'autres espèces et (3) de créer une espèce et deux genres nouveaux.^1";
- 4647 s[4644] = "PANDEY D.K., FURSICH F.T., BARON-SZABO R.C. (2009).- Jurassic corals from the Jaisalmer Basin, western Rajasthan, India.- *Zitteliana A* 48/49: 13-38.- FC&P 36, p. 100, ID=6526^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj, Bath Tith; Geography: India, Kachchh^The first comprehensive taxonomic description of Jurassic corals from the Jaisalmer Basin, a pericratonic shelf basin on the northwestern slope of the Indian peninsular shield, is based on 75 specimens, which belong to five suborders, seven families, nine genera, and ten species. In Upper Bajocian rocks, all corals belong to the suborder Faviina, in Middle Bathonian rocks 75% of the specimens are members of the Stylinina, whereas corals occurring in the Tithonian all belong to the Caryophyllina. [original abstract]^1";
- 4648 s[4645] = "PANDEY D.K., LATHUILIERE B., FURSICH F.T., KULDEEP S. (2002).- The oldest Jurassic cyathophorid coral (Scleractinia) from siliciclastic environments of the Kachchh Basin, western India.- *Paläontologische Zeitschrift* 76, 2: 347-356.- FC&P 33-2, p. 34, ID=1170^Topic(s): ; Scleractinia, Cyathoporida; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Baj; Geography: India, Kachchh^*Cyathophora Michelin* 1843, hitherto well known from the Upper Jurassic and Cretaceous, has been found in the Middle Jurassic (Bajocian) of the Kachchh Basin, western India. Eleven specimens of *Cyathophora bourgueti* (Defrance 1826) from the Babia Cliff Sandstone member of the Kaladongar Formation, exposed along the northern scarp of the Kala Dongar, Pachchham Island, Kachchh, are described and illustrated as the earliest Jurassic record of the family Cyathophoridae Vaughan & wells 1943. It is suggested that the monospecific occurrence of *Cyathophora bourgueti* was controlled by salinity.^1";
- 4649 s[4646] = "MEHL D., FURSICH T. (1997).- Middle Jurassic Porifera from Kachchh, western India.- *Paläontologische Zeitschrift* 71, 1-2: 19-33.- FC&P 26-2, p. 74, ID=3762^Topic(s): sponge meadows; Porifera; Systematics: Porifera; Stratigraphy: Jurassic Bath; Geography: India, Kachchh^From the Late Bathonian sponge biofacies at Jumara Dome, Kachchh (western India) 11 species of'lithistid'; hexactinellinid and calcarean sponges are described. New taxa are the order Sigmatospirida, the genus Jumarella, and the species Jumarella astrorhiza, Mastosia rhytidodes, Radicispongia kraspedophora, and Hexactinella prisca. The diverse sponge assemblage is associated with a rich fauna of epibenthic bivalves and brachiopods and formed meadows [which] grew on a carbonate ramp at the lower end of the photic zone, in quiet waters below storm wave base. The rate of sedimentation exceeded that of sponge production. This prevented the development of reef-like bodies. In contrast to Mesozoic sponge reefs, growth of the sponge meadows appears

- to have been confined to the regressive phases of small transgressive-regressive cycles.¹";
- 4650 s[4647] = "PANDEY D.K., FURSICH F.T. (1994).- Bajocian (Mid Jurassic) age of the lower Jaisalmer Formation of Rajasthan, western India.- Newsletters on Stratigraphy 30, 2: 75-81.- FC&P 24-2, p. 38, ID=4539Topic(s): stratigraphy; Systematics: ; Stratigraphy: Jurassic Baj; Geography: India, RajasthanThe occurrence of the coral Isastrea bernardiana (d'Orbigny 1850), hitherto known only from the Bajocian of Europe, near the so far undated base of the Jaisalmer Formation of Rajasthan, western India, suggests a Bajocian age for the lower part of the formation. As the base of the Jaisalmer Formation also represents the earliest marine record in the area, the rime of transgression of the Jurassic sea across the Indus shelf can be dated accordingly as Bajocian. [original abstract]^1";
- 4651 s[4648] = "FURSICH F.T., CALLOMON J.H., PANDEY D.K., JAITLEY A.K. (2004).- Environments and faunal patterns in the Kachchh rift basin, western India, during the Jurassic.- Rivista Italiana di Paleontologia e Stratigrafia 110, 1: 181-190.- FC&P 36, p. 90, ID=6501Topic(s): geology, reefs; geology, reefs; Systematics: ; Stratigraphy: Jurassic; Geography: India, KachchhMarine Jurassic sediments (Bajocian-Tithonian) of the Kachchh Basin were deposited in a ramp setting. Except during the Middle and Late Bathonian, when a carbonate regime became established, the fill of the basin consists predominantly of siliciclastics. The sediments represent environments that range from coastal plains (rivers and associated flood plains with caliche nodules), deltas, brackish water lagoons, nearshore sand and iron-oolite bars of the inner ramp, generally situated above fair-weather wave-base, to the middle ramp influenced by storm-waves and by storm-generated currents, and finally to the outer ramp which is characterised by low energy, fine-grained sediments. Changes in relative sea level produced a cyclic sedimentation pattern. The rich benthic fauna of macroinvertebrates is dominated by bivalves, followed by brachiopods, gastropods, corals, serpulids, and sponges. The analysis of 370 statistical samples and more than 27, 000 specimens produced more than 40 benthic associations and assemblages. They show a relationship to several environmental parameters, two of which, salinity and climate, are briefly discussed. The spatial distribution of the facies and biota is outlined for two time slices, the Bathonian and the Callovian-Oxfordian, respectively. [original abstract]^1";
- 4652 s[4649] = "FURSICH F.T., OSCHMANN W., PANDEY D.K., JAITLEY A.K., SINGH I.B., LIU C. (2004).- Paleoecology of Middle to Upper Jurassic Macrofaunas of Kachchh Basin, Western India: an overview.- Journal of the Palaeontological Society of India 49: 1-26.- FC&P 36, p. 90, ID=6502Topic(s): ecology; ecology; Systematics: ; Stratigraphy: Jurassic; Geography: India, Kachchh^^1";
- 4653 s[4650] = "LOSER H., MOHANTI M. (2004).- A Cenomanian coral assemblage from southern India.- Neues Jahrbuch fuer Geologie und Palaeontologie, Monatshefte 2004, 10: 577-594.- FC&P 33-2, p. 33, ID=1166Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Cen; Geography: India SSix hermatypic coral species [Adelocoenia desori (Koby 1897), Isastrea minima Prever 1909, Montlivaltia icaunensis d'Orbigny 1850, Rennensismilia cf. inflexa (Reuss 1854), Phyllocoenia pomeli Peron & Thomas 1893, Dimorphastrea grandiflora d'Orbigny 1850] from mixed carbonate - siliciclastic sediments of the Cenomanian (Upper Cretaceous) of the Karai formation (Uttattur Group) of southern India are described. Four of them are colonial and two are solitary corals. The fauna compares well with Early Cretaceous to Cenomanian corals from northern and central Europe in particular. No relationships exist with the Late Albian coral faunas from southern India described in the 19th century, which is attributed to differences

- in the facies.^1";
- 4654 s[4651] = "RIGBY J.K., MOHANTI M. (1993).- A new hexactinellid sponge from the Eocene of Kutch, India.- Journal of Paleontology 67, 6: 917-922.<http://www.jstor.org/pss/1306105>.- FC&P 23-2.1, p. 57, ID=4405^Topic(s): new taxa; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Eocene; Geography: India, Kachchh^A single specimen of the new dictyonine hexactinellid species Verrucocoelia biswasi was collected from the Middle Eocene Fulra Limestone from Lakhpatt Fort, Kutch, western India. The euretoid species is broadly bowl-shaped, 7-8cm wide and 5-6cm high, with walls of branched to weakly anastomosed tubes that extend upward and outward from a simple, unfluted, walled spongocoel. Skeletal strands diverge upward and outward from near the gastral surface of each tube. The sponge occurs in silty tan marl with abundant alveolinids and less common other large foraminifera, bivalves, and gastropods in sediments thought to have accumulated in a quiet, sheltered environment, possibly a lagoon. [original abstract]^1";
- 4655 s[4652] = "RIGBY J.K., MOHANTI M. (1990).- The First Reported Middle Eocene Sponge from India: A Raphidonema from the Fulra Limestone Formation, Kutch, India.- Journal of Paleontology 64, 4: 510-514.- FC&P 20-1.1, p. 75, ID=2867^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Eocene M; Geography: India, Kachchh^A single specimen of the new sponge, Raphidonema indica n.sp., is the first Eocene sponge to be reported from India. It was collected from the Fulra Limestone Formation at Lakhpatt, Kutch, India. The undulating, cup-like sponge is most similar to R. farringtonense (Sharpe 1854), but the Indian species has a clustered, mounded excurrent system and numerous tangential canals on the upper, exhalant surface. Skeletal tracts in Raphidonema indica are 0.4-0.5 mm in diameter, in walls that are generally 12-14 mm, but range up to 18 mm thick.^1";
- 4656 s[4653] = "MOHANTI M., SRIVASTAVA S.C. (1994).- Oligocene reefal environment of Kutch Basin (Western India) with implications of the Mediterranean connection.- Geologie Mediterranee 21, 3-4: 127-129.- FC&P 25-1, p. 53, ID=3068^Topic(s): reefs, ecology, geography; reefs; Systematics: ; Stratigraphy: Oligocene; Geography: India, Kachchh^The pericratonic Kutch Rift Basin, Western India, developed during the Indian plate drifting process (Biswas 1982), exhibits a remarkably well-exposed larger Foraminifera-rich-carbonate succession ranging in age from the Middle Eocene to Oligocene in the western and southwestern coastal plains of Kutch Mainland between Lakhpatt (68°46''20'"; 23°49''32'") and Goyela (68°49''25'"; 23°26''40'").^1";
- 4657 s[4654] = "GUPTA S.K., AMIN B.S. (1974).- Th/U ages of corals from Saurashtra coast.- Marine Geology 16: 79-83.- FC&P 4-2, p. 46, ID=5211^Topic(s): geochronometry; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: India, Saurashtra^Un-recrystallized fossil corals occurring at 2-6m above the present mean low-tide level on the Saurashtra coast (Western India) have been dated by ²³⁰Th/²³⁴U and ²³⁴U/²³⁸U radiometric methods. The measured ages of the corals, which are in agreement with radiocarbon ages, fall in three groups, 6,000, 30,000 and 120,000 years before present. This observation, coinciding with the high sea-level stands reported in several locations in the world, in the absence of evidence in support of instability of Saurashtra coast, suggests that the coral reefs are remnants of one Holocene and two Quaternary high sea-level stands.^1";
- 4658 s[4655] = "ROSEN B.R. (2002).- Biodiversity: old and new relevance for palaeontology.- Geoscientist 12, 9: 4-9.- FC&P 33-2, p. 13, ID=1105^Topic(s): biodiversity; biodiversity; Systematics: ; Stratigraphy: fossil; Geography: ^^1";

- 4659 s[4656] = "MEHL D., MULLER I., MULLER W.E.G. (1998).- Molecular Biological and Paleontological Evidence that Eumetazoa, Including Porifera (Sponges), are of Monophyletic Origin.- In: Watanabe Y. Fusetani N. (Eds.): Sponge Sciences. Multidisciplinary Perspectives: 133-156.- FC&P 27-2, p. 65, ID=3934^Topic(s): early phylogeny; Eumetazoa monophyly; Systematics: Animalia; Stratigraphy: Proterozoic; Geography: ^The phylogenetic relationships of the kingdom Animalia (Metazoa) have long been questioned. Initially, detailed descriptions of animal embryology and adult morphology were used to solve the evolutionary origins of distant groups such as phyla. Focusing on the lowest eukaryotic multicellular organisms, the metazoan phylum Porifera (sponges), it remained unclear if they independently evolved multicellularity from a separate protist lineage (polyphyly of animals) or derived from the same protist group as the other animal phyla (monophyly). Based on constituent characters of the sponges a monophyletic origin of the Porifera can be deduced. The oldest complete fossil sponge has been described from the Early Cambrian, while the earliest spicules date from the late Proterozoic, about 600 million years ago. It is suggested that the first sponges did not contain spicules. After having analyzed those genes from the sponge *Geodia cydonium* which are typical for multicellularity, e.g., those coding for adhesion molecules/receptors and a nuclear receptor, it has to be concluded that all animals, including sponges, are of monophyletic origin. Based on the elaborated molecular biological data we suggest not subdividing Metazoa into Parazoa (including the sponges) and Eumetazoa. In addition it was estimated that the adhesion molecules/receptors from sponges diverged from a common ancestor in the Precambrian, about 800 million years ago.^1";
- 4660 s[4657] = "BORCHIELLINI C., BOURY-ESNAULT N.VACELET J., LE PARCO Y. (1998).- Phylogenetic analysis of the Hsp70 sequences reveals the monophyly of Metazoa and specific phylogenetic relationships between animals and fungi.- *Mol. Biol. Evol.* 15: 647-655.- FC&P 27-2, p. 64, ID=3982^Topic(s): early phylogeny; Systematics: Animalia; Stratigraphy: Proterozoic; Geography: ^To understand the early evolution of the Metazoa, it is necessary to determine the correct phylogenetic status of diploblastic animals. Despite cladistic studies of morphological characters and recent molecular phylogenetic studies, it remains uncertain whether diploblasts are monophyletic or paraphyletic, and how the phyla of diploblasts are phylogenetically related. The heat shock protein 70 (Hsp70) sequences, because of their ubiquity and high degree of conservation, could provide a useful model for phylogenetic analysis. We have sequenced almost the entire nucleic acid sequence of cytoplasmic Hsp70 from eight diploblastic species. Our data support the monophyly of diploblastic animals. However, the phylogenetic relationships of the diploblast groups were not significantly resolved. Our phylogenetic trees also support the monophyly of Metazoa with high bootstrap values, indicating that animals form an extremely robust clade.^1";
- 4661 s[4658] = "ZHURAVLEV A.Yu. (1993).- Were Ediacarian Vendobionta multicellular? .- *N. Jb. Geol. Palaeont. Abh.* 180, 2/3: 300-313.- FC&P 23-1.1, p. 84, ID=4194^Topic(s): early phylogeny; Vendobionta; Systematics: Animalia; Stratigraphy: Neoproterozoic; Geography: ^^1";
- 4662 s[4659] = "PFLUG H.D. (1974).- *Feinstruktur und Ontogenie der Jungpraekambrischen Petalo-Organismen.- Paläontologische Zeitschrift* 48, 1-2: 77-109.- FC&P 4-1, p. 47, ID=5193^Topic(s): early phylogeny; Systematics: Animalia; Stratigraphy: Neoproterozoic; Geography: ^^1";
- 4663 s[4660] = "PHILIPPE H., DERELLE R., LOPEZ P., BORCHIELLINI C., BOURY-ESNAULT N., VACELET J., RENARD E., HOULISTON E., QUINNEC E., De SILVA C., WINCKER P., Le GUYADER H., LEYS S., JACKSON D.J., SCHREIBERG F., ERPENBECK D., MORGENSTERN B., WORHEIDE G., MANUEL M. (2009).-

Phylogenomics Revives Traditional Views on Deep Animal Relationships.- Current Biology 19, 8: 706-712.- FC&P 36, p. 130, ID=6587^Topic(s): early phylogeny; early phylogeny; Systematics: Animalia; Stratigraphy: Proterozoic; Geography: ^The origin of many of the defining features of animal body plans, such as symmetry, nervous system, and the mesoderm, remains shrouded in mystery because of major uncertainty regarding the emergence order of the early branching taxa: the sponge groups, ctenophores, placozoans, cnidarians, and bilaterians. The "phylogenomic" approach [1] has recently provided a robust picture for intrabilaterian relationships [2, 3] but not yet for more early branching metazoan clades. We have assembled a comprehensive 128 gene data set including newly generated sequence data from ctenophores, cnidarians, and all four main sponge groups. The resulting phylogeny yields two significant conclusions reviving old views that have been challenged in the molecular era: (1) that the sponges (Porifera) are monophyletic and not paraphyletic as repeatedly proposed [4-9], thus undermining the idea that ancestral metazoans had a sponge-like body plan; (2) that the most likely position for the ctenophores is together with the cnidarians in a "coelenterate" clade. The Porifera and the Placozoa branch basally with respect to a moderately supported "eumetazoan" clade containing the three taxa with nervous system and muscle cells (Cnidaria, Ctenophora, and Bilateria). This new phylogeny provides a stimulating framework for exploring the important changes that shaped the body plans.^1";

4664 s[4661] = "VALENTINE J.W. (1992).- Dickinsonia as a polypoid organism.- Paleobiology 18, 4: 378-382.- FC&P 22-1, p. 30, ID=3382^Topic(s): problematica, polypoid?; Cnidaria ?, Dickinsonia; Systematics: Cnidaria; Stratigraphy: Neoproterozoic; Geography: ^Dickinsonia is reconstructed as a benthic polypoid of generally cnidarian design. The oral surface was without tentacles but contained a median oral slit that probably led through a pharynx into an enteron, which was divided into digestive diverticulae by radiating mesenteries; feeding may have been via ciliary tracts. The mesenteries and the body wall contained a stiff form of mesogloea. There seems to be no need to postulate a novel constructional grade for this organism, bringing the concept of the Vendozoa into question.^1";

4665 s[4662] = "ZHURAVLEVA I.T. (1976).- Geological and biological evolution at boundary of Proterozoic and Phanerozoic.- Proceedings Int. Geol. Congress, session 25 (Moskva): 14-24.- FC&P 6-1, p. 31, ID=5529^Topic(s): geology; geohistory; Systematics: ; Stratigraphy: Proterozoic / Cambrian; Geography: ^^1";

4666 s[4663] = "COPPER P. (2001).- Evolution, radiations and extinctions in Proterozoic to mid-Paleozoic reefs.- The History and Sedimentology of Ancient Reef Systems: 89-119 [Stanley G. D. (ed.); Plenum Press, New York].- FC&P 31-1, p. 70, ID=1649^Topic(s): phylogeny, radiations, extinctions; reefs; Systematics: ; Stratigraphy: Proterozoic - Paleozoic; Geography: ^[stromatoporoid-coral reefs are discussed in the sections on Ordovician and Silurian-Devonian reefs]^1";

4667 s[4664] = "REITNER J., MEHL D. (1996).- Monophyly of the Porifera.- Verh. naturwiss. Ver. Hamburg NF36: 5-32.- FC&P 26-2, p. 75, ID=3765^Topic(s): monophyly; Porifera; Systematics: Porifera; Stratigraphy: Neoproterozoic - Recent; Geography: ^The monophyly of the Porifera is well established. According to our hypothesis the Hexactinellida are the adelphotaxon of the Pinacophora (new taxon = Calcareia + Homoscleromorpha + Demospongidae). The Porifera are the adelphotaxon of the Eumetazoa / Placozoa. Sponge spicules are considered not to be a constituent character of the Porifera. Mineralized spicules developed independently within the three poriferan main taxa the Hexactinellida, Calcareia, and Demospongiae. Demospongian microscleres are not derived from

- megascleres in contrast to those of Hexactinellida. Accordingly, spicules probably developed several times within the Demospongiae. Remains of Porifera are known since the late Proterozoic.¹";
- 4668 s[4665] = "JENKINS R.J.F. (1989).- The supposed terminal Precambrian extinction event; in relation to the Cnidaria.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 307-317.- FC;P 19-1.1, p. 14, ID=2549Topic(s): extinctions; extinctions; Systematics: Cnidaria; Stratigraphy: Ediacaran; Geography: ^1";
- 4669 s[4666] = "MEHL-JANUSSEN D. (1999).- Die fruhe Evolution der Porifera. Phylogenie und Evolutionsoekologie der Porifera im Palaeozoikum mit Schwerpunkt der desmentragenden Demospongiae (,Lithistide[#]);.- Munchener Geowissenschaftliche Abhandlungen, Reihe A, 37: 1-72.- FC;P 28-2, p. 34, ID=4029Topic(s): early phylogeny; Porifera; Systematics: Porifera; Stratigraphy: Ediacaran - Cambrian; Geography: ^The taxon Porifera as the earliest definite Metazoan phylum is documented from ca. 543-549 Mio. Y. old sediments, e.g. of Ediacara lagerstaetten: Palaeophragmodictya, a hexactinellide-like early sponge from these strata may not have possessed any mineralized spicules at all. Tiny fossils from the ca. 580 Mio. Y. old Duoshantuo-phosphorite have been interpreted as juvenile sponges, in which case they belong to the Demospongiae. However, the clade Porifera most probably separated from the Eumetazoa at least 200 Mio. Y. earlier. During the earliest Cambrian the Hexactinellida were predominant, but already from the Atdabanian, the taxon Pinacophora has become highly diverse, e.g. the demospongide group Astrophora, including the ecologically flexible Geodiidae. [first part of extensive summary]^1";
- 4670 s[4667] = "MATTHEWS S.C., MISSARZHEVSKIY V.V. (1975).- Small shelly fossils of Late Precambrian and Early Cambrian age: a review of recent work.- Journal Geol. Soc 131, 3: 289-304.- FC;P 4-2, p. 66, ID=5317Topic(s): small shelly fossils; small shelly faunas; Systematics: ; Stratigraphy: Ediacaran - Cambrian L; Geography: ^[among other groups also Archaeocyatha are mentioned]^1";
- 4671 s[4668] = "IVANOVSKIY A.B., IVANOV I.B. (1984).- Stratigrafiya i paleontologiya drevneshego fanerozoya.- Nauka, Moskva, 125 pp.- FC;P 13-2, p. 58, ID=0606Topic(s): biostratigraphy; fossils stratigraphy; Systematics: ; Stratigraphy: Vendian - Silurian; Geography: ^(Stratigraphy and paleontology of the elder phanerozoic era.) The paper deals with newer problems and questions concerning the stratigraphy of wendian, Ordovician and silurian, including the paleontology of Paleozoic corals, e.g. a group of extinct organisms that are of significance in stratigraphy.¹";
- 4672 s[4669] = "WEBBY B.D. (1984).- Early Phanerozoic distribution patterns of some major groups of sessile organisms.- Proceedings 27th International Geological Congress 2: 193-208.- FC;P 14-1, p. 58, ID=1061Topic(s): benthos, distribution patterns; benthos sessile; Systematics: ; Stratigraphy: Phanerozoic L; Geography: ^The initial diversification of stromatoporoids, among other organisms, is briefly traced. The clathrodictionids spread slowly in middle Caradoc time from an island arc setting in Australia. Other organisms made their first appearances in platform settings.¹";
- 4673 s[4670] = "OEKENTORP K. (2001).- Review on diagenetic microstructures in fossil corals - a controversial discussion.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 193-209.- FC;P 30-1, p. 20, ID=1618Topic(s): microstructures, diagenesis; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: ^Microstructures in Palaeozoic corals are discussed

in a comprehensive survey resulting from current examinations. It is considered that diagenetic alterations are more common than hitherto assumed. This bears consequences for taxonomic purposes as well as for phylogenetic inferences. In principal, three fundamental types of diagenetical changes, concerning pseudoskeletal. i.e. diagenetic altered microstructures, have to be distinguished: (1) skeletogenic recrystallization, (2) aggrading neomorphism and (3) calcite twinning. * The latter includes zigzag patterns and pseudolamellar structures, both of which are due to the same mineralogical regularities of calcite. The occurrence of cyanobacteria in the coralla of Favosites specimens from the Eifel Hills, Germany, shows that the overprinting of the skeleton by aggrading neomorphism and formation of cleavages most probably succeeded cyanobacterial settlement. Therefore, **Stirnzonen**, zigzag patterns, and microlamellar structures cannot be primary in origin. [original abstract]^1";

4674 s[4671] = "GILL I., OLSON J.J., HUBBARD D.K. (1995).- Corals, paleotemperature records, and the aragonite-calcite transformation.- *Geology* 23, 4: 333-336.- **FC#038;P 25-1**, p. 30, ID=3003^Topic(s): paleotemperatures, calcite - aragonite; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: ^Oxygen isotopic records from corals play an increasing role in paleoclimatic research and climatic modeling. Proxy records of sea-surface temperature are produced by isotopically analyzing samples drilled from aragonitic (CaCO3) coral skeletons. However, drilling aragonite causes a polymorphic inversion to calcite accompanied by 18O enrichment. The isotopic enrichment may occur through atmospheric exchange, CO2 degassing, or fractionation during digestion. Regardless of the mechanism, dry drilling produced isotopic shifts as large as 0.8‰, corresponding to an erroneous temperature decrease of 3°C. This error is larger than the global temperature rise since the Industrial Revolution, and a substantial part of the global temperature variation over the past 10 ka. Because the isotopic shift is inconsistent and can occur without the production of measurable calcite, detecting and correcting the isotopic shift may be difficult.^1";

4675 s[4672] = "SEMENOFF-TIAN-CHANSKY P. (1991).- Rythme de croissance chez les coraux fossiles et ralentissement de la rotation terrestre.- *Sciences, Publication de l'Association Francaise pour l'Avancement des Sciences* 91, 2/3: 127-163.- **FC#038;P 21-1.1**, p. 48, ID=3241^Topic(s): coral growth, sclerochronology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: ^^1";

4676 s[4673] = "CAMOIN G., MONTAGGIONI L. (1995).- Coraux fossiles, archives du climat.- *La Recherche* 275, April 1995, 26: 402-407.- **FC#038;P 24-1**, p. 15, ID=4451^Topic(s): paleoclimates; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: ^Tres sensibles a leur environnement, les coraux contruisant des squelettes calcaires qui gardent en memoire du milieu. Les coraux fossiles fournissent ainsi de precieuses informations sur les climats passes. Leur etude a deja montre que le refroidissement des regions tropicales au cours des periodes glaciaires quarternaires a ete plus important qu'on ne le pensait. De quoi permettre d'ameliorer les simuitations du climat futur.^1";

4677 s[4674] = "LAFUSTE J. (1970).- Lames ultra-minces à faces polies. Procédé et application à la microstructure des Madréporaires fossiles.- *C. R. Acad. Sci. Paris* 270: 679-681.- **FC#038;P 1-2**, p. 25, ID=4704^Topic(s): research techniques; Anthozoa microstructures; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil; Geography: ^Sont définies et illustrées les microstructures 1) fibreuse à bosselures, 2) lamellaire, 3) microlamellaire. Ces trois types de microstructure sont caractéristiques des Tabulata, Heliolitida et Tétracoralla. La microstructure des Hexacoralla, établie dès le Trias, est d'un type différent.^1";

- 4678 s[4675] = "DIETL G., URLICHS M., WARTH M. (1977).- Coral collection - Staatl. Mus. f. Naturkunde in Stuttgart, Ludwigsburg branch.- FC&P 6, 2: 35-37.- FC&P 6-2, p. 35, ID=5541Topic(s):collections of fossils; coral collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[fossil corals collections; Germany]^1";
- 4679 s[4676] = "OEKENTORP K. (1977).- Some new aspects on secondary microstructures in fossil corals (preliminary report).- FC&P 6, 2: 32-35.- FC&P 6-2, p. 32, ID=5553Topic(s):diagenesis; corals diagenesis; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[research report]^1";
- 4680 s[4677] = "COPPER P. (1977).- Coral collection - Laurentian University, Canada.- FC&P 6, 2: 35.- FC&P 6-2, p. 35, ID=5554Topic(s):collections of fossils; coral collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[fossil corals collections; Canada]^1";
- 4681 s[4678] = "GEISTER J. (1977).- Coral collection - Staatl. Mus. f. Naturkunde in Stuttgart, Schloss Rosenstein branch.- FC&P 6, 2: 37.- FC&P 6-2, p. 37, ID=5555Topic(s):collections of fossils; coral collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[fossil corals collections; Germany]^1";
- 4682 s[4679] = "LAUB R.S. (1977).- Coral collection - Buffalo Mus. of Science.- FC&P 6, 2: 40.- FC&P 6-2, p. 40, ID=5557Topic(s):collections of fossils; coral collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[fossil corals collections; USA]^1";
- 4683 s[4680] = "FLOWER R.H. (1977).- Coral collection - New Mexico Bureau of Mines, Socorro.- FC&P 6, 2: 40.- FC&P 6-2, p. 40, ID=5558Topic(s):collections of fossils; coral collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[fossil corals collections; USA]^1";
- 4684 s[4681] = "TURNER S.(?) (1980).- The Hancock Museum.- FC&P 9, 1: 9.- FC&P 9-1, p. 9, ID=5727Topic(s):collections of fossils; corals collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[fossil corals collection, Hancock Museum, Newcastle upon Tyne, UK]^1";
- 4685 s[4682] = "LAUB R.S. (1980).- Buffalo Museum of Science.- FC&P 9, 1: 9.- FC&P 9-1, p. 9, ID=5736Topic(s):collections of fossils; corals collections; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[recent acquisitions to fossil corals collection, Buffalo Museum of Science, Buffalo, New York]^1";
- 4686 s[4683] = "KONISHI K. (1979).- Fossils of soft corals as an example of forgotten reef- or rock-builder. [in Japanese].- The Earth Monthly (Chikyu) 1, 9: 643-649.- FC&P 10-1, p. 31, ID=5942Topic(s):soft; soft corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^^1";
- 4687 s[4684] = "anonymous (A.B.Ivanovskiy ?) (1974).- Holotypes from the collections kept in Monographical Section, Museum of Geology and Geophysics, Siberian Section of Academy of Sciences, Novosibirsk.- FC&P 3, 1: 39-45.- FC&P 3-1, p. 39, ID=6258Topic(s):collections of fossils; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[types of collections: 72 (Devonian, Kuznetsk Basin; Dubatolov 1963); 232 (Devonian M, Kuznetsk Basin; Besprozvannykh 1964); 236 (Silurian L & Devonian U, Siberian Platform; Ivanovskiy 1965); 237 (Carboniferous L, Siberian Platform; Ivanovskiy 1967); 248 (Devonian, various locations; Rugosa by Spasskiy 1964, Tabulata by Dubatolov 1964); 260 (Ordovician & Silurian L, Siberian Platform; Sokolov & Tesakov 1963); 261 (Ordovician & Silurian, Siberia NE and

- Urals N; Sokolov & Tesakov 1963); 290 (Devonian L, Penzha Range; Dubatolov 1967); 302 (Devonian L, Asia Central; Tesakov 1965); 303 (Cretaceous, Siberia W; Ivanovskiy 1960); 304 (Ordovician U, Siberian Platform; Ivanovskiy 1961); 305 (Ordovician & Silurian, Siberian Platform; Ivanovskiy 1963); 318 (Permian L, Far East; Ivanovskiy 1969); 337 (Devonian L & M, various locations; Dubatolov 1969, 1972); 359 (Devonian M, Altay; Dubatolov 1969); 400 (Devonian M, various locations; Dubatolov 1972); 418 (Permian U, Omolon Massive; Sokolov 1960)]^1";
- 4688 s[4685] = "GILL G.A. (1972).- Staining in the study of fossil corals.- FC&P 1, 2: 4-5.- FC&P 1-2, p. 4, ID=6260^Topic(s):research techniques, staining; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[staining may reveal an image entirely different from the one delivered by an untreated surface - remarks Gill in his short review]^1";
- 4689 s[4686] = "SEMENOFF-TIAN-CHANSKY P. (1975).- Problems of documentation of fossil corals.- FC&P 4, 2: 14-28.- FC&P 4-2, p. 14, ID=6295^Topic(s):documentation; corals, documentation; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[report on special meeting held during the Paris Symposium of IASFCP in Septemeber 1975, chaired by P. Semenoff-Tian-Chansky, aimed at creating an international system for collecting data on morphology and distribution of fossil corals]^1";
- 4690 s[4687] = "SEMENOFF-TIAN-CHANSKY P. (1977).- Documentation.- FC&P 6, 1: 17-18.- FC&P 6-1, p. 17, ID=6296^Topic(s):documentation; corals, documentation; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^[presentation and discussion of suggestions by Cotton and by Jeffords for creating the international catalogue of fossil corals, inspired by ideas presented during the "Problems of Documentation" meeting at the IInd Symposium of IASFCP in Paris in September 1975 - see Semenoff-Tian-Chansky 1975 (FC&P 4, 2: 14-28)]^1";
- 4691 s[4688] = "HOLDER H. (1991).- Friedrich August Quenstedt's Korallenwerk.- FC&P 20, 1.1: 32-39.- FC&P 20-1.1, p. 32, ID=6795^Topic(s):revision; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^Die erste deutschsprachige Monographie fossiler Korallen stammt von Friedrich August Quenstedt (1809-89), der 50 Jahre lang an der Universität Tübingen gelehrt hat (Quenstedt: Petrefactenkunde Deutschlands. Der ersten Abth. 6. Band: Korallen (Röhren- und Sternkorallen). Text- u. Tafelband, 1093 S., Taf. 143-184 mit 2346 Fig.; Leipzig 1878-81). [from introductory part of a note]^1";
- 4692 s[4689] = "YOUNG G.A. (1999).- Fossil colonial corals: colony type and growth form.- Functional Morphology of the Invertebrate Skeleton [E. Savazzi (ed.); John Wiley and Sons (London)]: 647-666. [book chapter] - FC&P 29-1, p. 8, ID=7006^Topic(s):colony types; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^^1";
- 4693 s[4690] = "YOUNG G.A. (1999).- Fossil colonial corals: growth patterns and coral-substrate relationships.- Functional Morphology of the Invertebrate Skeleton [E. Savazzi (ed.); John Wiley and Sons (London)]: 667-687. [book chapter] - FC&P 29-1, p. 8, ID=7007^Topic(s):coral growth; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^^1";
- 4694 s[4691] = "WRZOLEK T. (2002).- Databases and fossil corals.- FC&P 31, 1: 80-81.- FC&P 31-1, p. 80, ID=7115^Topic(s):databases; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:fossil; Geography:^Future progress in fossil corals research can be ascertained by new databases, created by fusion of the existing literature data and personal databases of individual researchers. Our joint efforts could result in a kind of "Supertreatise" … [excerpt from a short note]^1";

- 4695 s[4692] = "SOKOLOV B.S., IVANOVSKIY A.B. (eds) (1993).- Fauna i ekosistemy geologicheskogo proshlogo [fauna and ecosystems of geological past; in Russian].- Nauka [?], Moskva; 125 pp.- FC&P 22-2, p. 79, ID=3500Topic(s): ecosystems; fossils, ecosystems; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: fossil; Geography: ^Papers contain descriptions of numerous but little known representatives of different groups of fossils from Precambrian (aristarchs, metazoans), Paleozoic (corals, trilobites), of sclerosponges. Special articles devote to some new data of the recent coral-reef ecosystem and to palaeobiogeography of Early Mesozoic.^1";
- 4696 s[4693] = "KOSSOVAYA O.L., SOMERVILLE I.D. (2010).-'Fossil corals, archaeocyaths and sponges" - Proceedings of the 10th International Symposium on Fossil Cnidaria and Porifera, August 12-16, 2007, Saint-Petersburg, Russia.- Palaeoworld 19, 3-4: 209-211.- FC&P 36, p. 128, ID=6582Topic(s): symposium volume; Anthozoa, Porifera; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: fossil; Geography: ^The 10th meeting of the "International Association for the Study of Fossil Cnidaria and Porifera" was held in Saint-Petersburg, Russia from August 12 to 16, 2007. Saint-Petersburg was elected to host the 10th International Symposium on Fossil Cnidaria and Porifera during the general assembly of the International Association in Graz, Austria in 2003. This 10th jubilee Symposium of the Fossil Cnidaria and Porifera Association was dedicated to the Academician of the Russian Academy of Science, Boris Sokolov, one of the'founding fathers' of the Association and the President of the First Symposium in Novosibirsk in 1971. A number of colleagues with the support of the Administration of The Karpinsky Research Geological Institute organized the scientific and social programme. About 120 participants from 24 countries attended the meeting. [taken from preface]^1";
- 4697 s[4694] = "BOGOYAVLENSKAYA O.V., IVANOVSKIY A.B., CHUDINOVA I.I. (1976).- Istoriya izucheniya Paleozoyskikh korallov i stromatoporoidey (1970-1975 gg). [history of research of Paleozoic corals and stroms, 1970-1975; in Russian].- Trudy Inst. geol. geofiz. AN SSSR, Sib. otd. 311; 53 pp.- FC&P 6-1, p. 25, ID=5518Topic(s): research history; corals, stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: fossil; Geography: ^[research history 1970-1975]^1";
- 4698 s[4695] = "AVLAR H. (1991).- Katalog der Typen und Belegstücke zur Paläozoologie im Geologisch-Paläontologischen Institut und Museum der westfälischen Wilhelms-Universität Münster. I. Teil; Invertebrata - Coelenterata / Archaeocyatha; Sammlung der Forschungsstelle für Korallenpaläozoologie.- Veröffentlichungen des Geologisch-Paläontologischen Museums 5, 141 pp; Münster.- FC&P 33-1, p. 44, ID=7201Topic(s): collections of fossils; Coelenterata, Archaeocyatha; Systematics: Cnidaria Porifera; Archaeocyatha; Stratigraphy: fossil; Geography: ^[this catalogue has been published for the 6th International Symposium on Fossil Cnidaria and Porifera, Münster 1991, and contains data on all the specimens and thin sections held at the Forschungsstelle]^1";
- 4699 s[4696] = "REITNER J., WORHEIDE G. (2002).- Non-Lithistid Fossil Demospongiae - Origins of their Palaeobiodiversity and Highlights in History of Preservation.- Systema Porifera: A Guide to the Classification of Sponges [Hooper J. N. A. & Van Soest R. W. M. (eds); Kluwer Academic/Plenum Publishers, New York].- FC&P 32-2, p. 76, ID=1420Topic(s): biodiversity, preservation history; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: fossil; Geography: ^Available evidence suggests that the first demosponges occur in the Late Proterozoic with forms characterized by bundles of long monaxonic spicules. In the Middle Devonian the first modern forms of Dendroceratida,'axinellids' (mostly halichondrids), and first

- haplosclerida appeared. An important boundary for the demosponges is the late Devonian extinction event, which caused a complete overhaul of demosponge communities. The Late Permian and the Triassic, especially the Late Triassic, are the main eras for coralline sponge radiation and dominance, in which some modern taxa occur for the first time (Ceratoporella, Astrosclera, Vaceletia). In the Late Jurassic the freshwater environments were occupied by certain (marine) demosponges, mostly Haplosclerida. The importance of coralline demosponges as primary reef-builders decreases up to the Late Cretaceous.^1";
- 4700 s[4697] = "MEHL D. (1991).- Note on the taxon Lychniscosa Schrammen (Hexactinellida, Porifera).- FC&P 20, 1.1: 46-49. [short note] - FC&P 20-1.1, p. 46, ID=6797^Topic(s): systematics; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: fossil; Geography: ^Rauff (1893/94) was the first author to pay attention to the very special shape of nodes in some hexactinellid principal spicules. The principals concerned show the usual regular triaxial symmetry (a constituent character of the Hexactinellida), but in addition they are provided with 12 oblique cross-beams closely surrounding the axial cross. According to these lantern-like nodes Rauff (1893/94) invented the name lychnisk for this kind of spicules. Since the lychniscs are very common within the Mesozoic Hexactinellida, Schrammen (1902: 7) erected a taxon "Unterordnung Lychniskophora" to comprise all hexactinellids, whose principal supporting skeleton consists of lychniscs. [introductory part of a short note]^1";
- 4701 s[4698] = "FLUGEL E., HOTZL H. (????).- Fossile Hydrozoen - Kenntnisstand und Probleme.- Paläontologische Zeitschrift 49: 369-406.- FC&P 5-2, p. 12, ID=5456^Topic(s): Hydrozoa, Stromatoporoidea; Systematics: Cnidaria Porifera; Hydrozoa Stromatoporoidea; Stratigraphy: fossil; Geography: ^A major review article on the hydrozoa and particularly the stromatoporoidea.^1";
- 4702 s[4699] = "MORYCOWA E. (1977).- L' ultra-microstructure du squelette des Helioporidae fossiles (Octocorallia).- Bureau Recherches Geologiques et Minieres Memoir 89: 012-025 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 29, ID=0100^Topic(s): microstructures; Octocorallia, Helioporidae; Systematics: Cnidaria; Octocorallia; Stratigraphy: fossil; Geography: ^^1";
- 4703 s[4700] = "MORYCOWA E. (1981).- Preservation of skeleton microstructure in fossil Scleractinia.- Acta Palaeontologica Polonica 25, 3-4: 321-326.- FC&P 10-1, p. 35, ID=5956^Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: fossil; Geography: ^^1";
- 4704 s[4701] = "WADE M. (1980).- Fossil Scyphozoa.- FC&P 9, 1: 7-8.- FC&P 9-1, p. 7, ID=5717^Topic(s): Scyphozoa; Systematics: Cnidaria; Scyphozoa; Stratigraphy: fossil; Geography: ^Preparation of a review chapter on fossil Scyphozoa for Traite de Zoologie caused a new attempt to identify the structures in fossils attributed to (or likely to be) fossil scyphozoa. Their placement according to stratigraphic age and morphologic relations drew out very clearly how poor our understanding of the age of the coelenterates has been. It is certain that the Hydrozoa were strongly differentiated by the Vendian: some primitive characters in the Scyphozoa could relate to their later differentiation from a common ancestral class, rather than the Scyphozoa having an ancestral position themselves. [first part of a paleontological note]^1";
- 4705 s[4702] = "SEPKOSKI J.J.jr (2002).- A Compendium of fossil marine animal genera.- Bulletins of American Paleontology 363: 1-560. ISBN 978-0-87710-450-6.- FC&P 31-2, p. 25, ID=1662^Topic(s): genera database; genera index; Systematics: Animalia; Stratigraphy: fossil; Geography: ^This is a listing of approximately 37.000 taxonomic genera of marine animals known from the fossil record, based on the late J. John Sepkoski, Jr's working

database, which he last updated July 13 to November 13, 1998. These data are the basis of many analyses by Sepkoski and others, and are published here with minimal – and surely incomplete – clerical corrections to make this extraordinary compendium widely available. It covers invertebrates, and animal-like protists, gives time intervals of first and last known occurrence, and provides literature sources for these data. The time intervals are mostly the internationally recognized stratigraphic stages; many are resolved substage divisions. Genera are presented in a classification by order, class, phylum, and kingdom, reflecting current classifications in the published literature. [the volume has been edited by D. Jablonski & M. Foote]^1";

- 4706 s[4703] = "COPPER P., JISUO JIN, (eds) (1996).- Brachiopods.- Balkema Press, Rotterdam; 378 pp.- FC&P 25-2, p. 16, ID=3075^Topic(s): reef brachiopods; reef brachiopods; Systematics: Brachiopoda; Stratigraphy: fossil; Geography: ^[a number of papers in this volume deal with reef dwelling brachiopods of various ages, esp. Permian]^1";
- 4707 s[4704] = "RIEGRAF W. (1989).- Triassic Belemnoids (Cephalopoda, Coleoidea) formerly described as Corals versus Tertiary Corals described as Belemnites (or The Fairy Tale of Tertiary &Belemnites&).- FC&P 20, 1.1: 40-45. [short note] - FC&P 20-1.1, p. 40, ID=6796^Topic(s): misidentification cases; corals, vs, belemnites; Systematics: Mollusca; Stratigraphy: fossil; Geography: ^In some genera of the coral order Pennatulacea Verrill 1865, spicules or sklerodermites and horny tissue form mesodermal solid calcareous axes or tubes with transverse tabulae. A well-preserved fossil example of Pennatulacea was described by Zittel (1924, p. 130, fig. 205) under the name Graphularia desertorum Zittel. Although clearly corals, such fossils could mislead palaeontologists into interpreting them as coleoid remains. Thus, carbonaceous Graphularia axes show some resemblance to internal structures of belemnite rostra, and unfortunately, certain Graphularia stems seem to have an orthoconic cavity at one end similar to the belemnite's alveolus. Conversely, the internal structures of some coleoids could lead to their interpretation as corals. [first fragment of a short note]^1";
- 4708 s[4705] = "OLIVER W.A.jr, SANDO W.J., CAIRNS S.D., COATES A.G., MACINTYRE I.G., BAYER P.M., SORAUF J.E. (eds) (1984).- Recent advances in the paleobiology and geology of the Cnidaria.- Palaeontographica Americana 54: 1-557 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 47, ID=0977^Topic(s): symposium volume; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^^1";
- 4709 s[4706] = "NUDDS J.R., LOSER H. (2001).- The fossil cnidarian record.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 007-033.- FC&P 31-1, p. 54, ID=1617^Topic(s): distribution, genera; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^Nudds and Sepkowski (1993) compiled stratigraphic information for the first and last occurrences of every family in the phylum Cnidaria. This paper presents an update of that record, including new data and revisions of systematics and stratigraphy. The section on the Scleractinia has been completely revised (by H.L.). The new suborder Hapsiphyllina (Rugosa) is proposed.^1";
- 4710 s[4707] = "SOKOLOV B.S. (ed.) (1974).- Drevniye Cnidaria; Proceedings of the 1st International Symposium on Fossil Cnidaria; Novosibirsk, 1971; in two volumes.- Trudy Inst. Geologii i Geofiziki AN SSSR, Sibirskoe Otdeleniye, volumes 201 & 202 (362pp + 276pp).- FC&P 4-1, p. 16, ID=4996^Topic(s): symposium volume;

- Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^1";
- 4711 s[4708] = "CHEVALIER J.P. et al. (eds) (1977).- Second Symposium international sur les coraux et récifs coralliens fossiles; Paris, 1975.- Mémoires du BRGM 89: 561 pp., 73 pls.- FC&P 6-1, p. 3, ID=5473^Topic(s): symposium volume; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^The contents deal with the following subjects: paleontology (systematic, ultra and microstructures of skeletal tissue, evolution), paleogeography, paleoecology, biostratigraphy (mainly subdivisions of the Paleozoic according to the corals and related forms), Recent reefs (biological zonations, ecology, geomorphology). * A number of contributions are devoted to the reconstitution of ancient environments (morphology, the part taken by the different builders in the past biogenetic structures, sedimentology, diagenetic processes in the reef environment).^1";
- 4712 s[4709] = "SCRUTTON C.T. (1979).- Early fossil Cnidarians.- The origin of major invertebrate groups [M.R. House (ed.)]: 161-207; Academic Press, London.- FC&P 9-1, p. 55, ID=5712^Topic(s): ; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^The later Precambrian and early Phanerozoic record of cnidarian or supposed cnidarian fossils is reviewed. The first reliable records are considered to be among the Ediacaran fauna of Vendian age and most cnidarian groups with a significant fossil record had appeared by the Ordovician. The relationship of some important fossil groups of disputed or doubtful affinities are discussed. The Stromatopora and Chaetetida are considered to be closer to the Porifera than the Cnidaria, in agreement with most recent work. The Conulata are of uncertain relationship but may form a separate class of cnidarians. The Hydroconozoa are also accepted as a provisional cnidarian class. A suggestion that some or all tabulate corals may be more closely related to the Porifera is disputed. * Cambrian coral records are reviewed and some are regarded as very doubtful or not of cnidarian affinities. The relationship of the remainder to the Ordovician records are discussed and possible phylogenetic schemes for the early diversification of the tabulate and rugose corals are outlined. No post-Cambrian direct phyletic link between Tabulata and Rugosa is considered likely but a common ancestor for the two orders may have existed in the late Precambrian or early Cambrian. * Various opinions on the origin and phylogeny of the Cnidaria are briefly outlined. Doubts concerning the completeness of the fossil record and uncertainties over the interpretation of Precambrian material weakens the contribution of the palaeontological evidence to the debate on the nature of the earliest cnidarians. [original abstract]^1";
- 4713 s[4710] = "KATO M. (1980).- Report on the Third International Symposium on Fossil Cnidarians. [in Japanese].- Journal of Geography (Chigaku Zasshi) 89, 3: 198-200.- FC&P 10-1, p. 31, ID=5941^Topic(s): symposium report; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^3rd Symposium report^1";
- 4714 s[4711] = "IVANOVSKIY A.B., PREOBRAZHENSKIY B.V., SOKOLOV B.S. (1980).- Mezhdunarodnyi simpozium po iskopaemym knidariyam.[international symposium on fossil cnidarians; in Russian].- Paleontologicheskii Zhurnal 1980: 148-150.- FC&P 10-1, p. 45, ID=5970^Topic(s): symposium report; fossil Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^a brief account of the third international symposium on fossil corals held in Warsaw in September 1979]^1";
- 4715 s[4712] = "anonymous (1982).- Type and figured cnidarians at the City of Bristol Museum and Art Gallery, UK.- FC&P 11, 2: 16-17.- FC&P 11-2, p. 16, ID=6143^Topic(s): fossil collections; Cnidaria; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^[types and illustrated fossil corals;

- data extracted from: E.J. Loeffler & M.D. Crane (1982): Catalogue of type, figured and cited fossils in the City of Bristol Museum & Art Gallery. Part 2, Invertebrata: Porifera, Coelenterata, Bryozoa; The Geological Curator 3, 4, supplement: 19-37 + v-viii.]^1";
- 4716 s[4713] = "DEBRENNE F. (1972).- Coelenteres et groupes voisins.- FC&P 1, 2: 3-4.- FC&P 1-2, p. 3, ID=6259^Topic(s): systematics; Coelenterata; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^[remarks on taxonomic status and affinities of stromatoporoids and Archaeocyatha]^1";
- 4717 s[4714] = "LUTTE B.-P. (1984).- Katalog des im Geologischen Instituts der Universitat zu Koln aufbewahrten und in Veroffentlichungen abgebildeten Coelenteraten-Materials.- FC&P 13, 2: 73-81.- FC&P 13-2, p. 73, ID=6386^Topic(s): collections of fossils; Coelenterata; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^The catalogue lists Rugosa, Tabulata and Scleractinia, and a single stromatoporoid, held in the collection of the Koln University (acronymed GIK), with a list of relevant publications.^1";
- 4718 s[4715] = "YOUNG G.A., HAGADORN J.W. (2010).- The fossil record of cnidarian medusae.- Palaeoworld 19, 3-4: 212-221.- FC&P 36, p. 136, ID=6600^Topic(s): medusae; cnidarian medusae; Systematics: Cnidaria; Stratigraphy: fossil; Geography: ^Fossils of cnidarian medusae are extremely rare, although reports of fossil medusoids, most of which do not represent medusae, are rather common. Our previous inability to distinguish these fossils has hampered attempts to investigate patterns and processes within the medusozoan fossil record. Here we describe criteria for the recognition of bona fide fossil medusae and use them to assess the evolutionary, paleoenvironmental, and taphonomic history of the Medusozoa. Criteria include distinctive sedimentologic and taphonomic features that result from transport, stranding, and burial of hydrous clasts, as well as unequivocal body structures comparable to those of extant animals. Because the latter are uncommon, most fossil medusae remain in open nomenclature; many are assigned to stem-group scyphozoans. The majority of described medusae are associated with coastal depositional environments (such as tidal flats or lagoons). They rarely occur in oxygen-poor deeper-water facies. All medusan groups have long geologic histories. Scyphozoa are known from the Cambrian, but more derived scyphomedusae were not demonstrably present until the Carboniferous; Mesozoic scyphozoans are rather diverse. Hydromedusae are known from the Ordovician but may extend back to the Cambrian. The record of cubozoans is shorter and sparser; the oldest definite cubozoan is Carboniferous in age. [original abstract]^1";
- 4719 s[4716] = "PEREJON A., COMAS-RENGIFO M.J. (eds) (1997).- Proceedings of the VII International Symposium on Fossil Cnidaria and Porifera.- Boletin de la Real Sociedad Espanola de Historia Natural, seccion Geologica 91, 1/4: 001-379.- FC&P 27-1, p. 12, ID=3786^Topic(s): symposium volume; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: ^^1";
- 4720 s[4717] = "PEREJON A., COMAS-RENGIFO M.J. (eds) (1997).- Proceedings of the VII International Symposium on Fossil Cnidaria and Porifera.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 001-392.- FC&P 27-1, p. 12, ID=3787^Topic(s): symposium volume; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: ^^1";
- 4721 s[4718] = "JELL P.A., PICKETT J.W. (eds) (1989).- Fossil Cnidaria 5. Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs held in Brisbane, Queensland, Australia, 25-29 July 1988.- Mem. Ass. Australas. Palaeontols 8: 1-438. [symposium proceedings] - FC&P 19-1.1, p. 12, ID=6782^Topic(s): symposium volume; Cnidaria, Porifera;

- Systematics: Cnidaria Porifera; Stratigraphy: fossil;
Geography: ^^1";
- 4722 s [4719] = "OEKENTORP K. (1991).- Report on the VI. International Symposium on Fossil Cnidaria including Archaeocyatha and Porifera.- FC&P 20, 2: 19-27.- FC&P 20-2, p. 19, ID=6802^Topic(s): symposium report; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: ^[...] the "VI. International Symposium on Fossil Cnidaria including Archaeocyatha and Porifera"; took place in Germany, in Münster from September 9th to September 14th, 1991. The International Association for the Study of Fossil Cnidaria and Porifera was founded - almost exactly on the month - in Novosibirsk twenty years ago. The Symposium was organized by the Forschungsstelle für Korallenpaläozoologie in co-operation with the westfälische Wilhelms-Universität Münster. [initial part of the chairman's report; attached is a list of lectures given at the Symposium]^1";
- 4723 s [4720] = "EZAKI Y., MORI K., SUGIYAMA T., SORAUF J.E. (eds) (2001).- Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera; September 12-16, 1999, Sendai, Japan.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: xiii + 1-341 pp. [symposium volume] - FC&P 30-1, p. 19, ID=7059^Topic(s): symposium volume; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil; Geography: ^^1";
- 4724 s [4721] = "MEHL-JANUSSEN D. (2000).- Schwämme in der fossilen Überlieferung.- Zentralblatt für Geologie und Paläontologie II, 2000, 1/2: 15-26.- FC&P 30-2, p. 36, ID=1606^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: fossil; Geography: ^^1";
- 4725 s [4722] = "DEBRENNE F. (1999).- The past of sponges, sponges of the past.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.)]: Proceedings of the 5th International Sponge Symposium]: 9-23.- FC&P 28-2, p. 7, ID=6931^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: fossil; Geography: ^^1";
- 4726 s [4723] = "RIGBY J.K., FINKS R.M., REID R.E.H. (2003).- Treatise on Invertebrate Paleontology, Part E (Revised), Porifera, vol. 2.- Roger L. Kaesler (ed.); Geological Society of America and University of Kansas; 27 + 349 pp. ISBN 0-8137-3130-5 / 978-0-8137-3130-8. [Treatise] - FC&P 33-1, p. 41, ID=7181^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: fossil; Geography: ^[contents of the volume: Introductory Part; General features of the Porifera (R.E.H. Reid); Classification (J.K. Rigby); Class Demospongia: General Morphology and Classification (R.E.H. Reid); Paleozoic Demospongia: Morphology and Phylogeny (R.M. Finks); Post-Paleozoic Demospongia (R.E.H. Reid); Demosponge Phylogeny (R.E.H. Reid); Hexactinellida: General Morphology and Classification (R.E.H. Reid); Paleozoic Hexactinellida: Morphology and Phylogeny (R.M. Finks); Post-Paleozoic Lyssacinosa (R.E.H. Reid); Working Keys to Some Lyssacinosid Families (R.E.H. Reid); Dictyonine Hexasterophora (R.E.H. Reid); Glossary of Morphological Terms (R.E.H. Reid & J.K. Rigby); Reproduction and Development (R.M. Finks); Physiology (R.M. Finks); Functional Morphology and Adaptation (R.M. Finks); Variability and Variation (R.M. Finks); Ecology and Paleoecology of Sponges (R.M. Finks); Evolution and Ecologic History of Sponges during Paleozoic Times (R.M. Finks); Geographic and Stratigraphic Distribution (R.M. Finks & J.K. Rigby); Techniques of Study (R.M. Finks); References Cited; Index]^1";
- 4727 s [4724] = "RIGBY J.K., FINKS R.M., REID R.E.H. (2004).- Treatise on Invertebrate Paleontology, Part E (Revised), Porifera, vol. 3.- Roger L. Kaesler (ed.); Geological Society of America and University of Kansas; 872 pp., 506 figs. ISBN 8137 31313.- FC&P 33-2, p. 49, ID=7248^Topic(s): ; Porifera; Systematics: Porifera;

- Stratigraphy: fossil; Geography: ^[contents and authors of chapters of the volume: * Classification: 1-8 (J.K. Rigby) * Paleozoic demosponges: 9-173 (J.K. Rigby & R.M. Finks) * Paleozoic hexactinellid sponges: 319-448 (R.M. Finks & J.K. Rigby) * Heteractinida: 557-584 (R.M. Finks & J.K. Rigby) * Hypercalcified sponges: 585-764 (R.M. Finks & J.K. Rigby) * Unrecognizable supposed sponges (pp 765-773) and Genera incorrectly assigned to Porifera but belonging to other taxa (p. 773) - (J.K. Rigby)]^1";
- 4728 s[4725] = "NUDDS J.R. (1982).- Catalogue of type, figured, and referred fossils in the Geological Museum of Trinity College, Dublin: Part I (Protozoa, Porifera, Archaeocyatha, Coelenterata, Bryozoa).- Royal Dublin Society Journal of Earth Sciences 1982, 4: 133-165.- FC&P 11-2, p. 28, ID=1838^Topic(s): catalogue of fossils; Porifera Cnidaria, catalogue; Systematics: Porifera Cnidaria; Stratigraphy: fossil; Geography: ^^1";
- 4729 s[4726] = "NUDDS J.R. (1989).- Catalogue of type, figured and referred fossils in the Geological Museum of Trinity College, Dublin: Supplement (Animalia).- Irish Journal of Earth Sciences 9: 177-196.- FC&P 18-1, p. 29, ID=2230^Topic(s): catalogue of fossils; Porifera Cnidaria, catalogue supplement; Systematics: Porifera Cnidaria; Stratigraphy: fossil; Geography: ^[includes corals and sponges]^1";
- 4730 s[4727] = "PARFREY S.M. (1983).- Catalogue of type and figured Porifera and Coelenterata from the Geological Survey of Queensland, Brisbane.- FC&P 12, 2: 7-12.- FC&P 12-2, p. 7, ID=6202^Topic(s): ; Porifera Coelenterata; Systematics: Porifera Cnidaria; Stratigraphy: fossil; Geography: ^Geol. Survey of Queensland catalogue^1";
- 4731 s[4728] = "REITNER J. (1991).- Phylogenetic aspects and new descriptions of spicule-bearing hadromerid sponges with a secondary calcareous skeleton.- Fossil and Recent Sponges [J. Reitner & H. Keupp (eds)]: 179-211; Springer-Verlag, Berlin.- FC&P 21-1.1, p. 59, ID=6816^Topic(s): systematics, taxonomy; Porifera Hadromerida; Systematics: Porifera; Stratigraphy: fossil; Geography: ^[most of the fossil genera described have chaetetid-like calcareous skeletons but their taxonomy and phylogeny are based on spicular morphology exclusively; Calcichondrilla has a "modified stromatoporoid skeleton"]^1";
- 4732 s[4729] = "TERMIER H., TERMIER G. (1977).- Ischyrosponges fossiles: paleogeographie, paleoecologie, evolution et stratigraphie.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 520-529.- FC&P 6-2, p. 18, ID=5547^Topic(s): ; Porifera Ischyrospongiae; Systematics: Porifera; Stratigraphy: fossil; Geography: ^^1";
- 4733 s[4730] = "SCRUTTON C.T. (1978).- Periodic growth features in fossil organisms and the length of the day and month.- Tidal friction and the Earth's rotation [Broche P. & Sundermann J. (eds)]: 154-196.- FC&P 8-2, p. 38, ID=0331^Topic(s): fossils, sclerochronology, ; sclerochronology; Systematics: ; Stratigraphy: fossil; Geography: ^[a review including the role of corals in this field and tabulating the data published up to the time of writing]^1";
- 4734 s[4731] = "TSIEN H.-H. (1981).- Ancient reefs and reef carbonates.- Reef Symposium, Manila 1981, 1: 601-609.- FC&P 13-2, p. 56, ID=0599^Topic(s): reefs carbonates; reefs, reef carbonates; Systematics: ; Stratigraphy: fossil; Geography: ^^1";
- 4735 s[4732] = "KIESSLING W. (2003).- Riffdiversität in der Erdgeschichte - Fossilbericht und Interpretationen.- Kleine Senckenberg-Reihe 45: 205-215. ISBN 978-3-510-61354-0.- FC&P 34, p. 84, ID=1325^Topic(s): reef diversity; reefs; Systematics: ; Stratigraphy: fossil; Geography: ^Coral reefs are amongst

the most diverse ecosystems on our planet. Historical and ecological factors are discussed as potential causes of the extremely high species richness ranging to hundreds of thousands. The extreme depletion of nutrients, the spatial complexity and the common but moderate disturbances of the reef building is well documented in the fossil record but quantitative fluctuations of reef diversity are only roughly known. The best available diversity curves for the last 550 million years exhibit strong variations of both species richness within reefs and the global diversity of reef builders. These fluctuations are often related to mass extinctions but also occur independently of evolutionary crises. The most important factor governing secular fluctuations of reef diversity is probably the nutrient concentration in the oceans. Climate change, while influencing the biological composition of reefs, had only limited effect on reef diversity.¹¹;

4736 s[4733] = "STANLEY G.D.jr (ed.) (2001).- The History and Sedimentology of Ancient Reef Systems.- Topics in geobiology 17; Kluwer Academic / Plenum Publishers - New York, Dodrecht, London, Moscow. ISBN 0 306 46467 5.- FC&P 32-2, p. 72, ID=1433Topic(s): reef complexes, history, sedimentology; reef complexes; Systematics: ; Stratigraphy: fossil; Geography: ^[contents: (1) Brief preface to the volume; G.D. Stanley, Jr. (2) Introduction to reef ecosystems; G.D. Stanley, Jr. (3) Phanerozoic reef trends based on the Paleoreef database; w. Kiessling. (4) Evolution, Radiations and extinctions in Proterozoic to mid-Paleozoic reefs; P. Copper. (5) Paleoecology of Cambrian reef ecosystems; A.Y. Zhuravlev. (6) Biologically induced carbonate precipitation in reefs through time; G.E. webb. (7) A Half Century Later: The Permian Guadalupian Reef Complex of West Texas and Eastern New Mexico; N.D. Newell. (8) Triassic reefs on the Tethys; E. Flügel, B. Senowbari-Daryan. (9) Jurassic reef ecosystems; R. Leinfelder. (10) Cretaceous Evolution of Rudist Ecosystems; A Regional Synthesis of the Caribbean Tropics; C. Johnson, E.G. Kauffman. (11) The role of framework in modern reefs and its application to ancient systems; D.K. Hubbard, et al. (12) Coral reefs, carbonate sedimentation, and global change; P. Hallock. (13) Compiled Glossary]¹¹;

4737 s[4734] = "ROSEN B.R. (1990).- Coloniality.- In: Briggs D.E.G. & Crowther P.R. (eds): Palaeobiology: a synthesis: 330-335; Blackwell Scientific Publications, Oxford.- FC&P 19-2.1, p. 11, ID=2730Topic(s): colonial organisms; colonial organisms; Systematics: ; Stratigraphy: fossil; Geography: ^^1";

4738 s[4735] = "ROSEN B.R. (1990).- Reefs and build-ups.- In: Briggs D.E.G. & Crowther P.R. (eds): Palaeobiology: a synthesis: 341-346. Blackwell Scientific Publications, Oxford.- FC&P 19-2.1, p. 11, ID=2731Topic(s): synthetic review; reefs; Systematics: ; Stratigraphy: fossil; Geography: ^^1";

4739 s[4736] = "GEISTER J. (1997).- Auf der Suche nach dem analogen Korallenriff.- Coral Research Bulletin 05: 151-160.- FC&P 27-1, p. 116, ID=3876Topic(s): analogy principle; reefs; Systematics: ; Stratigraphy: fossil; Geography: ^Most fossil coral reefs are not readily comparable to modern reefs in terms of ecology and framework structure because both fossil and recent reefs formed in a wide range of particular environmental settings resulting in diverging aspects of individual bioherms. The most important environmental parameters are the type of substratum available for settlement of larvae and the influence of sea level fluctuations. Effects of both on reef formation are discussed. Reefs that formed with taxonomically divergent coral faunas and at different geological times under broadly comparable environmental settings may show surprising geomorphological and ecological similarities. Such reef formations are termed "analogous reefs". Comparative studies of couplets of analogous reefs, one recent and one fossil may be an efficient tool for better understanding of both fossil and recent reef

environments. A few selected examples of such analogous reefs, established on unstable substrata, are discussed from basinal and deltaic deposits and from turbiditic environments.¹";

4740 s[4737] = "COPPER P. (1994).- Ancient reef ecosystem expansion and collapse.- Coral Reefs 13, 1: 3-11.- FC&P 23-1.1, p. 7, ID=4048Topic(s): reef ecosystems, geohistory; reef ecosystems; Systematics: ; Stratigraphy: fossil; Geography: ^Platform carbonate and, particularly, reef ecosystem development (with reefs representing the acme of carbonate platform growth) were highly cyclical in early to mid Paleozoic time, especially in relation to known or postulated times of global warming or cooling. These cycles do not appear to correspond to postulated 26 Ma rhythms seen in diversity patterns, nor were they regular. There were major periods of worldwide reef expansion (e.g. mid-Silurian-Late Devonian), corresponding to global warming well above present day norms, and periods of complete global reef collapse (e.g., mid-Cambrian to mid-Ordovician, Late Devonian) corresponding to global perturbations. At times of major reef expansion in the Paleozoic, areas covered by equatorial reef and inter-reef carbonate platforms are conservatively estimated to have periodically exceeded 5 million sq. km, nearly ten times that in the modern ocean. At times of global reef collapse, e.g. the Famennian (Late Devonian), reef complexes were completely absent or, at best, covered <1000 sq. km. The chief factors relating to periodic collapse and mass extinction of reef biotas appear to be related to climatic change and possibly ocean anoxic events, in turn as a response to large scale, geologically disruptive factors such as plate collisions, plate movement across equatorial belts and volcanism. Stress "signals" in Cambrian through Cretaceous reef ecosystems appear to be comparable to those of today: whether these relate to physical versus biological stress is uncertain. Reef stress is evident in globally reduced areas and thicknesses of reef carbonate production, the absence of large scale barrier reef systems and reduction to smaller patch reef complexes (or, periodically, following mass extinctions, no reefs at all), reduced species and genus diversity, small skeletons or colonies, limited or no biotic zonation along reef transects, and arrested succession and ecologic replacement of complex, more highly evolved taxa by "simpler"; stress-resistant disaster taxa at the genus to ordinal (or even phylum) level. [original abstract]^1";

4741 s[4738] = "COPPER P. (1994).- Reefs under stress: the fossil record.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 87-94.- FC&P 23-1.1, p. 15, ID=4066Topic(s): stress; reefs; Systematics: ; Stratigraphy: fossil; Geography: ^Reef ecosystems under stress are those which operate at much less than or below optimal environmental conditions. Stressed habitats are reflected in reduced reef thickness and diameters, absence of large scale barrier and atoll systems, general failure to develop clear biotic zonation, lowered diversity, stunted size of colonial corals, partial replacement by solitary corals and stress tolerant taxa, and arrested ecologic successions. Stressed reef communities typically occur today at the fringes of coral reef development in higher latitudes, where coral dominated faunas are replaced by bryozoan-foraminiferan-serpulid-sa-bellariid-mollusc dominated communities. In tropical belts, stress factors include high input of siliciclastics, especially clay minerals and laterites, unstable soft substrates, brackish environments in areas of high runoff around deltas, poorly lighted waters due to large amounts of fines in suspension, high surface plankton productivity (due to surplus nutrients) and increased water depth at the margins of the photosynthetic abilities of symbionts. Examples of Ordovician through Permian reefs under stress include especially the calcareous and

siliceous sponge reef communities inhabiting slope environments, offshore mudmounds and lithoherms (including waulsortian mounds), and small reefs with impoverished and aberrant faunas. Though stressed reef communities are usually considered a response to less than optimal conditions at a local level, such conditions may also be a response to global deterioration of climates, especially at times of mass extinction. Reef recovery following mass extinction phases, such as the Late Ordovician and Late Devonian, apparently favoured re-invasion and repopulation of the reef habitat by Lazarus taxa which were preserved in deeper or colder (high latitude) water refugia: thus, these may represent offshore-onshore or onshore cold-onshore warm patterns. This contradicts the general pattern of onshore to offshore migration and evolution of benthic communities which set the style for the warmer Phanerozoic intervals. Similarly, deeper or cooler water reefs (mudmounds, lithoherms, etc.) emigrated to shallower water subequatorial habitats during mass extinction phases. Recovery periods for the reef ecosystem following mass extinction phases are measured in millions of years. ^1";

- 4742 s[4739] = "CHAPMAN R.E. (1977).- Economic geology and fossil coral reefs.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 04.- FC&P 7-1, p. 32, ID=5594^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: fossil; Geography: ^^1";
- 4743 s[4740] = "ROSEN B.R. (1977).- The depth distribution of recent hermatypic corals and its palaeontological significance.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 507-519.- FC&P 6-1, p. 29, ID=0102^Topic(s): ecology, bathymetry; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: living & fossil; Geography: ^Mainly concerned with Recent and Mesozoic scleractinian corals but with implications for rugosans^1";
- 4744 s[4741] = "SOKOLOV B.S. (1986).- Fanerozoiskie rify i korally SSSR [Phanerozoic reefs and corals of the USSR].- (Trudy Vsesouznogo simpoziuma po korallam i rifam, Dushanbe, 1983) Nauka, Moskva, 232 pp.- FC&P 15-2, p. 27, ID=0645^Topic(s): reefs coral; reefs, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Phanerozoic; Geography: USSR^^1";
- 4745 s[4742] = "SOKOLOV B.S. (ed.) (1980).- Korally i rify fanerozoya SSSR. [Phanerozoic corals and reefs of USSR].- Korally i rify fanerozoya SSSR [phanerozoic corals and reefs of the USSR; in Russian; trudy IV simpozyuma po iskopaemym korallam (Tbilisi 1978)]: 232 pp., 42 figs, 7 tabs, 23 pls; Nauka, Moskva.- FC&P 11-1, p. 51, ID=1777^Topic(s): coral reefs; corals, reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Phanerozoic; Geography: USSR^This book contains 39 reports on the systematic, morphology, evolution, ontogeny of corals (Tabulata, Rugosa, Scleractinia) and neighbouring groups. The book also deals with reports on coral reefs.^1";
- 4746 s[4743] = "RISK M.J., PAGANI S.E, ELIAS R.J. (1987).- Another Internal Clock: Preliminary Estimates of Growth Rates Based on Cycles of Algal Boring Activity.- Palaios 1987, 2: 323-331.- FC&P 17-1, p. 20, ID=2118^Topic(s): sclerochronology; Anthozoa growth rates; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil & living; Geography: ^Modern corals from Lizard Island, in Australia's Great Barrier Reef, show pronounced dark gray zones parallel to growth surfaces. These color bands are caused by increased activity of boring algae during the dry sunny season, and hence are annual. Cyclicity in algal boring activity may therefore be used to determine growth rates and life spans of some fossil organisms, and possibly the seasons of spat settling and death. Samples of Devonian stromatoporoids from Bathurst Island in the Canadian Arctic show cycles in boring intensity which suggest growth rates of about 1 cm/yr. These results are questionable, however, because the borings cross through

both the lamellae and calcite cement in the interlamellar spaces. This implies early infilling of the stromatoporoid skeleton, a process which is still in debate. Ordovician solitary rugose corals from Kentucky and southern Manitoba show marked cyclicity in intensity of algal borings preserved in the epitheca. Growth rates are estimated to have been about 2 cm/yr. Both the apices and distal portions of these corals are relatively unbored. Perhaps the larvae settled during the cloudy monsoon season, and the adults died (2-3 years later) as a result of overturning and transport by monsoonal storms. Both the stromatoporoid and rugosan growth rates are as high as those shown by modern hermatypic corals, reinforcing previous suggestions that some Early Paleozoic marine invertebrates possessed zooxanthellae.¹";

- 4747 s[4744] = "GRASSE P.-P. (ed.) (1988).- *Traité de Zoologie III, 3 (Anthozoaires)*.- Masson, Paris: 859 pp., 441 figs.- FC&P 17-1, p. 46, ID=2173Topic(s): treatise; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: living & fossil; Geography: ^La coordination de ce volume ayant d'abord été assurée par le regretté J.-P. Chevalier a été achevée par D. Doumenc, sous-directeur au Muséum National d'Histoire naturelle, Paris. L'ouvrage est subdivisé comme suit: Classe des Anthozoaires. Définition: 1-2; 1) Sous-classe Octocoralliaires, par A. Tixier-Ourivault: 3-185, figs 1-147; 2) Sous-classe Hexacoralliaires. Définition: 187-188; 2a) Ordre Antipathaires, par F. Pax (†), M. Van-Praet et D. Doumenc: 189-210, figs 148-154; 2b) Ordre Cérianthaires, par Y. Tiffon: 211-256, figs 155-176; 2c) Ordres Actiniaires, Ptychodactiniaires et Corallimorphaires, par D. Doumenc et M. Van-Praet, avec la collaboration de F. Duval et J. Parietas: 257-401, figs 177-262; 2d) Ordre Scléractiniaires, par J.-P. Chevalier (†), avec la collaboration de L. Beauvais pour les Scléractiniaires mésozoïques: 403-764, figs 263-418; 3) Sous-classe Tétracoralliaires, par P. Semenoff-Tian-Chansky: 765-781, figs 419-424; 3a) Ordre Zoanthaires, par C. Herberts: 783-810, figs 426-432; 4) Sous-classe Heterocoralliaires, par J. Lafuste: 811-814, figs 433-436; 5) Sous-classe Tabulés, par J. Lafuste: 815-821, figs 438-441.¹";
- 4748 s[4745] = "FAGERSTROM J.A. (1987).- *The Evolution of Reef Communities*.- *The Evolution of Reef Communities*; 600 pp; John Wiley and Sons, . New York (etc.).- FC&P 17-1, p. 47, ID=2174Topic(s): reef biocoenoses, variability; reefs communities history; Systematics: Cnidaria; Anthozoa; Stratigraphy: Phanerozoic; Geography: ^[This is a fascinating review and interpretation of the history of reefs, reef-building and reef faunas and floras through time. Starting with a synthesis of modern reef occurrences, physical and biological controls and processes, Fagerstrom proceeds to reef community description and analysis. This is followed by a discussion of the ecology and history (as related to reefs) of the major biologic groups involved, and finally by a history of the changing community structure of reefs through Phanerozoic time. There is much about corals in the book, but most interesting to me is the recognition of major units of time during which community structure was relatively constant, separated by short turnover episodes that permitted the development of quite different kinds of reefs. (William A. Oliver jr).]¹";
- 4749 s[4746] = "IVANOVSKIY A.B. (1983).- *Morfologicheskie analogii drevnykh i sovremennykh korallov [morphological analogues of ancient and modern corals; in Russian]*.- *Biologiya morya* 1983, 1: 60-61.- FC&P 12-2, p. 29, ID=2637Topic(s): morphology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil & living; Geography: ^The similarity of the skeletal structure of many Paleozoic and Recent corals may result from the fact that iterative evolution of the genetically indivisible branch of coelenterates could proceed by analogous ways in the Paleozoicum as well as in the Mesozoicum and Cenozoicum. [original summary]¹";
- 4750 s[4747] = "LATHUILLIERE B., GEISTER J. (eds) (1995).- *Coral reefs in the*

- past, present and future.- Publications du service geologique du Luxembourg 29 [Proceedings of the second European regional meeting of the ISRS, Luxembourg, sept. 1994]; 272 pp.- FC&P 25-2, p. 20, ID=3084Topic(s): coral reefs; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil & living; Geography: ^^1";
- 4751 s[4748] = "SORAUF J.E. (1996).- Biocrystallization models and skeletal structure of Phanerozoic corals.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 159-186.- FC&P 25-2, p. 28, ID=3191Topic(s): skeletal growth, biomineralization; corals, skeletal structures; Systematics: Cnidaria; Anthozoa; Stratigraphy: Phanerozoic; Geography: ^^1";
- 4752 s[4749] = "GEISTER J. (1977).- Coral collection - Naturhist. Mus. Basel.- FC&P 6, 2: 38-40.- FC&P 6-2, p. 38, ID=5556Topic(s): collections of fossils; coral collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil & living; Geography: ^[fossil & living corals collections; Switzerland]^1";
- 4753 s[4750] = "HUBBARD J.A.E.B. (1983).- The plain man's guide to enigmatic coral reefs.- Mercian Geologist 9, 1: 1-30; Nottingham.- FC&P 12-2, p. 42, ID=6239Topic(s): reefs; reefs structures; Systematics: Cnidaria; Anthozoa; Stratigraphy: fossil & living; Geography: ^Although by no means monomineralic, reefs are often enigmatic structures because the superficial homogeneity of their carbonate components renders their complex internal histories obscure to many forms of detection. This is particularly evident in the case of seismic studies of subsurface phenomena which tend to yield misleadingly uniform lensoid interpretations resulting from refraction at the shale:carbonate and sandstone:carbonate interfaces beyond the margins of the reef sensu stricto. But studies of random sections through reefs can be equally baffling in the field. The reasons for the ensuing confusion often results from attempting to compare different diagenetic grades of the same geological age. This account stresses the interdisciplinary nature of reef analysis irrespective of time by means of models and by analogy with present day tropical coral reefs. By drawing on case histories from Zanzibar and the Seychelles and comparing them with data from Bermuda, Bahamas, Florida and the Australian Great Barrier Reef, the oceanic provinciality of sediments is highlighted, and their local variability is related to their oceanographic and geomorphological setting and consequent settlement pattern which is often wind dominated. Then emphasis is placed on integrating ecosystem analysis of the biota and associated sediments with chemical predictions on the preservability of the fabric following burial in the vadose zone and subsequent loading. Intimate details of present day and vadose Pleistocene reef fabrics are illustrated by scanning electron micrographs which draw attention to the fact that quantitative data are only as good as the natural constraints put upon them. Thus one coral clast featuring no less than eleven adhesive dinoflagellates indicates that all the published sediment budgets are preferentially biased against the interstitial biota, the base of the food chain and the role of organic matter so limiting their potential for ecosystem analysis and biasing their palaeoecological utility. Though more readily quantified, this limitation is no worse than the geochemical parameters encountered during burial diagenesis: hence reefs range from the obvious to the obscure. [original abstract]^1";
- 4754 s[4751] = "ZHURAVLEVA I.T., MIAGKOVA E.I. (1987).- Phanerozoic primitive multicellulurs.- Trudy Instituta Geologii Geofiziki AN SSSR, sibirskoye otdeleniye 695; 223 pp.- FC&P 17-1, p. 43, ID=2172Topic(s): ; Archaeocyatha stroms; Systematics: Porifera; Archaeocyatha; Stratigraphy: Phanerozoic; Geography: ^[includes chapter on Archaeocyatha by I. T.

- Zhuravleva and a chapter on Stromatoporata by I. T. Zhuravleva and E. I. Myagkova]^1";
- 4755 s[4752] = "REITNER J. (1987).- Phylogenie und Konvergenzen bei rezenten und fossilen Calcare (Porifera) mit einem kalkigen Basalskelett ("Inozoa", "Pharetronida").- Berliner geowissenschaftliche Abhandlungen A086: 87-125.- FC&P 17-1, p. 36, ID=2148^Topic(s): phylogeny, convergence; Porifera, Calcare; Systematics: Porifera; Calcare; Stratigraphy: living & fossil; Geography: ^Two different skeletal types occur within the Recent Calcare. One type bears calcareous spicules only, and the other type shows rigid basal skeleton in addition to the spicular skeleton. Basal skeletons are characteristic of most fossil examples. Some of the observed basal skeletons are convergent with those of certain demosponges. Stromatoporoid, thalamid and adapted chaetetid skeleton types are observed besides other types not observed within the calcified demosponges. Basal skeletons are probably a plesiomorphic feature of the coralline Calcare. Three phylogenetic models, based on phylogenetic systematics, are discussed. It is possible to distinguish two main phylogenetic lineages. The Minchinella-lineage and the closely related Barroisia-lineage are probably the stock of the Recent non-calcified Calcare. Most of the Recent species of coralline Calcare are classified within this subclass. The second lineage (Murrayona-lineage) is probably the stock of the modern Calcinea. The new species Barroisia gandaraensis n.sp. is described. Verticillites extensus Lang is shown not to be a demosponge and a new genus name is created (Muellerithalamia).^1";
- 4756 s[4753] = "VEIZER J.S., WENDT J. (1976).- Mineralogy and Chemical Composition of Recent and Fossil skeletons of calcareous sponges.- N. Jb. Geol. Palaeont. Mh. 9: 558-573.- FC&P 6-2, p. 18, ID=5548^Topic(s): skeletal mineralogy; Porifera calcarea; Systematics: Porifera; Calcare; Stratigraphy: fossil & living; Geography: ^^1";
- 4757 s[4754] = "MULLER A.H. (1974).- On the Taphonomy and Ecology of Recent and Fossil Limnic Hydromedusae.- Zeitschrift der geologischen Wissenschaften 01, 1: 1475-1480.- FC&P 3-2, p. 31, ID=4914^Topic(s): taphonomy, ecology; Hydrozoa, Hydromedusae; Systematics: Cnidaria; Hydrozoa; Stratigraphy: living & fossil; Geography: ^^1";
- 4758 s[4755] = "FENNINGER A.von, FLAJS G. (1974).- Zur Mikrostruktur rezenter und fossiler Hydrozoa.- Biomineralisation Forschungsberichte 7: 69-99; Akad. der Wissensch. und der Literatur, Mainz.- FC&P 4-1, p. 46, ID=5185^Topic(s): microstructures; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: fossil & living; Geography: ^^1";
- 4759 s[4756] = "WENDT J. (1980).- The development of skeletal formation, microstructure, and mineralogy of rigid calcareous sponges from the late Paleozoic to Recent.- Coll. Intern. du CNRS 291 [C. Levi & N. Bouryesnault (eds): Biologie des Spongiaires - Sponge Biology]: 449-457.- FC&P 10-2, p. 76, ID=6104^Topic(s): skeletal formation; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: fossil & living; Geography: ^^1";
- 4760 s[4757] = "PREOBRAZHENSKIY B.V., ARZAMASCEV I.S. (1985).- Zhiznennye formy kolonial'nykh skleraktinij.- Paleontologicheskij Zhurnal 1985, 4: 5 .- FC&P 15-1.2, p. 38, ID=0835^Topic(s): actualistic approach; Scleractinia, ecology; Systematics: Cnidaria; Scleractinia; Stratigraphy: living & fossil; Geography: ^Vorgelegt wird ein kombiniertes, koordiniertes System und eine vereinheitlichte Terminologie der Lebensformen riffbildender Korallen. Diskutiert wird die Moglichkeit der Nutzung dieses Systems fur die Analyse gegenwartiger und fossiler Rifflandschaften fur eine Prazisierung aktualistischer Rekonstruktionen.^1";

- 4761 s[4758] = "ZIBROWIUS H., SOUTHWARD E.C., DAY J.H. (1975).- New observations on a little-known species of Lumbrineris (Polychaeta) living on various Cnidarians, with notes on its recent and fossil Scleractinian hosts.- Journal. mar. biol. Ass. U.K. 55: 83-108.- FC&P 4-2, p. 50, ID=5229^Topic(s): scleractinian, polychaete symbiosis; scleractinian, polychaete symbiosis; Systematics: Cnidaria; Scleractinia; Stratigraphy: living & fossil; Geography: ^Dredging at the edge of the continental shelf at various stations between Eire and Morocco and again off the Natal coast of South Africa and Madagascar has revealed an interesting association between a polychaete and various cnidarians. The polychaete Lumbrineris flabellicola Fage (1936) is re-described, and its relationship to various species of ahermatypic corals is discussed. The worm forms grooves around the skeleton and the examination of fossil material shows that similar grooves occur on corals from the Miocene and later deposits in Italy. Surprisingly, dredging in the Mediterranean has revealed no living specimens. The worldwide distribution of the Lumbrineris-coral association is discussed.^1";
- 4762 s[4759] = "PREOBRAZHENSKIY B.V., KRASNOV Ye.V. (1980).- Ontogenesis of some recent and fossil corals of the genus Flabellum (Scleractinia).- Biologiya korallovykh rifov [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 183-191, 3 figs.- FC&P 10-1, p. 62, ID=6035^Topic(s): ontogeny; Scleractinia, Flabellum; Systematics: Cnidaria; Scleractinia; Stratigraphy: fossil & living; Geography: ^The comparative analysis of the succession of the appearance of the septa in the recent Flabellum rubrum and two species of the fossil representatives of the genus. The conclusion was drawn about absence of strict numerical and geometrical alignment in the appearance of new septa during the ontogenesis and about bilateral symmetry in this coral on the late ontogenetic stages. The absence of the six ray symmetry in these representatives of Hexacorallia is shown.^1";
- 4763 s[4760] = "LOSER H. (1992).- The current systematics of Scleractinia.- FC&P 21, 1.1: 21-37.- FC&P 21-1.1, p. 21, ID=6805^Topic(s): systematics; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: fossil & living; Geography: ^In connection with a study of the history of Mesozoic coral research (Turnsek & Loser, in press) a data bank on coral genera cited in the literature (1940-1990) was compiled by D. Turnsek (Ljubljana). This data bank comprises over 4,000 items, each consisting of the source of the citation, the name of the genus as well as the higher taxa (subfamily, family, superfamily, suborder) to which the genus was assigned. * In order to obtain information on the current state of the systematics of Scleractinia the data bank was subjected to various transactions. For this purpose it was examined under two aspects: the classification of genera into families and of families into suborders (subfamilies and superfamilies were left out of consideration owing to their rare usage). * The following list shows the systematics as it emerges from the literature published between 1940 and 1990. The allocations given (of genera to families and of families to suborders) and the publications quoted are always the latest ones. * Two things become evident: for one, there seems to be little justification for certain suborders and families with hardly any subordinate taxa. Also, it is striking to note the large number of genera which were never cited again after their first description. As a product of data bank transactions, the systematics obtained presents an entirely objective picture. Although, of course, the literature evaluated lays no claim to completeness. * In conjunction with B. Lathuiliere (Nancy) the authors of the various families were verified on the basis of the International Rules of Zoological Nomenclature and were in part corrected (e.g. Thamnasteriidae Reuss not Vaughan, Latomeandriidae Fromentel not Alloiteau). * I thank my colleagues

- Dragica Turnsek and Bernard Lathuiliere for their assistance. [original introduction to the systematics]^1";
- 4764 s[4761] = "REITNER J. (1986).- Fossil and modern calcareous demosponges ("stromatoporoids";, "chaetetids"; "sphinctozoans"; pars): systematics and polyphyletic origin.- 4th North American Paleontological Convention.- FC&P 15-2, p. 45, ID=0752^Topic(s): systematics, polyphyly; stroms, Chaetetida, Sphinctozoa; Systematics: Porifera; Stromatoporoidea Chaetetida Sphinctozoa; Stratigraphy: fossil & living; Geography: ^Most of the 3 groups are demosponges and polyphyletic. Systematic position of the Paleozoic forms is unclear^1";
- 4765 s[4762] = "SANDO W.J. (1997).- A silver platter-History of the international Association for the Study of Fossil Cnidaria and Porifera and trends in cnidarian and poriferan research, 1971-1994.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 005-033.- FC&P 26-2, p. 8, ID=3669^Topic(s): research history, IASFCP history; Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: fossil & living; Geography: ^The International Association for the Study of Fossil Cnidaria and Porifera has played a leading role in the communication of cnidarian and poriferan research since its creation in 1971 at the First International Symposium in Novosibirsk, USSR, This paper presents a review of the changes in and accomplishments of the Association during the past quarter century. Research reports published in symposium proceedings are based toward topics currently popular among the leaders of research and among the more affluent countries. As the Association approaches the 21st century, it faces new challenges posed by an aging and shrinking membership. Analysis of data on fossil Cnidaria and Porifera specialists reveals trends that are reshaping our science as we approach the next century: 1) a dramatic decline in the size of the workforce, 2) a shift away from government research institutions toward universities and museums as the main workplaces, 3) a shift away from the dominance of a few large countries toward a more equitable geographic distribution of the workforce, 4) a declining emphasis on Paleozoic Zoantharia as the principal object of study within the Cnidaria, and 5) a declining relative emphasis on Stromatoporata and Archeocyatha as the principal objects of study within the Porifera. In this changing scene, the Association can be even more important than before in promoting, organizing and communicating the science of fossil Cnidaria and Porifera.^1";
- 4766 s[4763] = "VACELET J. (1984).- Les eponges dans les recifs actuels et fossiles.- Oceanis 10, 1: 99-110.- FC&P 14-1, p. 57, ID=1060^Topic(s): reefs sponges; reefs, sponges; Systematics: Porifera; Stratigraphy: fossil & living; Geography: ^The constructional and bioserious role of sponges in modern reefs is reviewed. In the past the sponges represented by the Stromatoporoids, tabulatormorphs, sphinctozoans, and archaeocyathids were important reef builders but retreated at the end of the Cretaceous to cryptic environments. Vacelet speculates on the possibility that these fossil forms had zooxanthellae.^1";
- 4767 s[4764] = "REITNER J., KEUPP H. (eds) (1990).- Fossil and Recent Sponges.- Springer Verlag (ISBN 3-540-52509-2). Approx. 520 pp., 387 figs., 43 tbls.- FC&P 19-2.1, p. 44, ID=2785^Topic(s): current research; Porifera; Systematics: Porifera; Stratigraphy: fossil & living; Geography: ^Fossil and Recent Sponges contains articles on taxonomic, phylogenetic and ecological aspects of sponges of both biological and paleontological interest. They focus on three main topics: phylogeny and systematics, biology, and paleoecology of sponges. The reader is offered an overview over the most important aspects of current sponge research: 1) establishment of a new taxonomy based on monophyletic groups (phylogenetic systematics), including recent and fossil taxa; 2) new concepts of the biomineralisation of sponge skeletons; 3)

- 4768 palaeoenvironmental analysis of fossil sponge buildups.^1";
s[4765] = "CUIF J.-P., DEBRENNE F., LAFUSTE J., VACELET J. (1979).- Comparaison de la microstructure du squelette carbonate non spiculaire d'Eponges actuelles et fossiles.- Coll. Int. C. N. R. S. Biol. Spong.: 459-465.- FC&P 9-1, p. 18, ID=5777^Topic(s): skeletons; Porifera skeletons; Systematics: Porifera; Stratigraphy: living & fossil; Geography: ^^1";
- 4769 s[4766] = "HARTMAN W.D., WENDT J.W., WIEDENMAYER F. (1980).- Living and Fossil Sponges. Notes for a Short Course.- Sedimenta 8: 1-274; Miami. [handbook] - FC&P 10-2, p. 75, ID=6096^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: living & fossil; Geography: ^^1";
- 4770 s[4767] = "CUIF J.-P., GAUTRET P. (1991).- Taxonomic value of microstructural features in calcified tissue from Recent and fossil Demospongiae and Calcarea.- Fossil and Recent Sponges [J. Reitner & H. Keupp (eds)]: 159-169; Springer-Verlag, Berlin.- FC&P 21-1.1, p. 58, ID=6815^Topic(s): microstructures, taxonomy; Porifera; Systematics: Porifera; Stratigraphy: fossil & living; Geography: ^[microstructure of Vaceletia, Acanthochaetetes. Astroclera, and Petrobiona is investigated to assess the probability of repeated production of the same type of skeleton in various groups]^1";
- 4771 s[4768] = "MEHL D. (1993).- Report on 4th International Porifera Congress.- FC&P 22, 1: 13-17.- FC&P 22-1, p. 13, ID=6822^Topic(s): symposium report; Porifera; Systematics: Porifera; Stratigraphy: living & fossil; Geography: ^The International Porifera Symposia, which take place in different countries every four to five years, are rare occasions for spongiologists from all over the world to exchange and discuss scientific results and to plan and coordinate future research programs. This year's 4th International Porifera Congress was organized with much devotion by zoological and paleontological colleagues in Amsterdam, mainly from the Institute of Taxonomic Zoology and the Foundation Pangea, Huizen. The title "Sponges in Time and Space" indicates the combined effort of Poriferan scientists to investigate this ancient group of organisms from all paleontological as well as neontological aspects. Main emphasis of this congress was placed on the side of recent biology with much attention paid to cell biology, biochemistry and the very promising exploration of sponges for medical and pharmacological purposes. [first part of extensive report]^1";
- 4772 s[4769] = "MEHL D. (1993).- Completion of the report on 4th Int. Porifera Congress in Amsterdam, 1993.- FC&P 22, 2: 43-44.- FC&P 22-2, p. 43, ID=6825^Topic(s): symposium report; Porifera; Systematics: Porifera; Stratigraphy: living & fossil; Geography: ^In spite of its considerable extension my first report on the Int. Congress "Sponges in time and Space" did not cover all important contributions. The total amount of information given during this meeting by far exceeded the extend of data that can be usefully recorded within one summary. Some of the topics, eg. session Biogeography and Natural Products workshop, were touched only briefly without mentioning most of the contributions. Within this supplement, I intend to correct these omissions. For the poster sessions, I restrict myself to a simple list of contributions. [introductory part of the report]^1";
- 4773 s[4770] = "JANUSSEN D. (2002).- Book announcement: Systema Porifera; by Hooper & van Soest (2002).- FC&P 31, 2: 32. [book announcement] - FC&P 31-2, p. 32, ID=7130^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: living & fossil; Geography: ^^1";
- 4774 s[4771] = "HOOPER J.N.A., SOEST R.W.M.van (eds) (2002).- Systema Porifera: A Guide to the Classification of Sponges. (in 2 volumes).- Kluwer Academic Publishers / Plenum Publishers; 1810pp; New York.

ISBN 0-306-47260-0.- FC&P 31-2, p. 32, ID=7131^Topic(s):systematics; Porifera; Systematics: Porifera; Stratigraphy: living & fossil; Geography: ^Research whilst compiling this book has uncovered a fauna about twice the size as that previously published in the literature and consequently Systema Porifera revises and stabilizes the systematics of the phylum to accommodate this new knowledge in a contemporary framework. Practical tools (key illustrations, descriptions of character) are provided to facilitate the assignment of approximately 680 extant and 100 fossil genera. * Systema Porifera is unique making sponge taxonomy widely available at the practical level of classification (genera, families, order). It is a taxonomic revision of sponges and spongiomorphs (such as sphinctozoans and archaeocyathans) based on re-evaluation of type materials and evidence. It is also a practical guide to sponge identification providing descriptions and illustrations of characters and interpretation of their importance to systematics. Systema Porifera addresses many long standing nomenclatural problems and provides a sound baseline for future debate on sponges and their place in time and space. * Systema Porifera describes 3 classes, 7 subclasses, 24 orders, 127 families and 682 valid genera of extant sponges (with over 1600 nominal generic names and an additional 500 invalid names treated). Treatment of the fossil fauna is less comprehensive or critical, although 6 classes, 30 orders, 245 families and 998 fossil genera are mentioned. Keys to all recent and many fossil taxa are provided.^1";

4775

s[4772] = "BRUNTON F.R., DIXON O.A. (1994).- Siliceous sponge-microbe biotic associations and their recurrence through the Phanerozoic as reef mound constructors.- Palaios 9: 370-387.- FC&P 23-2.1, p. 59, ID=4414^Topic(s): mud mounds; mud mounds; Systematics: Porifera; Stratigraphy: Phanerozoic; Geography: ^The association between mound-building, benthic microbial communities and siliceous sponges is characteristic of some reef mounds of Early Cambrian, Early-Middle Ordovician, Late Silurian, Late Devonian, Late Mississippian, Late Permian, Late Triassic and Late Jurassic age. Significant episodes of siliceous sponge-microbe reef mound construction, each lasting 5-15 Ma, generally recurred at intervals of approximately 70-100 Ma. Each was a time when thrombolite-forming and/or stromatolite-forming calcimicrobes flourished as constructors, and associated demosponges and hexactinellid sponges diversified as bafflers and binders, and even constructors on the reef mounds. The siliceous sponge-microbe biotic association flourished in subtropical/tropical marine, generally low turbulent, nutrient-rich, deeper subtidal environments (largely below storm wave base). This biotic association shows a temporal change in paleoenvironmental preference through the Phanerozoic from generally inner- to mid-shelf Cambrian and Ordovician examples to both mid-shelf and foreslope environs in the Silurian, Devonian and Carboniferous to predominantly distal shelf and slope settings in Permian, Late Triassic and Late Jurassic examples. The occurrences of these episodes of reef mound construction near the culminations of substantial marine transgressions indicates that extrinsic controls associated with sea level change, such as their spatial association with stratified basin waters and fluctuating oxygen-minimum zones, may have been important in microbial reef mound establishment. During successive sea level highstands the deeper water siliceous sponge-microbe reef mound community appears to have flourished in proximal fore-slopes and extensive drowned shelves and ramps in areas where, at lowstand, reef-building metazoans such as stromatoporoids, corals and calcareous sponges usually predominated. The resurgence of the siliceous sponge-microbe community suggests the recurrence of similar conditions of depth, nutrient conditions, and other subtle physical and chemical controls. These were, in part, controlled by tectonic influences during the evolution of Paleozoic and early Mesozoic seas.^1";

4776

s[4773] = "NESTOR H. (1970).- On the changes of trophic structure and

- productivity of reef ecosystem.- Corals and Reefs of the Phanerozoic of the USSR [Sokolov B. S. (ed)]: 14-18. Nauka, Moskva.- FC&P 9-2, p. 51, ID=0374Topic(s): trophic structure; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^^1";
- 4777 s[4774] = "FAGERSTROM J.A. (1985).- Comparison of processes and guild structures of Holocene and ancient reef communities.- Proceedings 5th International Coral Reef Conference, Tahiti 2: 126.- FC&P 14-2, p. 44, ID=0934Topic(s): reefs biocoenoses; reefs ecology; Systematics: ; Stratigraphy: fossil & living; Geography: ^^1";
- 4778 s[4775] = "KAZMIERCZAK J., ITTEKKOT V., DEGENS E. (1985).- Biocalcification through time: environmental challenge and cellular response.- Paläontologische Zeitschrift 59, 1-2: 15-33.- FC&P 14-2, p. 23, ID=0940Topic(s): biocalcification history; biocalcification; Systematics: ; Stratigraphy: fossil & living; Geography: ^^ concept explaining biocalcification as a form of calcium detoxification is advanced using geochemical and paleontological criteria. The first appearance of calcareous skeletons at the turn of the Precambrian/Cambrian is interpreted as a biotic response to a gradual rise of Ca²⁺ in world ocean resulting in Ca²⁺ stress environments in shelf areas. Periodic appearance in the Phanerozoic record of heavily calcified marine biota, absent or relic in modern seas, suggests considerable temporal fluctuations of calcium concentrations in the ancient ocean. Temporal changes in Ca²⁺ and mineral nutrient contents in the environment can be seen as overriding factors in the evolution of organisms.^1";
- 4779 s[4776] = "SCHUHMACHER H., PLEWKA M. (1981).- Mechanical resistance of reefbuilders through time.- Oecologia 49: 279-282.- FC&P 14-1, p. 57, ID=1056Topic(s): reef builders, mechanical strength; reef builders, stroms, corals; Systematics: ; Stratigraphy: fossil & living; Geography: ^The great strength of the calcareous skeleton of Ceratoporella is analysed quantitatively. The sponge is used as a model for the Stromatoporoids of the Paleozoic and it is concluded that these built very resistant frameworks. In contrast scleractinians are fragile but make up for breakage by rapid growth.^1";
- 4780 s[4777] = "KIESSLING W., FLUGEL E., GOLONKA J. (1999).- Paleoreef Maps: Evaluation of a Comprehensive Database on Phanerozoic Reefs.- American Association of Petroleum Geologists Bulletin 83, 10: 1552-1587.- FC&P 28-2, p. 46, ID=1508Topic(s): distribution, data base; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^To get a better understanding of controls on reef development through time, we created a comprehensive database on Phanerozoic reefs. The database currently comprises 2470 reefs and contains information about geographic position / paleoposition, age, reef type, dimensions, environmental setting, paleontological and petrographical features, and reservoir quality of each buildup. Reef data were analyzed in two qualitatively different ways. The first type of analysis was by visualization of paleogeographic reef distribution maps. Five examples (Late Devonian, Early Permian, Late Triassic, Late Jurassic, middle Miocene) are presented to show the potential of paleoreef maps for paleogeographic and paleoclimatological reconstructions. The second type of analysis was a numerical processing of coded reef characteristics to realize major trends in reef evolution and properties of reef carbonates. The analysis of paleolatitudinal reef distributions through time shows pronounced asymmetries in some time slices, probably related to climatic asymmetries rather than controlled by plate tectonic evolution alone. The dominance of particular reef builders through time suggests that there are seven cycles of Phanerozoic reef development. First curves for the Phanerozoic distribution of bioerosion in reefs, bathymetric setting, and debris potential of reefs are presented. The

observed pattern in the temporal and spatial distribution of reefs with reservoir quality may assist in hydrocarbon exploration. Statistical tests on the dependencies of reefal reservoir quality suggest that large size, high debris potential, low paleolatitude, high amount of marine aragonite cement, and a platform/shelf edge setting favor reservoir quality. Reefal reservoirs are significantly enhanced in times of high evaporite sedimentation, elevated burial of organic carbon, low oceanic crust production, low atmospheric CO₂ content, and cool paleoclimate, as well as when they are present in aragonite oceans.¹¹;

- 4781 s[4778] = "KIESSLING W. (2001).- Paleoclimatic significance of Phanerozoic reefs.- *Geology* 29, 8: 751-754.- FC&P 30-2, p. 32, ID=1612^Topic(s): ecology, climatic tracers; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^A database of pre-Quaternary Phanerozoic reefs is used to test the significance of ancient reefs as paleoclimatic tracers. The compilation of reef paleolatitudes through time and comparison with published paleoclimate curves shows that neither the width of the tropical reef zone nor the total latitudinal range of reefs is correlated with published estimates of paleotemperature. However, reefs trace paleoclimatic indirectly: Algal reefs tend to prevail during icehouse climatic intervals, and distinct high-latitude reefs are only developed in the cold intervals, whereas during greenhouse episodes, the reef zone usually ended abruptly at a particular latitudinal boundary in the subtropics. Additionally, different biotic reef types tended to be concentrated in different latitudes. The lowest latitudes have usually been occupied by coralline sponge or microbial reefs, coral reefs tend to grow in intermediate latitudes, and bryozoan reefs constantly occupied the highest latitudinal position.¹¹;
- 4782 s[4779] = "SCHRODER J., PURSER B.H. (eds) (1986).- Reef Diagenesis.- Springer-Verlag Berlin Heidelberg New York: 455 pp., 187 figs, 18 tabs.- FC&P 16-2, p. 40, ID=2091^Topic(s): diagenesis, case stories volume; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^Reef Diagenesis is a state-of-the-art survey demonstrating the importance of diagenesis in a series of case histories ranging from the Cambrian to the present. The individual contributions discuss topics such as the three-dimensional distribution of cements and other diagenetic fabrics, the vertical and lateral variations in porosity with respect to sedimentary and diagenetic conditions, as well as hydrodynamic systems leading to fabrics and their variations in time and space. Diagenetic models derived from these data will help elucidate similar processes going on in other types of carbonate rocks. In view of the petroleum reservoir potential of reefs, these models have direct application to the worldwide search for oil. Contents: Introduction - Cenozoic Reefs - Mesozoic Reefs - Paleozoic Reefs - Subject Index.¹¹;
- 4783 s[4780] = "COPPER P. (1988).- Ecological succession in Phanerozoic reef ecosystems: is it real?.- *Palaios* 03, 2: 136-152.- FC&P 18-1, p. 19, ID=2206^Topic(s): reefs, ecological succession; reefs ecology; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^^1";
- 4784 s[4781] = "KUZNETSOV V.G. (1986).- Carbonate accumulation in reefs and its evolution in Earth history.- Phanerozoic reefs and corals of the USSR [Sokolov B. S. (ed.), Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam, Dushanbe 1983]: 110-123 [in Russian].- FC&P 18-1, p. 38, ID=2256^Topic(s): reefs carbonates; reefs, carbonates; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^^1";
- 4785 s[4782] = "COPPER P. (1989).- Enigmas in Phanerozoic reef development.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 371-385.- FC&P 19-1.1, p. 14,

ID=2556^Topic(s): history; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^1";

4786 s[4783] = "FLUGEL E., FLUGEL-KAHLER E. (1992).- Phanerozoic Reef Evolution: Basic Questions and Data Base.- Facies 26: 167-278.- FC&P 21-1.1, p. 55, ID=3264^Topic(s): data base; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^1An updated data base is a matter of importance and urgency in order for encouraging a process-oriented approach to the study of reef evolution. The evolution of reefs is a major section of a Priority Program of the Deutsche Forschungsgemeinschaft devoted to 'Global and regional controls of biogenic sedimentation'. Biological, paleontological and geological approaches in the study of ancient and modern reefs are needed for providing a better understanding of the following basic questions: - Biological and non biological processes responsible for the construction and destruction of recent reefs. Studies should be focused on those processes which might also be regarded as important controls in the history of fossil reefs. - Paleontological data describing the changes in the biological controls of reef development over time. Studies should aim for a better understanding of major crises in the reef ecosystem during the Earth's history. - Geological factors governing the short-term and long-term development of reefs. Studies should be concentrated on the controls of reef accretion by sea-level fluctuations, climatic changes and possible changes in early diagenetic factors. The Reef Bibliography presented includes more than 4000 references dealing with Cambrian to Pleistocene reefs and more than 750 references referring to processes relevant to the interpretation of ancient reefs. The constraints of reef evolution will become clearer through intensifying comparative studies of reefs of different ages. The new data base should encourage this comparative research approach. ^1";

4787 s[4784] = "HENRICH R., FREIWALD A. et al. (1995).- Controls on modern carbonate sedimentation on warm-temperate to Arctic coasts, shelves and seamounts in the northern hemisphere: implications for fossil counterparts.- Facies 32: 71-108.- FC&P 24-2, p. 99, ID=4608^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: fossil & living; Geography: ^1In contrast to the well studied tropical carbonate environments, interest in non-tropical carbonate deposition was rather low until the basic ideas of the Foramol-concept were outlined by Lees & Buller (1972). In the following two decades studies on non-tropical carbonate settings evolved as a new and exciting branch of carbonate sedimentology (see Nelson 1988). This is achieved in a great number of publications dealing on temperate carbonate deposits from numerous coastal and open shelf settings on both hemispheres. The existence of wide extended carbonate depositional systems and even reefal frameworks in Subarctic and Arctic seas which are in focus by our research group made it possible to study modern non-tropical carbonate settings along a latitudinal transect from the warm-temperate Mediterranean Sea to the cold Nordic Seas. Because of increasing seasonality in environmental conditions towards high latitudes, the major controls in biogenic carbonate production can be more clearly addressed in these areas. After the initiation of the priority program "Global and regional controlling processes of biogenic sedimentation - evolution of reefs" by the German Science Foundation four years ago, a set of modern case studies were comparatively analysed specifically with regard to their principle controlling processes: (1) Modern and Holocene coralline algal reefs and rhodolith pavements formed in wave-protected shallow waters along the coast of the Brittany and northern Norway. Their fine-tuned interaction with herbivores resulted in the development of widespread but low-diverse, slowly growing coralline algal frameworks with high competitive value against the rapid-growing phaeophytic communities. (2) The Mediterranean Cladocora caespitosa banks provide an instructive example of non-tropical

hermatypic coral framework construction out of the subtropical-tropical coral reef belt. (3) The geometry and environmental controls of several kilometer long coral reefs formed by the azooxanthellate *Lophelia pertusa* and *Madrepora oculata* are studied in more than 250m water depth in mid and northern Norway. (4) Modern Bryozoa-sediments are widely distributed on non-tropical deeper shelf settings. The formational processes converting bryozoan-thickets into huge piles of sand and gravel dunes are recently studied on the outer shelves off northern Brittany and off northern Norway. (5) Arctic sponge-bryozoan buildups on the seamount Vesterisbank in the Greenland Sea and (6) balanid-dominated open shelf carbonates on the Spitsbergen Bank form the Arctic end members of modern Foramoal-deposits. Seasonal ice-edge phytoplankton blooms and efficient mechanisms of pelagic-benthic food transfer characterize these depositional settings. Fossil counterparts of each of these modern case studies are discussed in context with their paleoceanographic and environmental settings.¹;

4788 s[4785] = "HUBBARD J.A.E.B. (1972).- Cavity formation in living scleractinian reef corals and fossil analogues.- *Geol. Rundschau* 61, 2: 551-564.- FC&P 2-1, p. 13, ID=4711Topic(s): cavity formation; reefs; Systematics: ; Stratigraphy: fossil & living; Geography: ^Shifts in community structure and concomitant cavity formation may be rapidly effected by subtle environmental changes; as secretion rates vary from organism to organism. The experimental rates, placed in declining order are: encrusting worms, encrusting red algae, bivalve, coral. The worms, with their organic coatings, secreted a maximum extension of 12mm per month, and the red algae 3mm, whereas the bivalve and coral only achieved a matter of microns. Thus, in the aquarium, the coral would have been effectively smothered by the worms and algae in the foreseeable future. [end-fragment of extensive abstract]¹;

4789 s[4786] = "ZOLOTAREV V.N., KRASNOV Yu.V. (1974).- Periodicity in the growth of skeletal formations in recent and fossil invertebrates.- *Paleontologicheskii Zhurnal* 1974, 8, 3: 405-408.- FC&P 4-2, p. 40, ID=5198Topic(s): skeletal growth periodicity; invertebrates; Systematics: ; Stratigraphy: living & fossil; Geography: ^^1";

4790 s[4787] = "STEARNS C.W. (1982).- The shapes of Paleozoic and modern reef-builders: a critical review.- *Paleobiology* 8, 3: 228-241.- FC&P 12-1, p. 47, ID=6201Topic(s): reef builders, ecological interpretations; reef builders, shapes; Systematics: ; Stratigraphy: fossil & living; Geography: ^Paleoecologists studying Paleozoic reef-builders have interpreted their growth forms as responses to conditions of depth and turbulence in reef complexes. Comparison of the shapes of Paleozoic stromatoporoids and corals with the growth forms of modern scleractinians has been used to reconstruct Paleozoic conditions. A review of shape zonation on modern reefs indicates that no general pattern is applicable to all reefs and variations in shape are the result of the interaction of many environmental factors with the genetically dictated growth pattern of the coral. In most zones of a reef a wide range of shapes co-exist. The growth forms of corals on modern reefs are not a simple vegetative response to the many environmental parameters that have been shown to influence form, but are constrained by phylogenetic and developmental influences as well as functional ones. * Interpretations of the environments of western Canadian and other mid-Paleozoic reefs have been based on the growth forms of stromatoporoids. The environmental significance of the shapes has been deduced from comparison with the shapes of modern scleractinians, functional morphology, nature of the enclosing sediment, position of growth, position within the reef, and diversity gradients. The validity of these criteria is open to question and considerable doubt remains concerning the significance of the growth forms. The shapes of reef animals are not specific guides to

- environments of modern reefs and should not be expected to be guides for ancient ones. [original abstract]^1";
- 4791 s[4788] = "BOSENCE D.W.J. (1983).- Coralline algal reef framework.- J. geol. Soc. London 140: 365-376.- FC;P 12-2, p. 41, ID=6237^Topic(s): reef frameworks; reef framework; Systematics: ; Stratigraphy: fossil & living; Geography: ^Published and unpublished accounts of coralline algal reef frameworks are reviewed. The descriptions are divided into frameworks constructed from crustose coralline algae and those constructed from branching corallines. Crustose frameworks are briefly described and illustrated from the Miocene of Malta. Recent 'coralligene' from the Mediterranean, Eocene reefs from Spain, Recent algal reefs of St. Croix, U.S. Virgin Is. and algal reefs from Bermuda. Branching frameworks are briefly described and illustrated from the Recent mearl of the NE Atlantic. Recent mud mounds from Florida, Recent algal reefs from St. Croix and Recent algal ridges on Pacific reefs. Crustose and branching frameworks show an increase in strength of construction, early submarine cements and macro-borers and a decrease in erodibility from low to high energy environments. The occurrence of genera in coralline frameworks is primarily controlled by their geographic and water-depth ranges. The construction of coralline frameworks is seen as the result of competition for living space on shallow marine hard substrates. [original summary]^1";
- 4792 s[4789] = "MATTER A. (1984).- Modern and ancient stromatolitic buildups.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 16.1-16.15.- FC;P 13-1, p. 11, ID=6329^Topic(s): stromatolites; stromatolites; Systematics: ; Stratigraphy: living & fossil; Geography: ^In these brief course notes the analogy between ancient and recent stromatolites is stressed. Stromatolites are considered to represent mainly the response of algal and bacterial communities to environmental conditions. The fact that stromatolites may have evolved through time according to Russian authors, allowing a zonation of the Proterozoic, raises the question "Is the Present the (only) key to the Past?". Nonetheless, stromatolites considerably influenced sedimentation for hundreds of millions of years by their ability to form wave-resistant structures and, more importantly, to bind sedimentary material and prevent it from being displaced into the deeper parts of the seas. Thus, stromatolites were largely responsible for the construction of major carbonate platforms throughout much of the Proterozoic into the Lower Palaeozoic. [conclusions of the paper]^1";
- 4793 s[4790] = "KIESSLING W., SIMPSON C., FOOTE M. (2010).- Reefs as Cradles of Evolution and Sources of Biodiversity in the Phanerozoic.- Science 327, 5962: 196-198.- FC;P 36, p. 116, ID=6554^Topic(s): biodiversity; reefs; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^Large-scale biodiversity gradients among environments and habitats are usually attributed to a complex array of ecological and evolutionary factors. We tested the evolutionary component of such gradients by compiling the environments of the geologically oldest occurrences of marine genera and using sampling standardization to assess if originations tended to be clustered in particular environments. Shallow, tropical environments and carbonate substrates all tend to have harbored high origination rates. Diversity within these environments tended to be preferentially generated in reefs, probably because of their habitat complexity. Reefs were also prolific at exporting diversity to other environments, which might be a consequence of low-diversity habitats being more susceptible to invasions.^1";
- 4794 s[4791] = "WEST R.R., MCKINNEY F.K., FAGERSTROM J.A. & VACELET J. (2011).- Biological interactions among extant and fossil clonal organisms.- Facies 57: 351-374.- FC;P 36, 134, ID=6597^Topic(s): ; Systematics: ; Stratigraphy: ; Geography: ^Biological interactions among clonal marine

organisms are an important aspect of their behavior and are important in the construction of biological reefs. The interactions addressed here are among crustose and erect coralline algae, sponges, corals, and bryozoans and may involve clones of the same species (conspecific), or different species (heterospecific). Conspecific interactions may be either between modules or clones that are produced asexually from one propagule, genetically identical, or between clones that are sexually produced from two or more propagules that may or may not be genetically identical. Juxtaposed genetically identical clones generally fuse whereas non-identical clones may or may not fuse, depending on their relatedness and histocompatibility. Most heterospecific clonal interactions are spatially competitive and result in overgrowths or stand-offs. Clone fission/fragmentation may occur as a result of biotic or abiotic processes that initially degrade but may eventually restore or even enhance ability to gain space and/or nutrients.

Self-overgrowths also occur, usually over dead, diseased, or senescent parts of the same clone. [original abstract]^1";

- 4795 s[4792] = "DEGENS E.T., KAZMIERCZAK J., ITTEKKOT V. (1986).- Cellular response to Ca²⁺ stress and its geological implications.- Acta Palaeontologica Polonica 30, 3-4: 115-135. [imprint 1985].- FC&P 15-2, p. 11, ID=6743Topic(s): skeletal Ca; Ca ions; Systematics: ; Stratigraphy: Phanerozoic; Geography: ^knowledge on transport and regulation of free calcium in the living cell is used in support of the theory (Kazmierczak et al. 1985) linking the onset of biocalcification at about the Precambrian / Cambrian boundary to a rise in Ca²⁺ concentrations in the shelf seas to levels toxic to biota. Following this event, fluctuating Ca²⁺ levels in the Phanerozoic seas are supposed to have challenged a variety of protists and invertebrates to respond by depositing no, thin, or thick skeletons respectively. Changes in type and extent of calcification, as observed in the stratigraphical record, are interpreted to reflect the pulsating flow of Ca²⁺ ions through crust, sea, and biota. Some implications of that theory to (i) the history of sea water, (ii) the global carbon cycle, (iii) stable carbon isotope geochemistry, and (iv) sedimentation of suspended clays, are briefly discussed.^1";
- 4796 s[4793] = "LAFUSTE J., DEBRENNE F., ZHURAVLEV A. (1990).- Les fuscines, type nouveau de biocristaux dans le squelette d'Hydroconus Korde 1963, corallomorphe du Cambrien inferieur.- C. R. Acad. Sci. Paris 310, ser. II: 1553-1559.- FC&P 19-1.1, p. 28, ID=2599Topic(s): microstructures; Corallomorpha, Hydroconus; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: ^^1";
- 4797 s[4794] = "DEBRENNE F., LAFUSTE J., ZHURAVLEV A.Yu. (1990).- Corallomorphes et spongiomorphes a l'aube du Cambrien.- Bulletin du Museum national d'histoire naturelle Paris, 4e ser., 12: 17-39.- FC&P 20-1.1, p. 52, ID=2817Topic(s): ; Corallomorpha; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian L; Geography: ^^1";
- 4798 s[4795] = "DEBRENNE F. (1984).- Le genre chez les Archeocyathes au Cambrien inferieur.- Bulletin de la Societe geologique de France 4: 609-619.- FC&P 13-2, p. 49, ID=0576Topic(s): ; Archaeocyatha genus concept; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^The evolution of the genus concept in Archaeocyatha is proceeding by steps : 1861-1910, 1910-1955, 1955-1970, 1970-1974, 1974-1980. The place given to the Archaeocyatha in the living world might influence the adapted hierarchy of the generic characters. Methods used in establishing the characterization of the genera as follows : a) so-called "ontogenic" stages; b) bioseries; c) homological variability. Possibility of ecogenera. The results of the above investigations are displayed on tables. Lacking of any recent model, the terms "genera" and "species" only represent our

- present concept of subordination of taxa, the real rank of which being not possible to determine. Nevertheless, genus in Archaeocyatha is the unit on which most of the specialists have come to an agreement.^1";
- 4799 s[4796] = "DEBRENNE F., ROZANOV A.Yu. (1983).- Paleogeographic and stratigraphic distribution of Regular Archaeocyatha (Lower Cambrian Fossils).- Geobios 06: 727-736.- FC&P 13-2, p. 49, ID=0577^Topic(s): ; Archaeocyatha biogeography; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^Based on the computerized catalogues previously established, and after a thorough checking of the results according to the last paleogeographic and stratigraphic data available; table of stratigraphic distribution within 11 paleogeographic areas are settled for genera of Regular Archaeocyatha considered at the present time as valid by the authors.^1";
- 4800 s[4797] = "ZHURAVLEVA I.T., KASHINA L.N. (1983).- Archeocyaths of the boundary between Lower and Middle Cambrian.- Biostratigrafiya i fauna pogranychykh otlozheniy nizhnego i srednego Kembriya Sibiri, Izdat. Nauka Sibirskoe otdeleni Novosibirsk, 548, p. 111-112.- FC&P 13-2, p. 51, ID=0588^Topic(s): biostratigraphy; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L / M; Geography: ^Review of taxa at the boundary through the world. Detailed description of the Siberian fauna.^1";
- 4801 s[4798] = "DEBRENNE F., ROZANOV A.Yu. (1985).- On the genus Dokidocyathus Taylor.- Paleontologicheskiy Zhurnal 1985, 3: 111-112.- FC&P 16-1, p. 78, ID=2024^Topic(s): ; Archaeocyatha, Dokidocyathus; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^[reevaluation of generic characters of the genus and specially the repartition in vertical plans of the radial rods]^1";
- 4802 s[4799] = "ZHURAVLEV A.Yu. (1986).- Evolution of archaeocyaths and palaeobiogeography of the early Cambrian.- Geological Magazine 123, 4: 377-385.- FC&P 16-1, p. 79, ID=2030^Topic(s): phylogeny, biogeography; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^[Tentative reconstruction of early Cambrian paleogeography according to the distribution of Archeocyathan faunas is presented. Two peaks of diversification occur at the beginning of Atdabanian and at the beginning of Botomian, when two main provinces may be recognized: American Koryakiyan Province and Afro Siberian Antarctic Province. According to the author, there was a certain stability in the distribution of skeletal elements of high taxonomic rank in Archaeocyatha, and on the opposite interchangeability of elements of low taxonomic rank. Implications for correlations and ecology are to be tested.]^1";
- 4803 s[4800] = "DEBRENNE F., ZHURAVLEV A.Yu., ROZANOV A.Yu. (1989).- Pravilnye Arkheotsiaty [Regular Archaeocyatha].- Akademiya Nauk SSSR, Trudy Paleont. Inst. 233, 198 pp., 32 pls, 70 figs.- FC&P 18-1, p. 54, ID=2315^Topic(s): ; Archaeocyatha regulares; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^Contents: Morphology - ontogeny - Regular Archaeocyathan systematics -diagnosis of genera - stratigraphic and paleogeographic distribution - Archaeocyatha and Sponges. [in Russian; an English revised version is in preparation and will be published in Cahiers de Paleontologie, Editions CNRS, in 1990]^1";
- 4804 s[4801] = "SAVARESE M. (1989).- Palaeobiology of Archaeocyathans: functional morphology and phylogenetic affinities.- University of California, Davis, unpublished PhD Thesis 1989.- FC&P 19-1.1, p. 72, ID=2713^Topic(s): biology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^Results from a modern analog approach, comparing archaeocyathan morphology to that of calcified sponges, a functional analysis of skeletal morphology from fume

- experiments and a cladistic analysis are in agreement: the algal affinity hypothesis for Archaeocyatha is rejected and a sponge affinity hypothesis is corroborated.¹¹";
- 4805 s[4802] = "DEBRENNE F., ROZANOV A.Yu., ZHURAVLEV A.Yu. (1990).- Les Archeocyathes Reguliers.- CNRS Press, Paris, 256 pp.- FC&P 20-1.1, p. 83, ID=2870Topic(s): ; Archaeocyatha regulares; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^The Archaeocyaths (Archaeocyatha) are the first multicellular organisms with a calcified skeleton. They appear in Siberia at the beginning of the Palaeozoic. They also are the first reef-builder Metazoans. Archaeocyaths are subdivided into Regulars and Irregulars. Only the Regulars are studied here. * Their elegant porous skeleton is an ideal model for the application of Vavilov's laws, permitting the establishment of a classification based on the homological variability. * This book has been written as a treatise in which researchers and teachers will find the up-to-date results on morphology, ontogeny, systematics, as well as the last palaeogeographical maps and biozonations of the Lower Cambrian. The now well established relationships with Sponges are exposed. [book presentation]¹¹";
- 4806 s[4803] = "DEBRENNE F., ZHURAVLEV A.Yu. (1996).- Archaeocyatha, Palaeoecology: a Cambrian sessile fauna.- Bolletino della Societa Paleontologica Italiana, Spec. vol. 3 [Cherchi A. (ed.): Autoecology of selected fossil organisms. Achievements and problems]: 7 pp., 1 pl., 3 figs.- FC&P 25-2, p. 61, ID=3162Topic(s): ecology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: ^Archaeocyaths are Cambrian sponges with calcareous skeletons. They are stenothermal organisms, limited to the intertropical climatic conditions. They were stenohaline: when salinity increases they are represented only by their simplest forms. They were stenobathic, living anchored in soft substrata in intertidal to subtidal zones, but did not overpass the photic one. Turbidity and water movements influenced the morphological face of an archaeocyath community. Archaeocyaths are associated to the reefal environments. They were facultative reef-builders (mainly binders and bafflers) and associated with reefal buildups as a substratum for the calcified cyanobacteria and cements. Buildups were essentially microbially mediated mud mounds dominated by solitary or low modular soft-substrate dwelling filter-feeders (archaeocyaths).¹¹";
- 4807 s[4804] = "DEBRENNE F. (1992).- Morphogenese et systematique des Archaeocyatha (Spongiaires, Cambrien inferieur).- Geobios 13 [Les fossiles ont la forme]: 217-222.- FC&P 21-2, p. 53, ID=3288Topic(s): morphology, systematics; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^All archaeocyaths proceed through the following stages: conical with one wall and empty internal cavity; two-walled cup, with horizontal bars, corresponding to the first radial partition with one single pore per intervallum width. Since the third stage, two main groups are distinguishable: two-walled cup with septa characteristic of Regulares, two-walled cup with taeniae characteristic of the Irregulars, besides this radial structural plan, a thalamid growth pattern is realized among both groups. Despite their different types of development, homologous architectonic characteristics are recognized in both groups and lead to the distinction of the following taxonomic categories: orders - growth pattern of the cup; superfamilies - outer wall structure; families - inner wall structure; genera - secondary order porosity features; species - additional elements and numeric discriminants.¹¹";
- 4808 s[4805] = "DEBRENNE F., COURTJAULT-RADE R. (1994).- Repartition paleogeographique des archeocyathes et delimitation des zones intertropicales au Cambrien inferieur.- Bulletin de la Societe geologique de France 165, 5: 459-467.- FC&P 24-1, p. 74, ID=4504Topic(s): paleolatitudes; Archaeocyatha; Systematics:

Porifera; Archaeocyatha; Stratigraphy: Cambrian L;
 Geography: ^Since the end of Upper Proterozoic, carbonate
 platforms progressively settle down. At the beginning of the Lower
 Cambrian, calcimicrobes expanded, later accompanied by benthic
 filter-feeders as cobuilders, i.e. archaeocyaths, whose development is
 strictly controlled by salinity, turbidity, bathymetry and temperature,
 corresponding to intertropical climatic conditions. The "reef
 mounds" (sensu James) are placed on the most recent
 palaeogeographic maps, controlled by palaeomagnetic data on one hand
 and fossil (trilobites and archaeocyaths) and facies distribution on
 the other. The archaeocyaths reef mounds are distributed within a belt,
 extending on both sides to the Equator (latitude 0° to 30°). Even
 between these latitudes, when the environment is hypersaline
 (dolomites) or turbidic (siliciclastic sediments) the archaeocyaths did
 not develop. The extension of the intertropical zone at the Cambrian is
 comparable with the present one; this is confirmed by the presence of
 siliciclastic deposits of the same Lower Cambrian age in Avalonia which
 are, according to palaeomagnetic data, situated at 45°-50° latitude,
 and by the occurrence of some small bioclastic carbonate levels
 deposited in temperate conditions. The demise of archaeocyaths at the
 end of the Lower Cambrian is a consequence of the alteration of their
 environment, due to a generalized extensional phase, corresponding to
 gradual opening of the Iapetus Ocean, and to a displacement of
 continents towards the South Pole, disturbing all the previous global
 palaeogeographic, palaeoenvironmental and climatic conditions.
 Uniformitarianism principles, at least for intertropical and temperate
 zones, could be applied as far back as the Lower Cambrian time.^1";

- 4809 s[4806] = "DEBRENNE F. (1974).- Analyse de l'article de I.T.
 Zhuravleva "Biologie des Archéocyathes"; in Etudes
 stratigraphiques, livre jubilaire en l'honneur de
 l'Académicien B.S. Sokolov: pp 107-124, 7figs, 4pls; Nauka,
 Moskva.- FC&P 3, 2: 47-51.- FC&P 3-2, p. 47,
 ID=4987^Topic(s): ; Archaeocyatha; Systematics: Porifera;
 Archaeocyatha; Stratigraphy: Cambrian L; Geography:
 ^Parmi les articles d'une très haute tenue scientifique écrits
 par les amis et collaborateurs de l'éminent académicien
 qu'est B.S. Sokolov pour son livre jubilaire, j'analyserai
 ici la contribution que I.T. Zhuravleva a consacrée à la biologie des
 Archéocyathes. [first fragment of an extensive analysis of a paper by
 I.T. Zhuravleva]^1";
- 4810 s[4807] = "BALSAM W.L. (1974).- Ecological interactions in an early
 Cambrian archaeocyathid reef community.- Dissert. Abstr. internation.
 B, USA 34, 9: 4448-4449.- FC&P 4-1, p. 47,
 ID=5187^Topic(s): ecology, Archaeocyatha; reefs; Systematics:
 Porifera; Archaeocyatha; Stratigraphy: Cambrian L;
 Geography: ^^1";
- 4811 s[4808] = "BELYAYEVA G.V. (1974).- Archaeocyathes à tumuli.- In
 Biostratigr. Et Paléont. du Cambrien inférieur de l'Europe et de
 l'Extrême-Orient: 115-123; Nauka, Moskva.- FC&P 4-2,
 p. 65, ID=5311^Topic(s): structures tumuli; Archaeocyatha;
 Systematics: Porifera; Archaeocyatha; Stratigraphy:
 Cambrian L; Geography: ^^1";
- 4812 s[4809] = "BORODINA N.P. (1974).- Archaeocyathes avec muraille externe
 à clathri.- In Biostratigr. Et Paléont. du Cambrien inférieur de
 l'Europe et de l'Extrême-Orient: 138-166.- FC&P
 4-2, p. 65, ID=5312^Topic(s): structures clathri;
 Archaeocyatha; Systematics: Porifera; Archaeocyatha;
 Stratigraphy: Cambrian L; Geography: ^^1";
- 4813 s[4810] = "DEBRENNE F. (1974).- Révision du genre Paranacyathus Bedford
 R. et W.R. 1937.- In Biostratigr. Et Paléont. du Cambrien inférieur de
 l'Europe et de l'Extrême-Orient: 167-178.- FC&P
 4-2, p. 65, ID=5313^Topic(s): revision; Archaeocyatha,
 Paranacyathus; Systematics: Porifera; Archaeocyatha;

- Stratigraphy: Cambrian L; Geography: ^Définition et limites du genre d'après les holotypes conservés au British Museum, Princeton University, South Australian Museum.^1";
- 4814 s[4811] = "VORONIN Yu.I. (1974).- Etude systématique de la famille des Ajacicyathidae Bedford R. & Bedford J. 1939.- In Biostratigr. et Paleont. du Cambrien inférieur de l'Europe et de l'Extrême-Orient: 124-137; Nauka, Moskva.- FC&P 4-2, p. 66, ID=5318^Topic(s): systematics; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^^1";
- 4815 s[4812] = "VOLOGDIN A.G. (1977).- Monocyaty Kembriya SSSR. [Cambrian Monocyatha of the USSR; in Russian].- Akademiya Nauk SSSR, Nauka Moskva: 156 pp., 78 figs, 1 tabl., 25 pls.- FC&P 7-2, p. 14, ID=5610^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian; Geography: USSR^^1";
- 4816 s[4813] = "DEBRENNE F., GANGLOFF R.A., JAMES N.P. (1981).- Archaeocyatha, pioneer buildups of the Phanerozoic.- US Geol. Surv. Open File Report 81-743: 63.- FC&P 11-1, p. 55, ID=6122^Topic(s): ; archaeocyathan reefs; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^^1";
- 4817 s[4814] = "DEBRENNE F. (1984).- Développement récifal au Cambrien inférieur: "récifs"à Archéocyathes.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 5.1-5.15.- FC&P 13-1, p. 10, ID=6318^Topic(s): reefs; reefs, Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^A travers les temps géologiques, les biohermes peuvent être considérés comme de deux types, ceux formés par piégeage des sédiments par des filaments algaires et/ou édifiés par des algues calcaires, surtout bien développés au Précambrien et Paléozoïque inférieur et les récifs et bioconstructions récifales, structures principalement composées de squelettes de Métazoaires et d'Algues calcaires, qu'on trouve dans tout le Phanérozoïque. * On a souvent lié l'apparition des récifs avec le développement des métazoaires à squelette comme les Coraux et les Stromatoporoïdes de l'Ordovicien moyen; mais dès le Cambrien inférieur on connaît des écosystèmes récifaux proches des structures plus récentes, coïncidant avec le développement des Archéocyathes, organismes parmi les premiers Métazoaires connus. [fragment of an introductory chapter]^1";
- 4818 s[4815] = "GANDIN A., DEBRENNE F. (2010).- Distribution of the archaeocyath-calcimicrobial bioconstructions on the Early Cambrian shelves.- Palaeoworld 19, 3-4: 222-241.- FC&P 36, p. 30, ID=6394^Topic(s): reefs; archaeocyathan buildups; Systematics: Porifera; Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^The differences and variety of structural, depositional, and compositional features observed in the Early Cambrian microbial-archaeocyath buildups preserved in the present-day continents, suggest a direct correlation between the physico-chemical factors of deposition and the structural architecture of the buildups. This can be explained in terms of their palaeogeographic collocation on the shelves (depth, energy), and hence of the areal distribution of epeiric basins and perioceanic/pericontinental platforms. * Data on the analysis of biohermal communities and their architectures indicate that the relative development of the main reef-building components, as well as their evolution within the reef communities, reflects the dominant physico-chemical factors, mainly temperature and nutrient availability, and the physiography of the primary depositional setting. The bioaccumulations show different reef building styles, defined by the types of associated facies and by the early diagenetic features. They are represented by (i) mud-supported simple (Kalyptrae) to compound

mounds locally with stromatactis-like cavities; (ii) dendrolitic bioherms and crustose buildups with large shelter cavities and low synoptic relief; (iii) cement-supported skeletal reefs with wave resistant frameworks often associated with oolitic shoals, and (iv) bioclastic sands, developed at photic and shallow sub-photoc depths on low-angle/low-energy ramps (i-ii) or on high-energy conditions on platforms distally rimmed (iii) or occasionally swept by storm currents (iv). The results of the analysis provide information on the spatial conditions of the primary depositional settings of the first metazoan involved in reef building in the history of the Earth, and suggest that the architecture of the bioconstructions was controlled not only by the physiography of the depositional setting and global/astronomic climate but also by local climatic conditions constrained by the latitudinal distribution of the Early Cambrian continental blocks. [original abstract]^1";

- 4819 s[4816] = "SAYUTINA T.A. (1981).- Rannenkembriyskoye semeystvo Khasaktiidae fam. nov. -vozmozhnye stromatoporaty. [Early Cambrian family Khasaktiidae fam. nov. - possible stroms; in Russian].- Paleontologicheskii Zhurnal 1980, 4: 13-30.- FC&P 11-2, p. 37, ID=1861^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Cambrian L; Geography: ^The following new taxa are established: Vittia rosenelliformis, V. allaris, Khasaktia vesicularis, K. intermedia, Drosdovia enigmatica, Edelsteinia vologdini.^1";
- 4820 s[4817] = "JELL J.S. (1984).- Cambrian cnidarians with mineralised skeletons.- Palaeontographica Americana 54: 105-109 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 46, ID=0967^Topic(s): skeletal; Cnidaria; Systematics: Cnidaria; Stratigraphy: Cambrian; Geography: ^1";
- 4821 s[4818] = "ZHURAVLEV A.Yu., DEBRENNE F., LAFUSTE J. (1993).- Early Cambrian microstructural diversification of Cnidaria.- Courier Forschungsinstitut Senckenberg 164: 365-372. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 23, ID=3472^Topic(s): microstructures, radiation; Cnidaria; Systematics: Cnidaria; Stratigraphy: Cambrian L; Geography: ^Radiation and diversification of early Cnidaria, at the beginning of the Cambrian are documented here, with special attention to the skeletal microstructures, investigated by means of electron microscope and ultra-thin sections, each time on the same specimen for direct comparison. Three centers are recognized: Siberia (Tommotian to mid-Botomian), Australia (mid-Botomian to Toyonian), North America (Upper Botomian to Toyonian), but without cosmopolitan forms. Corallomorphs of the Cambrian were represented by slender irregular polygonal tubes, mostly solitary in the Tommotian and Atdabanian and mainly modular in the later stages (Botomian and Toyonian). They acquired in their evolution multilayered walls and septum-like structures which are absent in the oldest forms. Out of the 10 Early Cambrian corallomorphs, 8 at least have different microstructures, none of them fully identified with one of the post-Cambrian Corals. The diversification of Early Cambrian corallomorphs, according to their microstructure, had their acme in the Botomian and decreased during the Toyonian; the Precambrian "medusoids", now thought plasmoid unicellulars, could not be considered the ancestor of Cambrian corallomorphs. For cnidarians, the Early Cambrian represents a unique stage in the development of the phylum with short-lived branches of high taxonomic level among which it is not possible to recognize an "ancestor" of true corals which will appear in the Ordovician.^1";
- 4822 s[4819] = "SAYUTINA T.A. (1983).- Cambroporella and Jakovlevites, possible Coelenterata of the lower Cambrian.- V Vsesoyuzny Simpozium po

- iskopaemym korallam i rifam, Dushanbe .- FC#038;P 13-2, p. 51, ID=0590^Topic(s): problematica; Coelenterata?, Cambroporella; Systematics: Cnidaria; Stratigraphy: Cambrian L; Geography: ^1";
- 4823 s[4820] = "WEBERS G.F., YOCHELSON E.L. (1999).- A revision of Palaeacmaea (Upper Cambrian) (? Cnidaria).- Journal of Paleontology 73, 4: 598-607.http:#47;#47; www.jstor.org/pss/1306759.- FC#038;P 29-1, p. 31, ID=1502^Topic(s): problematica, revision; Cnidaria?, Palaeacmaea; Systematics: Cnidaria; Stratigraphy: Cambrian U; Geography: ^Palaeacmaea typica, the type species of the genus, and P. irvingi, the only other Late Cambrian taxon considered congeneric are redescribed herein. Their morphology suggests that they are neither Monoplacophora, where they are currently assigned, nor are they Mollusca. Specimens of P. irvingi demonstrate considerable variation in shape, interpreted as distortion of a flexible integument, of essentially no thickness. A neotype is designated for P. irvingi; it is interpreted as a medusiform fossil, possibly a cnidarian. Only the holotype of P. typica is known, but it shows comparable features. The genus and the family Palaeacmaeidae are placed in Phylum Incertae Sedis. Four Ordovician species previously assigned to Palaeacmaea, show none of the characteristics noted, and they are tentatively reassigned to other genera. [original abstract]^1";
- 4824 s[4821] = "DEBRENNE F., GANGLOFF R.A., LAFUSTE J. (1981).- Microstructure of Tabulaconus and its significance to the taxonomy of Early Phanerozoic organisms.- US Geol. Surv. Open File Report 81-743: 64.- FC#038;P 11-1, p. 55, ID=6123^Topic(s): problematica, microstructure; Cnidaria?, Tabulaconus; Systematics: Cnidaria; Stratigraphy: Cambrian; Geography: ^[primitive Cambrian coelenterate]^1";
- 4825 s[4822] = "CAMOIN G., DEBRENNE F., GANDIN A. (1989).- Premieres images des communautes microbiennes dans les ecosystemes cambriens.- C. R. Acad. Sci. Paris 308, ser. II: 1451-1458.- FC#038;P 18-1, p. 54, ID=2313^Topic(s): reefs microbial; reefs microbes; Systematics: Monera; Stratigraphy: Cambrian L; Geography: ^Observations by means of scanning electron microscope of bacterial aggregates within the 3 major components of Lower Cambrian buildups, point out the role of microbes in the precipitation of micritic matrix as well as in calcification of both Epiphyton and archaeocyathan skeletons. The acquisition of symbiotic bacteria could be one of the factors responsible for the outburst of skeletalised forms and the development of the first metazoan reefs.^1";
- 4826 s[4823] = "ZHURAVLEV A.Yu. (1996).- Reef ecosystem recovery after the Early Cambrian extinction.- Geological Society Special Publication 102 [Hart M.B. (ed.): Biotic Recovery after Mass Extinction Events]: 79-96.- FC#038;P 25-2, p. 23, ID=3085^Topic(s): recovery; reefs; Systematics: ; Stratigraphy: Cambrian; Geography: ^Revised and new stratigraphic data indicate a complex extinction event in the late Early Cambrian which consisted of two, temporally, separate, but related phases. The earliest phase (mid-Botomian, Sinsk Event) may be related to widespread anoxia due to eutrophication and phytoplankton blooms. The later event (early Toyonian, Hawke Bay Event), is connected to a world wide regression. This double extinction event severely injured the reefal biota which has undergone a further rejuvenation during the remainder of the Cambrian. As a result of the lowering of grazing pressure and unhealthy metazoan-calcimicrobial interactions, the remaining metazoan reef-builders were eliminated by the end of the Early Cambrian. Consequent reduction of space heterogeneity led to the decline of calcified microbes (Renalcis, etc.) in both diversity and abundance which gave the way to the thrombolite-stromatolite community. The recovery of the reefal biota occurred during the very end of the Late Cambrian-Early Ordovician and may be attributed to Elvis-taxa, with the exception of the spicular demosponges. These recovering biota intruded

- into the thrombolite-stromatolite community and created a space for the more successful encrusting reef dwellers of Middle-Late Ordovician time.¹¹;
- 4827 s[4824] = "ZHURAVLEV A.Yu., WOOD R. (1995).- Lower Cambrian reefal cryptic communities.- *Palaeontology* 38, 2: 443-490.- FC&P 24-2, p. 108, ID=3164Topic(s): reefs cryptic communities; reefs, cryptic communities; Systematics: ; Stratigraphy: Cambrian L; Geography: ^During the Lower Cambrian, cryptic communities were more abundant than previously thought. They offered a habitat of reduced environmental stress and housed a substantial proportion of the total biodiversity of early reefs. Cryptic communities were composed of solitary organisms with no evidence of succession compared with most modern reefal crypts. This may be a result of the small size and short-lived nature of both crypts and their occupants. The rapid growth of synsedimentary cements in crypts may have reduced the time available for both colonization and growth of the crypts as they did not remain open for long before partial or total occlusion. Solitary archaeocyathids, solitary chambered forms (coscinocyathids and kazachstanicyathids), calcified cyanobacteria and a microburrowing ? metazoan were the most ubiquitous and abundant elements; putative primitive cnidarian, spiculate sponges and various problematica were also present. Several species of archaeocyaths were obligate cryptobionts; infaunal deposit-feeding (?) worms and probable boring sponges have been noted only in crypts. On a sub-zonal scale, the vast majority of archaeocyath species appeared simultaneously in both open surface and cryptic niches suggesting that Lower Cambrian crypts were neither refuges for open surface inhabitants nor niches for evolutionary innovations.¹¹;
- 4828 s[4825] = "ZHURAVLEV A.Yu., DEBRENNE F. (1996).- Pattern of evolution of Cambrian benthic communities: environments of carbonate sedimentation.- *Rivista Italiana di Paleontologia e Stratigrafia* 102, 3: 333-340.- FC&P 26-2, p. 85, ID=3773Topic(s): benthos, carbonates; benthic communities; Systematics: ; Stratigraphy: Cambrian; Geography: ^^1";
- 4829 s[4826] = "DEBRENNE F., ZHURAVLEV A.Yu. (1997).- Cambrian Food Web, a brief review.- *Geobios* 30, suppl. 1: 181-188.- FC&P 26-2, p. 85, ID=3774Topic(s): ecosystems; trophic webs; Systematics: ; Stratigraphy: Cambrian; Geography: ^On peut reconnaître dans les réseaux trophiques des communautés benthiques cambriennes: (1) la chaîne des producteurs primaires, principalement des bactéries calcifiées et non-calcifiées, du phytoplancton (acritarches) et de la matière organique dissoute et (2) la chaîne des consommateurs primaires en grande majorité des filtreurs (éponges, radiocyathes, brachiopodes craniates et certains mollusques), des suspensivores (formes tubicoles, lingules, échinodermes, cancellorids, quelques trilobites de la fin du Cambrien) et de probables détritivores (helcionelloides, paragastropodes, bivalves); en moindre proportion des carnivores (surtout des arthropodes et probablement des protoconodontes) et des perforants dont certains sont peut-être des parasites, mais dont il est difficile par la seule morphologie des trous de déterminer la nature; peu ou pas de brouteurs. [original French abstract]¹¹;
- 4830 s[4827] = "ZHURAVLEV A.Yu., MAIDANSKAYA I.D. (1998).- Faunal similarities and plate tectonics in the Early Cambrian.- In: Koroteev V.A. & Maslov A.V., eds.: *The Vendian-Early Palaeozoic Palaeogeography of Northern Eurasia*. Ekaterinburg: Uralian Branch, Russian Academy of Sciences. p. 166-71.- FC&P 28-1, p. 17, ID=3958Topic(s): biogeography; biogeography, geography; Systematics: ; Stratigraphy: Cambrian L; Geography: ^^1";
- 4831 s[4828] = "ZHURAVLEV A.Yu. (1999).- The modularity and development of Cambrian reef ecosystem.- *Zhurnal obshchey biologii* 60, 1: 29-40.- FC&P 28-1, p. 17, ID=3960Topic(s): reef complexes,

- ecosystem modularity; reef complexes; Systematics: ;
 Stratigraphy: Cambrian; Geography: ^^1";
- 4832 s[4829] = "ROZANOV A.Yu. (1984).- New aspects of the studies of bio- and paleogeography of the lower Cambrian.- Proceedings 27th International Geological Congress, Moskva 1984, ser. C.02, 2: 85-93.- FC&P 14-1, p. 59, ID=6624^Topic(s): biogeography; biogeography, geography; Systematics: ; Stratigraphy: Cambrian L; Geography: ^^1";
- 4833 s[4830] = "SUMPTER P.M., SHEEHAN P.M., WATKINS R. (1990).- Cambrian and Devonian Invertebrate Collections at the Milwaukee Public Museum.- Journal of Paleontology 64, 3: 486.- FC&P 19-2.1, p. 24, ID=2737^Topic(s): collections of fossils; paleontology, corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cambrian + Devonian; Geography: ^The Devonian collections comprise the nation's largest collection of Middle Devonian fossils from Wisconsin. The largest suite of fossils is a unique collection from the Taghanic Stage of Milwaukee County. The faunas are dominated by brachiopods with significant numbers of trilobites, bryozoans, corals, echinoderms and bivalves. Some of this material was described by Blodgett (1988), Cleland (1907, 1911), Griesemer (1965), and Pohl (1929a, 1929b). These localities are from quarries and temporary excavations that are now filled and cannot be recollected. There are 384 drawers of Devonian fossils from 797 localities represented by approximately 42,500 specimens. Of these localities, 360 are attributed either wholly or in part to Gilbert O. Raasch and share the same excellent documentation as his Cambrian collections. The Upper Devonian collections were made from tunnel projects under Lake Michigan in the early part of the century. These collections are especially significant since this unit is not represented by outcrop, and correlative strata in the subsurface of the Michigan Basin are important gas producers. * Fossil preservation in these collections is very good, and the faunas, which are in need of revision, provide outstanding possibilities for taxonomic work. Interested professionals are encouraged to conduct research in these collections. Hard copies of data are available on request. [part of the paper]^1";
- 4834 s[4831] = "WEBBY B.D. (1987).- Early stromatoporoids.- Hoffman A. et Nitecki M. H. (eds): Problematic Fossil Taxa; Oxford University Press: 148-166.- FC&P 16-2, p. 36, ID=2090^Topic(s): early phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Cambrian, Ordovician; Geography: ^[a major review of Ordovician and older stromatoporoids and the first radiation of the group; Pulchrilamina is identified as the ancestral labechiid; the relationship of the stromatoporoids to the Cambrian Khasaktidae, the sphinctozoa and the archaeocyatha is discussed]^1";
- 4835 s[4832] = "ALPERT S.P. (1973).- Bergaueria Prantl (Cambrian and Ordovician), a probable actinian trace fossil.- Journal of Paleontology 47, 5: 919-924.- FC&P 3-2, p. 36, ID=4940^Topic(s): trace fossils; Anthozoa (?) Bergaueria; Systematics: problematica; Stratigraphy: Cambrian, Ordovician; Geography: ^^1";
- 4836 s[4833] = "LATYPOV Yu.Ya. (1984).- Drevnejshenie odinochnye korally i principy ikh sistematiki. [the oldest solitary corals and principles of their classification; in Russian].- Nauka, Moskva .- FC&P 15-1.2, p. 28, ID=0880^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic L; Geography: ^Das werk behandelt die phanotypischen Merkmale der Rugosa, ihre Variabilitat und die Geschichte ihrer Entstehung, ihre Entwicklung und taxonomische Bedeutung. Zunachst erfolgt die methodologische Begrundung einheitlicher Kriterien taxonomischer Untersuchungen gegenwartiger und fossiler Populationen. Gezeigt werden Beispiele der Regeln von Veranderlichkeiten innerhalb und zwischen Populationen. [Ubersetzung der Original-Zusammenfassung]^1";
- 4837 s[4834] = "NEUMAN B.E. (1984).- Origin and early evolution of rugose

- corals.- *Palaeontographica Americana* 54: 119-126 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- **FC&P 14-1**, p. 46, ID=0975^**Topic(s): **early phylogeny; Rugosa origin; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Paleozoic L; **Geography: **^^1";
- 4838 s[4835] = "NEUMAN B.E. (2003).- The new early Palaeozoic rugose coral genera *Eurogrewingkia* gen. nov. and *Fosselasma* gen. nov.- Proceedings of the Estonian Academy of Sciences, *Geology* 52, 4: 199-212.- **FC&P 33-1**, p. 59, ID=1122^**Topic(s): **new taxa; Rugosa, *Eurogrewingkia*; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Paleozoic L; **Geography: **^The new genus *Eurogrewingkia* gen. nov. (type species selected here is *Grewingkia bilateralis* Neuman, 1969) is erected for streptelasmatic rugose corals with *Grewingkia*-like ontogeny lacking a cardinal fossula sensu stricto. In addition, the new genus *Fosselasma* gen. nov. (type species selected here is *Streptelasma unicum* Neuman, 1975) is erected for species with a *Streptelasma*-like ontogeny but provided with a cardinal septo-fossula. Species of *Eurogrewingkia* are currently recognized from the Upper Ordovician, Rawtheyan-Hirnantian strata in Europe and North America. Species of *Fosselasma* are found only in Hirnantian strata in Sweden and Norway. [original abstract]^1";
- 4839 s[4836] = "NEUMAN B.E. (1974).- Variations of morphological structures during the ontogeny of Lower Palaeozoic rugose corals.- *Drevniye Cnidaria* [B.S. Sokolov (ed.)], 1: 151-161.- **FC&P 5-2**, p. 6, ID=5405^**Topic(s): **ontogeny, variation; Rugosa, ontogeny; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Paleozoic L; **Geography: **^Ontogenetic features of some species of *Streptelasma*, *Grewingkia* and *Bodophyllum*.^1";
- 4840 s[4837] = "NEUMAN B.E. (1977).- On the taxonomy of the Lower Paleozoic solitary Streptelasmaticids.- *Memoires du BRGM* 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 69-77.- **FC&P 6-1**, p. 20, ID=5501^**Topic(s): **; Rugosa, Streptelasmaticidae; **Systematics: **Cnidaria; Rugosa; **Stratigraphy: **Paleozoic L; **Geography: **^[reviews characteristics of various genera of Streptelasmaticidae]^1";
- 4841 s[4838] = "REITNER J., MEHL D. (1995).- Early Paleozoic Diversification of Sponges: new data and evidences.- *Geol. Palaeont. Mitt. Innsbruck* 20: 335-347.- **FC&P 24-2**, p. 92, ID=3128^**Topic(s): **phylogeny; Porifera radiation; **Systematics: **Porifera; **Stratigraphy: **Paleozoic L; **Geography: **^Sponges are primitive metazoan organisms which occur since the late Proterozoic. The oldest sponge remains (hexactinellids) are from a shallow marine carbonate facies of the late Sinian Shibantan Member (China). From the Tommotian (Sansha, China) protospongiid and rossellimorph hexactinellids were discovered in shallow marine silicified rocks. The middle part of this section consists of silty shales with entirely preserved hexactinellid sponges: *Sanshadictya*, *Hyalosinica*, *Solactinella*, *Triticispongia*, *Huananospongia*. The hexactinellids typically are soft bottom dwellers, which sometimes grow on and form in situ spiculites (spicule mats). The sponges from the Chengjiang deposits of Atdabanian age, which show a rossellimorph spicule organization typical of the conservative hexactinellid groups, which inhabited the deep sea during most of the Phanerozoic, were also typical soft bottom dwellers. All sponge taxa (*Leptomitella*, *Leptomitus*, *Paraleptomitella* etc.) described from this locality we consider to be hexactinellids and not demosponges, as originally classified. The sponge communities of carbonate-dominated archaeocyathid mounds are completely different from the above described sponge mounds. The sponges from the archaeocyath mounds of the Flinders Ranges (S Australia) are characterized by *Calcarea* and demosponges (= modern type of the pharetronid *Calcarea Gravestockia pharetroniensis*., and many tetractinellid demosponges, *Geodiida*). Questionable is the

origin of four-rayed demosponge spicules found in some archaeocyaths. The oldest ceractinomorph demosponges are documented from the middle Cambrian (Vauxia - an aspicular sponge with keratose affinities, and isolated sigmata microscleres). Sponge communities of the Early Cambrian were highly developed, and already then they were taxonomically strongly dependent on substrates and trophic conditions.^1";

- 4842 s[4839] = "COPPER P. (1974).- Structure and development of early Palaeozoic reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 365-386.- FC&P 4-1, p. 17, ID=5002^Topic(s): structures; reefs; Systematics: ; Stratigraphy: Paleozoic L; Geography: ^^1";
- 4843 s[4840] = "COPPER P. (1997).- Reef and carbonate productivity: Cambrian through Devonian.- Proceedings 8th International Coral Reef Symposium 2: 1623-1630.- FC&P 27-1, p. 107, ID=3858^Topic(s): reefs carbonates; reefs, carbonates; Systematics: ; Stratigraphy: Cambrian - Devonian; Geography: ^Late Precambrian reefs, at a time of stromatolite and carbonate productivity decline, were marked by calcimicrobial encrusters and cementers: soft bodied metazoans played no identifiable role. This was largely continued in the earliest Cambrian stage (Nemakit-Daldynian), a period of radiation of many skeletal protostomes and deuterostomes, but a period of restricted carbonate shelf production. Metazoan archaeocyath reefs dominated the Tomotian-Toyonian, but vanished after only 10 Ma: their demise is speculative but focuses on anoxia, cooling, phosphate deposition, and regressions. The 65 Ma long Mid-Cambrian to late Middle Ordovician (Llanvirn) is marked by sparse but increasing chlorophyte, lithistid-pulchrilaminid, and bryozoan content, but most reefs were calcimicrobial, especially in distal ramp and slope settings. Tabulate and rugose corals, stromatoporoids, chlorophytes, rhodophytes (assisted by calcimicrobes), and bryozoans of the late Llanvirn-Caradoc initiated the expansion of mid-Paleozoic reefs, largest of the Phanerozoic. This reef ecosystem collapsed in the late Devonian (Frasnian), never to recover fully in the remaining Paleozoic: extended F/F mass extinction over 10 Ma is related to anoxia, nutrient increase, cooling (steep CO2 decline, rising O2 with the arrival of vascular plants) and sea-level drawdown as ocean shifted to an 'icehouse' mode.^1";
- 4844 s[4841] = "BOGOYAVLENSKAYA O.V. (1976).- Istoriya izucheniya paleozoiskikh korallov i stromatoporoidei (1970-1975 gg.). [history of study of Paleozoic corals and stromatoporoids (1970-1975)] .- Akademiya Nauk SSSR, Sibirskoe otdelenie, Inst. Geol. Geofiz. Trudy --- ???.- FC&P 6-1, p. 18, ID=0003^Topic(s): research history; Anthozoa stroms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Brings up-to-date the earlier book of the same title on the history of Palaeozoic coral and stromatoporoid research^1";
- 4845 s[4842] = "KATO M. (1975).- Palaeozoic biogeography based on data presented by fossil corals.- Marine Sciences Monthly 7, 9 [Proceedings of the "Ancient Reef Complex" Symposium]: 43-49.- FC&P 6-2, p. 16, ID=0130^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4846 s[4843] = "KOBLOK D.R., BOTTJER D.J., RISK M.O. (1977).- Disorientation of Paleozoic hemispherical corals and stromatoporoids.- Earth Sciences J4: 2226-2231.- FC&P 7-1, p. 25, ID=0194^Topic(s): coral growth, reorientation; Anthozoa stroms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^[in five sample populations there is no difference in the mean size of stromatoporoid heads that are in place and those that are disoriented]^1";
- 4847 s[4844] = "IVANOVSKIY A.B. (1984).- Istoriya izucheniya paleozojskikh korallov i stromatoporoidei. Rugozy (1975-1983).- Trudy

- Paleontologicheskogo Instituta 207: 1-88.- FC&P 15-1.2, p. 27, ID=0840^Topic(s): research history; Anthozoa stroms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^[Research-history of Paleozoic corals and stromatoporoids, in Russian] Das Buch enthalt eine ausfuhrliche Zusammenstellung (Typmaterial; Diagnosen, z.T. im Original; Familienzugehoerigkeit) von Gattungen der Rugosa, die in den letzten Jahren (1975-1983) aufgestellt wurden. Es enthalt daruber hinaus auch eine Bibliographic der Arbeiten, in denen Rugosa, Tabulata und Stromatoporoidea beschrieben wurden.^1";
- 4848 s[4845] = "SCRUTTON C.T. (1985).- Palaeozoic corals.- Classic literature on invertebrate palaeontology (The Palaeontological Microfiche Library, series 1), 2-3: 13-14 [Hallam A. (ed.)].- FC&P 15-1.2, p. 25, ID=0877^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4849 s[4846] = "IVANOVSKIY A.B. (1984).- The earliest stages in the evolution of corals.- Palaeontographica Americana 54: 154-158 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 46, ID=0966^Topic(s): early phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4850 s[4847] = "WHITE R.D., MITESCU N.C., SKORINA L.K. (2000).- Type catalog of fossil Invertebrates (Cnidaria: Anthozoa) in the Yale Peabody Museum.- Postilla 223: 1-49; New Haven. [catalogue of types] - FC&P 31-2, p. 38, ID=1187^Topic(s): fossil collections; type catalogue, Yale Peabody Museum; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Type material for 182 nominal species of fossil anthozoans is in the Invertebrate Paleontology collections of Yale University's Peabody Museum of Natural History. Primary types for 77 nominal species include 64 holotypes, 74 syntypes (representing 11 nominal species), 1 lectotype and 2 neotypes. Secondary types for 39 nominal species include 124 paratypes (representing 38 nominal species) and 16 paralectotypes (representing 1 nominal species). Tertiary types of 114 nominal species include 488 hypotypes. Most types are from new York State, Ohio, Quebec and Tennessee and have been described by T.W. Amsden, C.E. Beecher, E.J.Buehler, CO. Dunbar, G.H. Girty, E.C. Stumm and W.H.Twenhofel. [original abstract]^1";
- 4851 s[4848] = "PLUSQUELLEC Y., WEBB G.E., HOEKSEMA B.W. (1999).- Automobility in Tabulata, Rugosa, and extant Scleractinian analogues: Stratigraphic and paleogeographic distribution of Paleozoic mobile corals.- Journal of Paleontology 73, 6: 985-1001.- FC&P 29-1, p. 53, ID=1448^Topic(s): automobility; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Freeliving corals capable of automobility (e.g., lateral migration) were rare during Paleozoic time, but some species within the tabulate genera Procterodictyum, Procteria (Granulodictyum), P. (Pachyprocteria), Palaeacis and Smythina, and the rugose genera Combophyllum, and Baryphyllum, have morphologic characters that suggest they were capable of such self-directed movement. The rugose corals Gymnophyllum and Hadrophyllum, sensu stricto may have exhumed and righted themselves. No single morphological character is diagnostic for an automobile habit, but the following characters appear to be important indicators: 1) lack of an external attachment surface; 2) concentric skeletal accretion; 3)discoïd corallum shape; 4) concavo-convex, plano-convex, and, less commonly, biconvex corallum profile; and 5) small, lightweight corallum. Additionally, the occurrence of corallites on the base of the corallum (hypocorallites) is a good indicator of automobility in freeliving corals, but the character is so far known only in Procterodictyum. All known fossil automobile taxa appear to have inhabited relatively quiet environments

on muddy or silty, soft substrates. The earliest known automobile corals were early Emsian (Devonian) Procterodictyum. Paleozoic automobile corals were most abundant during Devonian time, with Procterodictyum, Procteria (Granulodictyum), and Combophyllum distributed in a narrow longitudinal band in the southern hemisphere on both sides of the Rheic Ocean. Carboniferous and Permian automobile taxa (Palaeacis partim, Smythina and Baryphyllum) were less diverse, but more cosmopolitan. Throughout Paleozoic time, the vast majority of automobile corals was confined to within 40 degrees of the paleoequator. However, additional research will be required before coral automobility can be used to constrain paleolatitude independently. ^1";

4852 s[4849] = "GUDO M. (2002).- Soft body reconstructions of Palaeozoic corals: implications for the system of Anthozoa (Coelenterata).- Lethaia 35, 4: 328-344.- FC&P 31-2, p. 26, ID=1664^Topic(s): soft tissues; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^The soft bodies and individual development sequences of the polyps of Palaeozoic corals are reconstructed on the basis of the functional, engineering and constructional morphology of recent Anthozoa. Four types of body reconstruction can be distinguished by the arrangement of mesenteries, the number of mesentery insertion zones and characteristic septal insertion patterns: (1) serial insertion of single mesenteries in four sectors, which has resulted in the serial insertion of septa, (2) symmetrical insertion of single mesenteries in four sectors, which has resulted in a symmetrical septal pattern or pseudo radial patterns, (3) exponential insertion of paired mesenteries in four sectors, which has resulted in septal bifurcation, and (4) exponential insertion of paired mesenteries in six sectors, which has resulted in a radial pattern. Suggestions for a constructional taxonomy are given on the basis of the arrangement of mesenteries and on individual development of reconstructed polyps. Accordingly, new superorders are introduced: 'Serialiales' for the first body constructions and 'Symmetricales' for the second. The third body construction is that of the Heterocorallia and the fourth that of the Hexacorallia. Following a constructional taxonomy, new and stricter definitions are given for the new and already known taxonomic categories of Rugosa, Heterocorallia and Hexacorallia. A byproduct of this re-definition is that several Palaeozoic corals represent the body reconstruction of the Hexacorallia and should therefore be revised as Hexacorallia; consequently, Hexacorallia must already have been present in the Palaeozoic. ^1";

4853 s[4850] = "KATO M. (1979).- Skeletal structures in Palaeozoic corals. [in Japanese].- The Earth Monthly (Chikyu) 1, 9: 656-660.- FC&P 11-1, p. 53, ID=1785^Topic(s): microstructures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";

4854 s[4851] = "SCRUTTON C.T. (1988).- Patterns of extinction and survival in Palaeozoic corals.- Spec. Vol. Syst. Ass. 34 [Larwood G. P. (ed.): Extinction and survival in the fossil record]: 65-88.- FC&P 17-2, p. 26, ID=2180^Topic(s): taxonomy genera; corals genera; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^The two major subclasses of Palaeozoic corals, the Tabulata and the Rugosa, appear respectively in the Lower and Middle Ordovician. Analyzed at the generic level, both show similar patterns of peaks of extinction close to successive system boundaries accompanied or followed by enhanced rates of diversification. Prior to the final disappearance of both groups at the end of the Permian, the most important extinction event occurs in the late Givetian, followed by the loss of most remaining genera about the Frasnian-Famennian boundary. Both subclasses survive into the Carboniferous through a very small number of long ranging genera together with the continued evolution of distinctive Rugosa, mainly adapted to deeper water fine clastic environments. Although the Rugosa

eventually rediversify vigorously in the Lower Carboniferous the Tabulata never regain their early-mid Palaeozoic prominence. Coloniality and colonial integration appear to have little value to overall in enhanced survivorship among Rugosa. Tabulate faunas are dominated successively by massive coenenchymal, massive perforate cerioid, and communicate fasciculate colony forms. A detailed analysis of generic ranges from the late Frasnian to the early Tournaisian reveals three extinction events among the rugose corals which can be matched to those in other groups. Environmental perturbations of eustatic and/or climatic origin are favoured as the principal causal factors.^1";

- 4855 s[4852] = "RODRIGUEZ S. (1989).- Lamellar microstructure in Palaeozoic corals: origin and use in taxonomy.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 157-168.- FC&P 20-1.1, p. 58, ID=2534^Topic(s): microstructures, lamellar; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Primary or secondary origin of the microlamellar microstructures of many Palaeozoic corals, is an object of controversy. They are especially frequent in Carboniferous corals (rugosans, tabulates, and all known Heterocorallia). Architecture and relationships of the microlamellar elements with fibrous microstructures seem to demonstrate that they are primary and not diagenetic. Futhermore some petrographic criteria indicate that they are not secondary. Since it is probably primary, the lamellar microstructure could be used in taxonomy. Nevertheless our knowledge of the microstructure of rugose corals is too slight. Many studies on microstructure must be done before using it broadly in the systematics of Rugosa. Such studies should be done with the appropriate techniques, scanning and ultrathin sections, and not with conventional thin sections.^1";
- 4856 s[4853] = "HAIKAWA T., SUGIYAMA T. (1983).- Corals.- In: Ota M. (ed.): Atlas of fossils from the Yamaguchi Prefecture. Palaeontology of the Yamaguchi Prefecture (Palaeozoic), Yamaguchi Prefectural Museum: 73-124. [in Japanese].- FC&P 19-1.1, p. 42, ID=2634^Topic(s): atlas of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4857 s[4854] = "KATO M. (1990).- Palaeozoic corals.- Publication of IGCP Project 224 [Ichikawa K., Mizutani S., Kara I, Hada S. & A. Yao (eds): Pre-Cretaceous terranes of Japan]: 307-312; Osaka.- FC&P 20-1.1, p. 52, ID=2818^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4858 s[4855] = "WEBB G.E. (1996).- Morphological variation and homoplasy: the challenge of Paleozoic coral systematics.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 135-158.- FC&P 25-2, p. 28, ID=3190^Topic(s): variation, homplasy; corals systematics; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4859 s[4856] = "IVANOVSKIY A.B. (1993).- Studies of Paleozoic corals in the USSR: a historic review.- Courier Forschungsinstitut Senckenberg 164: 017-019. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 9, ID=3433^Topic(s): research history; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: USSR^Paleozoic corals of Russia are first mentioned at the beginning of the 19th century in the papers of G. Fischer von Waldheim and E. Eichwald. Their systematic study was started by A. Stuckenberg (Carboniferous and Permian of the European Russia and Urals); these works are classical ones. A new stage began in

the thirties with the papers of E.D. Soshkina, T.A. Dobrolyubova (Rugosa) and a little bit later with the papers of B.B. Chernyshev and B.S. Sokolov (Tabulata). The works of these paleontologists stimulated the study of Paleozoic corals in various aspects: that especially became evident in the late fifties, when dozens of paleontologists worked on this topic. At that time progress was achieved especially in systematics and stratigraphy. Later on the number of specialists and their quality decreased which had nothing to do with falling interest in corals, but can be explained by a general decrease in the USSR for research on paleontology and stratigraphy. That led to the fact that only a few specialists now work on Paleozoic corals and this tendency does not promise any positive changes in this respect.¹¹;

4860 s[4857] = "WEBB G.E. (1993).- Phylogeny reconstruction: problems posed by Paleozoic corals.- Courier Forschungsinstitut Senckenberg 164: 71-074. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 11, ID=3439Topic(s): phylogeny, cladistic taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Cladistic theory provides a sound basis for phylogeny reconstruction of Paleozoic corals because it: 1, forces evaluation of every morphologic character; 2, bases relationship on shared morphologic "novelties" rather than gross morphologic similarity; and 3, rejects a priori conclusions on the taxonomic value of characters (i.e., "specific level" and "generic level" characters). Despite the value of cladistic theory, standard cladistic methodology is not an effective technique for phylogeny reconstruction of Paleozoic corals. To operate properly, cladistic methodology requires limited amounts of convergence and large numbers of non-convergent morphologic characters. Paleozoic corals are notable for convergence and parallel evolutionary trends and, in many cases, offer few characters for analysis owing to simplicity of morphology and phenotypic plasticity. These problems may be overcome in the future by developing: 1, better taxonomic descriptions; 2, new, untested morphologic characters; 3, better understanding of Paleozoic coral biology; and 4, new cladistic techniques that make use of both morphologic data and non-morphologic data, such as stratigraphic and geographic distribution.¹¹;

4861 s[4858] = "SCRUTTON C.T. (1997).- The Palaeozoic corals I: origins and relationships.- Proc. Yorkshire Geol. Soc. 51, 3:177-208.- FC&P 26-2, p. 63, ID=3742Topic(s): phylogeny, taxonomy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^The status, origins and relationships of the various groups of Palaeozoic corals are reviewed. Five orders are currently recognized: Rugosa, Tabulata, Heterocorallia, Cothoniida and Kilbuchophyllida, to which I add the Tabulaconida and Numidiaphyllida. The Rugosa and Tabulata are considered to be broadly monophyletic clades, and the Tabulata are confirmed as zoantharian corals. Morphological features, particularly aspects of septal insertion in both groups, are discussed as clues to their likely origins and relationships. They are not considered to have had a skeletonized common ancestor, but they may have arisen as separate skeletonization events from the same broad group of anemones, represented by the living Zoanthiniaria. The Rugosa are not considered to be ancestral to the Scleractinia. The latter, together with the Permian Numidiaphyllida, are considered to have evolved through skeletonization events among a group of anemones derived from the Actiniaria / Corallimorpharia, a member of which also gave rise to the Kilbuchophyllida in the Ordovician. The pattern of septal insertion in the Heterocorallia is controversial and the relationship of these corals to contemporary coral groups remains uncertain. The increasingly important record of Cambrian coralomorphs is assessed, and considered to include several genera of zoantharian corals. However, although similarities are apparent, none is regarded as directly ancestral to the post-Cambrian

- coral clades. The history of diversification and extinction of corals through the Palaeozoic is briefly reviewed.¹";
- 4862 s[4859] = "SCRUTTON C.T. (1998).- The Palaeozoic corals II: structure, variation and palaeoecology.- Proc. Yorkshire Geol. Soc. 52, 1: 1-57.- FC&P 27-1, p. 61, ID=3777^Topic(s): structures, variation, ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Palaeozoic corals faunas were dominated by two orders of Zoantharian corals, the Rugosa and the Tabulata. Almost all rugose and tabulate corals developed an epitheca or holotheca around the corallum and possessed small to minute attachment scars. A limited number had an encrusting life style and many others could facultatively encrust to some extent when settling by chance on a hard substrate. However, most were effectively free living on a soft substrate as mature coralla. A high percentage of rugose corals were solitary and of the colonial genera few exhibited physical integration of modules within the colony. In contrast, most of the exclusively modular tabulate corals possessed some degree of integration. Colony formation in tabulate corals was, with doubtful exceptions, solely of non-parricidal increase, whereas both non-parricidal and parricidal increase, the latter in a minor role, occur in the Rugosa. The sources of variation in solitary and colonial Palaeozoic corals are reviewed and data on growth rates, measured on the basis of cyclomorphic variation expressed as density band couplets, are assessed. Growth-form variation in solitary corals and its relationship to stability on the substrate are explored. Growth strategies in colonial corals are described and their adaptive success under different environmental conditions is discussed. Colonial growth-forms were a function of the interaction between growth strategy and prevailing conditions during astogeny, although some species had genetically constrained, relatively invariable growth-forms. Factors controlling the distribution of Palaeozoic corals in the environment - substrate and turbidity, water energy, depth, light, temperature and variations in salinity and oxygenation - are reviewed. Palaeozoic coral diversity was much lower than that of Recent hermatypic scleractinian corals in comparable environments. Most Palaeozoic corals were adapted to soft substrates in warm, shelf seas, and made a limited contribution to reef frameworks. It is concluded that none of them developed a symbiosis with algae in contrast to zooxanthellate scleractinian corals.¹";
- 4863 s[4860] = "OSPANOVA N.K. (1993).- Peculiarities and intraspecific competition in Paleozoic corals.- Donish, Dushanbe; 22 pp.- FC&P 23-1.1, p. 41, ID=4123^Topic(s): competition; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^1";
- 4864 s[4861] = "KOSSOVAYA O.L., KOSSOVOY A.L. (1992).- New method of late Paleozoic coral's thin septal structure.- Paleontologicheskii Zhurnal 1992, 2: 14-20. [in Russian, with English abstract].- FC&P 23-2.1, p. 46, ID=4270^Topic(s): microstructures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^1";
- 4865 s[4862] = "OEKENTORP K. (1972).- Sekundaerstrukturen bei palaeozoischen Madreporaria.- Muenster. Forsch. Geol.-Palaeont. 24: 35-108.- FC&P 1-2, p. 16, ID=4655^Topic(s): microstructures, diagenesis; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Bei palaeozoischen Madreporaria auftretende, morphogenetisch nicht erkl erbare Skelettstrukturen werden diskutiert und als sekundaer, postmortal, d.h. waehrend des Fossilisationsprozesses entstanden erkannt. Zuvor wird die bei den rezenten Cyclocorallia ausgebildete und auch bei fossilen Madreporaria teilweise noch erhaltene Fein- und Feinststruktur des Skelettes erlaeutert. Die beobachtbaren faserig-lamellaeren und die trabekulaeren Mikrostrukturen stellen die einzigen Primaer-gefuege bei allen Madreporaria dar.¹";

- 4866 s[4863] = "FEDOROWSKI J., JULL R.K. (1976).- Review of blastogeny in Palaeozoic corals and description of lateral increase in some Upper Ordovician Rugose corals.- Acta Palaeontologica Polonica 21, 1: 37-78.- FC&P 5-1, p. 23, ID=5340Topic(s): blastogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^The paper is a first study and detailed description of Upper Ordovician rugose coral blastogeny. It contains a general discussion of blastogeny, in which the following problems are pointed out: (1) terminology, (2) some characters and implications of blastogeny, (3) observations on wall structure, (4) polypoid relationships during blastogeny, and (5) value of blastogenetic studies.^1";
- 4867 s[4864] = "OEKENTORP K. (1974).- Microstructures of Palaeozoic corals.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 14-19.- FC&P 5-2, p. 6, ID=5406Topic(s): microstructures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^Describes pseudolamellar and zig-zag microstructures in Palaeozoic corals as of secondary origin.^1";
- 4868 s[4865] = "BOGOYAVLENSKAYA O.V. (1976).- History of the Study of Paleozoic Corals and Stromatoporoids.- Trudy AN SSSR, Sib. Otd. 311; pp?.- FC&P 5-2, p. 12, ID=5454Topic(s): research history; Anthozoa stroms; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4869 s[4866] = "LELESHUS V.L. (1980).- Zakonomernosti evolucyi paleozoyskikh koralllov. [principles of evolution of Paleozoic corals; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 42-48.- FC&P 9-1, p. 41, ID=5816Topic(s): phylogeny; corals phylogeny; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4870 s[4867] = "SCHOUPPE A.von (1973).- List of publications about Palaeozoic Corals.- FC&P 2, 1: 21-23.- FC&P 2-1, p. 21, ID=6270Topic(s): bibliography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^[list 29 papers by von Schouppe on Paleozoic corals published in the years 1939-1970]^1";
- 4871 s[4868] = "OSPAKOVA N.K. (2003).- Nekotorye aspekty kolichestvenno-kachestvennoy izmenchivosti paleozoyskikh koralllov. [some aspects of quantitative and qualitative variability of Palaeozoic corals; in Russian].- Trudy Instituta geologii AN Respubliki Tadjikistan, new series 2: 35-44; Khumo, Dushanbe.- FC&P 33-1, p. 25, ID=7178Topic(s): variability; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4872 s[4869] = "SOKOLOV B.S., IVANOVSKIY A.B., RIMSKAYA-KORSAKOVA G.L., CHUDINOVA I.I., (1973).- Historique de l''étude des Coraux et des Stromatopores paléozoïques. [in Russian].- Nauka, Moscou: 286 pp., 40 portraits, 41 fig., bibl. (3360 titres), index par auteurs, matières et genres. [en russe].- FC&P 3-1, p. 29, ID=4893Topic(s): research history; corals stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^Important ouvrage sur les Coraux et les Stromatopores paléozoïques, paraissant pour la première fois dans l''histoire bicentenaire de la paléontologie mondiale. Il comprend des esquisses historiques sur l''étude des Stromatopores, des Tabulés, des Héliolitidés, des Chaetétidés et des Rugosa, illustrées de portraits de célèbres paléontologistes-corallistes. La liste bibliographique (plus de 3 000 titres) concerne toute la littérature connue concernant les Coelentérés paléozoïques. Ce livre est destiné aux paléontologistes et aux zoologistes, de même qu''aux géologues stratigraphes qui étudient le Paléozoïque.^1";
- 4873 s[4870] = "WEST R.R., CLARK G.R. (1984).- Paleobiology and biological affinities of Paleozoic chaetetids.- Palaeontographica Americana 54: 337-348 [Oliver W. A. Jr et al. (eds): Recent advances in the

paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 58, ID=1063^Topic(s): biology, systematic position; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Paleozoic; Geography: ^The growth forms and sediments associated with chaetetids are reviewed. They lived in the photic zone of wave action and form reefs in Pennsylvanian rocks. The microstructure is trabecular. They are considered to be sclerosponges.^1";

4874 s[4871] = "MEHL D. (1996).- Phylogenie und Evolutionsoekologie der Hexactinellida (Porifera) im Palaeozoikum.- Geol. Palaeont. Mitt. Innsbruck special volume 4: 1-55.- FC&P 25-2, p. 39, ID=3123^Topic(s): phylogeny; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Paleozoic; Geography: ^The Hexactinellida, first appearing in the Late Proterozoic of China, are the earliest animals in Earth's history, which can be definitely attributed to an extant metazoan group. Already in the Middle Cambrian the hexactinellids show remarkably high diversity. Beside many specialized extinct groups, such as the Protospongiidae, the main groups of the recent Hexactinellida, the sister groups Amphidiscophora and Hexasterophora, are known since the Early Paleozoic. The large Paleozoic taxa, Reticulosa and Brachiospongiidae, known since the Cambrian and Ordovician, respectively, may have given rise to the recent Hexasterophora and Amphidiscophora. First representatives of the Hexactinosa, important sponges of the widely distributed Mesozoic spongiolithic facies and common also in recent deep sea environments, are known since the Devonian. A probably paraphyletic grouping, the "Rossellimorpha", stayed conservative in its skeletal architecture from the Early Cambrian until today, most of the time apparently restricted to deep-sea habitats, similar to those of most recent hexactinellids. During some periods of Earth's history, specialized groups of the Reticulosa, e.g. the Dictyospongiidae, developed the ability to live in shallow water under higher-energetic conditions. The Late Palaeozoic, especially Permian, was a time of highly diversified spicular skeletal types within the Hexactinellida, including "lithistid"-like frameworks with zygois and also groups with demospongioid spicule tracts. During the history of the Hexactinellida, the main faunal extinction occurred at the end of the Permian. However, no major extinction event is recorded at the Frasnian / Famennian boundary. The distribution of sponges and assemblages of isolated sponge spicules, especially for Early Palaeozoic sediments, gives important paleocological indications. An evolutionary-ecological evaluation of organismic groups expands the method of paleology. The value of this concept for our understanding of e.g. taphonomic and sedimentary processes is demonstrated by some examples on account of Palaeozoic Porifera.^1";

4875 s[4872] = "ELIAS R.J., MCAULEY R.J., MATTISON B.W. (1987).- Directional orientations of solitary rugose corals.- Canadian Journal of Earth Sciences 24, 4: 806-812.- FC&P 17-1, p. 19, ID=2117^Topic(s): growth orientation; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic; Geography: ^Unattached solitary rugose corals lying parallel to bedding are common in many Ordovician and younger Paleozoic units, but their directional orientations have seldom been examined. Interpretations based on occurrences in North American Upper Ordovician and Lower Silurian strata provide a foundation for such studies. Distinct directional patterns resulted from preferred orientation with respect to water motion. They indicate transportation rather than biologic orientation, if it can be shown that the corals were not preserved in life position or were abraded to a significant degree before burial. Transported, slightly curved specimens having trochoid to ceratoid form were aligned parallel to currents, with the apex pointing upstream, and

(or) were rolled nearly perpendicular to currents or almost parallel to crests of advancing waves, with the apex facing either way but directed slightly upstream. Therefore, unimodal orientation patterns, bimodal patterns with equal peaks that are opposite one another but slightly skewed, and trimodal patterns that are a combination of these can be used to determine flow directions. An apparently bimodal pattern with nearly equal and directly opposite peaks has been observed in a case involving mostly subcalceoloid corals. These individuals may have been aligned parallel to currents or to the direction of wave progression, with the apex facing either way. Random directional distributions do not necessarily indicate low-energy environments. They could have resulted from changes in flow direction during the time in which the sampled stratigraphic interval was deposited or from the effects of bioturbation on corals that were initially preferentially oriented. Directional patterns of solitary rugose corals are of value in paleoecology (recognition of transported assemblages) and basin analysis (determination of paleocurrent directions). They may also prove to be useful in making paleoenvironmental reconstructions (type of water motion, nature of substrate) if the reasons for different types of orientation patterns can be established with experimental work and additional data from the geologic record.^1";

- 4876 s[4873] = "CUIF J.-P. (1974).- Indices de la nature aragonitique des fibres chez les Madréporaires paléozoïques.- Bulletin de la Societe Geologique de France, Suppl. au vol. 16, 6: 162-164.- FC&P 4-1, p. 30, ID=5096^Topic(s): mineralogy, aragonite?; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic; Geography: ^^1";
- 4877 s[4874] = "LAUB R.S. (1982).- An annotated tabular key to the higher taxa of the rugose corals.- FC&P 11, 2: 9-15.- FC&P 11-2, p. 9, ID=6142^Topic(s): systematics, key to higher taxa; Rugosa, higher taxa; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic; Geography: ^The Rugosa have long posed problems for those seeking to classify their various taxonomic categories. To be convinced of this, one need look no farther than a comparison of the classifications offered in the original and recently revised coral sections of the Treatise on Invertebrate Paleontology (Hill, 1956 and 1981 respectively) and in Osnovy paleontologii (Sokolov, 1962). The differences between the various systems are significant. [first fragment of a paper]^1";
- 4878 s[4875] = "LIN BAoyu, XU SHOUYONG, JIA HUICHEN, GUO SHENGZHE, OUYANG XUAN, WANG ZENGJI, DING YUNJIE, CAO XUANDUO, YAN YOUYIN, CHEN HUACHENG (1995).- Monograph of Palaeozoic Corals: Rugosa and Heterocorallia [in 2 volumes].- Geological Publishing House, Beijing: 778 pp., 8 pls, 924 textfigs.- FC&P 25-1, p. 33, ID=2105^Topic(s): ; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa Heterocorallia; Stratigraphy: Paleozoic; Geography: ^The present monograph deals with all Palaeozoic Rugosa and Heterocorallia. It includes the morphology, evolution and origins, palaeoecology, Palaeozoogeographic provinces, sequences of faunas, techniques of study, classification and systematic descriptions (about 4 orders, 20 suborders, 102 families, 53 subfamilies and 939 genera, among which 3 suborders are new). [from book presentation at <http://www.hceis.com/book.asp?id=1856>]^1";
- 4879 s[4876] = "EZAKI Y. (1998).- Paleozoic Scleractinia: Progenitors or extinct experiments? .- Paleobiology 24, 2: 227-234.- FC&P 27-2, p. 45, ID=3898^Topic(s): early phylogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleozoic; Geography: ^The Scleractinia, which are one of the most important builders of modern reefs, have been considered to have first appeared in the Middle Triassic. Recently, Paleozoic scleractiniamorphs have been reported from both the Ordovician and the Permian, suggesting that the scleractinian-like body plan was already established in the Paleozoic. Those Paleozoic

- scleractiniamorphs are considered either unsuccessful skeletonized offshoots (extinct experiments) or Paleozoic progenitors of the post-Paleozoic Scleractinia. Permian scleractiniamorphs are characterized by "ancestral" features and have no specific morphologies that deny scleractinian affinities. Molecular phylogenetics also indicate that extant scleractinians are monophyletic and originated long before their Triassic appearance. A Paleozoic origin for the Scleractinia is supported by morphological and molecular phylogenetic data. On the other hand, there is no positive evidence to show that different groups of scleractinians had separate soft-bodied precursors. The Paleozoic scleractinians evolved within the framework of their basic body plan, and a direct derivation of the Scleractinia from the Rugosa is not probable. The Anthozoa are characterized by a bilaterally symmetrical body plan, which is traditionally considered to have been derived from other radially symmetrical Cnidaria. The problem of the origin of scleractinian body plan may provide a key for deciphering the early anthozoan radiation within the Bilateria. Other examples of Paleozoic Scleractinia and scleractiniamorphs will be found, probably in shallow-water reefal facies or deeper-water communities, bridging the stratigraphic gaps in occurrence and elucidating the origin of the Scleractinia and their body plan.^1";
- 4880 s[4877] = "NESTOR H. (1977).- On the ecogenesis of Paleozoic stromatoporoids.- Bureau Recherches Geologiques et Minieres Memoir 89: 249-254 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-2, p. 17, ID=0142^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^A review of the ecologic position of stromatoporoids in Ordovician, Silurian, and Devonian rocks. Major changes in the ecology position of the stromatoporoids came in Devonian time when they moved to occupy bank edge environment^1";
- 4881 s[4878] = "St JEAN J. (1983).- Paleozoic Stromatoporoids - Morphology and Biologic Inferences.- Palaeontographica Americana ????.- FC&P 13-1, p. 47, ID=0510^Topic(s): morphology, biology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4882 s[4879] = "FAGERSTROM J.A. (1983).- Paleozoic Stromatoporoid Paleoecology: A Review. Sponges and Spongiomorphs: Notes for a Short Course.- Tennessee University, Studies in Geology .: 173-177.- FC&P 13-1, p. 48, ID=0519^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4883 s[4880] = "NESTOR H. (1980).- Stromatoporoidei v Shel'fovykh Ekosistemakh Paleozoya i Geokhemicheskaya Evolyutsiya Gidrosfery [Stromatoporoidea in Paleozoic shelf Ecosystems and the Geochemical Evolution of the Hydrosphere].- Trudy Sessiyi vsesoyuznogo Paleontologicheskogo Obshchestva 22: 47-55 [Sokolov B. S. & Modzalevskaya Y. A. (eds): Ekostratigrafiya i Ekologicheskiye sistemy Geologicheskogo Proshlogo].- FC&P 13-1, p. 48, ID=0524^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4884 s[4881] = "STEARNS C.W., MAH A.J. (1986).- Skeletal microstructure of Paleozoic stromatoporoids.- 4th North American Paleontological Convention.- FC&P 15-2, p. 45, ID=0755^Topic(s): microstructures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4885 s[4882] = "BOGOYAVLENSKAYA O.V. (1984).- Stromatoporaty Paleozoya (Morfologiya, sistematicheskoye Polozheniye, Klassifikatsiya i puti Razvitiya) [Stromatoporata of the Paleozoic: Morphology, Systematics, Classification, and Evolution].- Akademiya Nauk SSSR, Paleontologicheskii Institut; ???.- FC&P 15-1.2, p. 44, ID=0777^Topic(s): classification; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic;

- Geography: ^This is an important summary of the author's views on the group.^1";
- 4886 s[4883] = "STEARNS C.W. (1985).- Skeletal variation in Paleozoic stromatoporoids.- Geological Society of America, Abstracts with Programs 17: 726-727.- FC&P 15-1.2, p. 45, ID=0788^Topic(s): growth forms; stroms, structures; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4887 s[4884] = "MISTIAEN B. (1984).- Disparition des Stromatopores paleozoiques ou survie de groupe: hypothese et discussion.- Bulletin de la Societe geologique de France 26, 7: 1245-1250.- FC&P 14-1, p. 56, ID=1049^Topic(s): extinctions, loss of skeleton; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^At the end of Devonian time the stromatoporoids did not become extinct but lost their skeletons and survived in cryptic habitats until they again began to secrete skeletons in Mesozoic time. The loss of skeletons is due to geochemical changes in the nature of the Paleozoic oceans.^1";
- 4888 s[4885] = "STOCK C.W. (1982).- Adaptive strategies of Paleozoic stromatoporoids.- Geological Soc. Amer. Abstracts with Progs. 14: 86.- FC&P 11-2, p. 37, ID=1863^Topic(s): adaptive strategies; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4889 s[4886] = "STEARNS C.W., MAH A.J. (1987).- Skeletal microstructure of Paleozoic stromatoporoids and its mineralogical significance.- Palaios 02: 76-84.- FC&P 16-2, p. 35, ID=2087^Topic(s): microstructures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^an irregular mosaic microstructure without fibrosity characterizes most specimens; cellular microstructures show no evidence of derivation from spherulitic microstructures; the specks are fluid inclusions that suggest an aragonite precursor]^1";
- 4890 s[4887] = "MORI K. (1987).- Historical review of Paleozoic stromatoporoid studies and problems of classification.- Chigaku-Zasshi 96: 392-402. [in Japanese].- FC&P 18-1, p. 53, ID=2308^Topic(s): research history, classification; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4891 s[4888] = "STEARNS C.W. (1989).- Intraspecific variability and species concepts in Palaeozoic stromatoporoids.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 45-50.- FC&P 19-1.1, p. 12, ID=2521^Topic(s): variability, species concept; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4892 s[4889] = "STEARNS C.W. (1989).- Specks in the microstructure of Palaeozoic stromatoporoids.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 143-148.- FC&P 19-1.1, p. 13, ID=2532^Topic(s): microstructures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4893 s[4890] = "DONG DEYUAN (1988).- On the classification of Paleozoic stromatoporoids.- Acta Micropalaeontologica Sinica 05, 1: 25-38.- FC&P 20-1.1, p. 76, ID=2872^Topic(s): classification; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^Basing the classification on skeletal and microstructure, the author reclassifies the Paleozoic stromatoporoids. Dendroid forms are placed in the new order Idiostromatidae which includes 3 families; Idiostromatidae, Amphiporidae and Stachyoditidae. Geronostroma is

moved from the Clathrodictyonidae to the Actinostromatidae. A family of the Labechiida, the Platiferostromatidae, are recognized for Stromatocerium and several genera from the late Devonian of China. The new family Cubodictyidae is established. More than 40 genera are placed in synonymy.]^1";

4894 s[4891] = "STEARN C.W. (1991).- A revision of Anostylostroma, Atelodictyon. and related genera (Paleozoic Stromatoporoidea).- Journal of Paleontology 65: 611-622.- FC&P 20-2, p. 73, ID=2978^Topic(s): revision; stroms, Anostylostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^Anostylostroma is limited to species with complex upwardly branching pillars and simple planar laminae. Species with V- or Y-shaped pillars are removed to Schistodictyon. Simplexodictyon is limited to species with double laminae formerly referred to Diplostroma and a new genus, Petrostroma. is proposed for species with simple planar laminae are rod-like pillars. The scope of Atelodictyon is limited to species with planar, simple laminae and species with collicular laminae are assigned to Aculatostroma. Several genera are placed in synonymy.^1";

4895 s[4892] = "STEARN C.W., WEBBY B.D. NESTOR H. STOCK C.W. (1999).- Revised classification and terminology of Palaeozoic stromatoporoids.- Acta Palaeontologica Polonica 44, 1: 1-70.http:// www.a pp.pan.pl/article/item/app44-001.html.- FC&P 28-1, p. 55, ID=3997^Topic(s): classification & terminology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^Palaeozoic stromatoporoids comprise a distinct class of non-spiculate poriferans that are represented as fossils by their basal skeleton. A revised terminology for the description of these fossils is presented. Seven orders (Labechiida, Clathrodictyida, Actinostromatida, Stromatoporellida, Stromatoporida, Syringostromatida, Amphiporida) are recognized. The following are recorded for each genus: (1) type species, catalogue number and depository of the primary holotype; (2) synonyms and their type species, (3) diagnosis; (4) stratigraphic range; (5) estimate of the number of species assigned to the genus; (6) stratigraphic and geographic distribution of the genus. Problems in definition and recognition of the genus are briefly discussed in annotations. One hundred and nine genera are considered valid, or doubtfully valid. Fifty-three genera are placed in synonymy. An additional 14 genera are considered to be of uncertain placement in the classification.^1";

4896 s[4893] = "KERSHAW S., BRUNTON F.R. (1999).- Palaeozoic Stromatoporoid taphonomy: ecologic and environmental significance.- Palaeogeography, Palaeoclimatology, Palaeoecology 149: 313-328.- FC&P 28-2, p. 37, ID=4034^Topic(s): taphonomy, ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^Epibenthic marine organisms, such as the aspiculate stromatoporoids, show a wide range of growth forms in different settings across Palaeozoic carbonate banks and reefs making them useful taphonomic tools in palaeoenvironment analysis. Three main postmortem taphosignatures are discussed: (1) physical breakage and bioerosion prior to burial are the main processes; (2) loss of morphologic and taxonomic information due to postburial diagenesis; and (3) minor localized reorientation during karstification. Hydrodynamic behaviour of stromatoporoid clasts was similar to that of other carbonate skeletal clasts in their rounding and sorting characteristics. Although bioerosion and bioturbation did not play an important role in Palaeozoic stromatoporoid taphofacies characterization, a marked increase in bioerosion of stromatoporoids is evident, beginning in certain Silurian (Wenlock) morphotypes and in some Devonian morphotypes. Stromatoporoids offer various profiles to shelf currents and seasonal storm surges, and apparently have different skeletal strength (durability) depending on skeletal architecture. Cyst-dominated skeletal architecture appears to have been resistant to

fragmentation. Latilaminae represent inherent zones of weakness that appear to have enhanced equidimensional (breakage away from latilaminae) to oblate (breakage along latilaminar surfaces) breakage. Construction of lamina-pillar architecture, gives the visual impression of varying robustness but this is supported by few data. Stromatoporoid response to increasing hydrodynamic energies varies greatly from no movement or simple overturning to severe fragmentation and size sorting. Although such variation broadly reflects palaeogeographic setting and thus periodic disturbance by tropical storms, familial and generic skeletal traits greatly influenced taphofacies characterization. These differences in modularity and ontogeny in the stromatoporoid groups have hampered the development of generalized taphofacies models. Taphofacies are not comparable between modern coralgal reefs and Palaeozoic stromatoporoid-bearing reefs for the following reasons: significant differences exist in the diversity of observable growth strategies; probable significant differences in life modes between these groups; and Palaeozoic microborers were fewer than modern representatives and apparently less effective in stromatoporoid taphofacies characterization than modern reef macrobioeroders are for coral taphofacies development.¹;

4897 s[4894] = "MISTIAEN B. (1994).- Skeletal density: implications for development and extinction of Palaeozoic Stromatoporoids.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 319-327.- FC&P 23-1.1, p. 23, ID=4089Topic(s): skeletal density; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^Palaeozoic Stromatoporoids present a large diversity of skeletal density (S.D.). A computer process is used to calculate this S.D.; the method is detailed. The first (Early Ordovician) and the last (topmost Devonian) Palaeozoic Stromatoporoids have the lowest S.D.; the Givetian and Frasnian ones present the highest S.D. The variations in the S.D. correspond to differences in the amount of calcium carbonate used by the Stromatoporoids to build their skeleton. These are correlated with variations in paleoenvironments (differences in water temperature and variation of PCO₂). Palaeozoic Stromatoporoids may be derived from pre-Ordovician non-calcified soft-bodied organisms (Webby, 1979). During the Early Ordovician, they develop a thin cystose skeleton. From the Ordovician to the Frasnian, they progressively erect a thicker and thicker skeleton. From Famennian to topmost Devonian they develop again a thin cystose skeleton. During and after the Carboniferous they may have again been living as non-calcified soft-bodied organisms.¹;

4898 s[4895] = "STEARN C.W. (1980).- Classification of the Paleozoic stromatoporoids.- Journal of Paleontology 54, 5: 881-902.- FC&P 10-1, p. 59, ID=6020Topic(s): classification; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^A classification of Paleozoic stromatoporoids is proposed that is based on similarities in structural elements. Because microstructures are subject to extensive diagenetic alteration, and classifications that have been based on them are difficult to apply, they have not been used as diagnostic criteria in the classification. The stromatoporoids are recognized as a class within the phylum Porifera and divided into five orders. Within the Labechiida, the families Labechiidae, Rosenellidae, Aulaceridae, and Cliefdenellidae are recognized. The Lophiostromatida are the only family in the order Lophiostromatida. The Actinostromatida include the Pseudolabechiidae, Actinostromatidae, and the Densastromatidae. Within the Clathrodictyidae, the families Clathrodictyidae, Ecclimadictyidae, Tienodictyidae, Diplostromatidae, and Amphiporidae are recognized. The Stromatoporida includes the families Stromatoporidae, Syringostromellidae, and Syringostromatidae. Eighty-seven genera are recognized as valid and are distributed to the various families. Forty

- genera are placed in synonymy. [original abstract; five orders, sixteen families and eighty seven genera are recognized and briefly discussed; forty genera are placed in synonymy]^1";
- 4899 s[4896] = "STEARNS C.W. (2010).- Paleozoic Stromatoporoidea: general introduction.- Treatise Online 05, Part E, Revised, Vol. 4, Chap. 9A, 3 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 42, ID=6411^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^^1";
- 4900 s[4897] = "STEARNS C.W. (2010).- Diversity trends of the Paleozoic Stromatoporoidea.- Treatise Online 9, Part E, Revised, Vol. 4, Chap. 11A, 5 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 43, ID=6415^Topic(s): diversity trends; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^ [The author provides two figures illustrating the diversity of stromatoporoids, using Ordovician and Silurian series and Devonian stages. The first figure combines all stromatoporoid genera. Maximum genus diversity occurs in the Eifelian Stage of the Middle Devonian. For the Silurian, the Ludlow Series has maximum diversity, and for the Ordovician, it is the Upper Ordovician. The second figure treats the generic abundance on an order-by-order basis. The abundances are not calibrated on the length of a particular increment, so short intervals (e.g., Silurian Pridoli Series) tend to have low diversities.]^1";
- 4901 s[4898] = "STEARNS C.W. (2010).- Extinction patterns of the Paleozoic Stromatoporoidea.- Treatise Online 10, Part E, Revised, Vol. 4, Chap. 11B, 17 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 43, ID=6416^Topic(s): extinction patterns; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^ [The author focuses on the Late Devonian near (Frasnian-Famennian) and total (Devonian-Carboniferous) extinction of stromatoporoids. Chapter subheadings include: (1) introduction; (2) physical evidence of Late Devonian conodonts; (3) Late Devonian decline of stromatoporoid diversity; (4) response of other taxa to Late Devonian events; (5) causes of Late Devonian extinctions; (6) bolide impact hypothesis; (7) anoxia, transgression, and regression; (8) glaciation in the Southern Hemisphere; (9) and global cooling. The Late Ordovician near extinction is completely ignored, as are other less dramatic extinctions suggested by other authors in the Silurian and Early Devonian.]^1";
- 4902 s[4899] = "STEARNS C.W. (2010).- Classification of the Paleozoic Stromatoporoidea.- Treatise Online 12, Part E, Revised, Vol. 4, Chap. 15B, 9 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 44, ID=6418^Topic(s): classification; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^ [This is a summary on the order- and family-level of classification of stromatoporoids. Chapter subheadings include: (1) introduction; (2) Treatise classification; and (3) historical review.]^1";
- 4903 s[4900] = "STOCK C.W., St JEAN J., OTTE L.J. (1990).- Annotated checklist of Paleozoic stromatoporoid genera and their type species.- FC&P 19, 1.2: 1-25. [list of genera] - FC&P 19-1.2, p. 1, ID=6787^Topic(s): list of genera; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^ The past 30 years [1960-1990] have witnessed a major increase in the number of stromatoporoid genera named from Ordovician through Devonian rocks. Nearly two-thirds the 187 genera listed below were named between 1960 and 1986. Unfortunately, many of these genera have proven to be useless. At least 19 of these newer genera have been shown to be junior synonyms of other genera, most likely due to poor communication among stromatoporoid workers. Some workers have not had access to all of the pertinent literature, especially from foreign countries, or are unable to read certain foreign languages. In some cases descriptions of genera or type species do not provide the

- information necessary for the full characterization of the taxon. Many authors do not adequately compare their new genera to other similar genera. In addition, at least 14 of the genera named in the last 30 years are invalid, having been proposed in violation of the International Code of Zoological Nomenclature. [first part of introduction]^1";
- 4904 s[4901] = "MILLER C.E. (2003).- Stromatoporoidea: an overview.- 68th Annual Field Conference of Pennsylvanian Geologists; Guidebook [J.H. Way et al. (eds); Altoona, PA]: pp 24-29. [field trip guide] - FC&P 33-1, p. 40, ID=7195^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^A general treatment of Paleozoic stromatoporoids for participants in a field trip to the Keyser Limestone in central Pennsylvania [see also another paper by C.E. Miller, 2003]^1";
- 4905 s[4902] = "WEBBY B.D. (1993).- Evolutionary history of Paleozoic Labechiida (Stromatoporoidea).- Memoirs of the Association of Australasian Palaeontologists 15 [Paleontological Studies in Honour of Ken Campbell]: 57-67.- FC&P 23-1.1, p. 80, ID=4183^Topic(s): phylogeny; stroms, Labechiida; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic; Geography: ^[The general morphology and classification of the order are reviewed. They are interpreted as sponges and problems of interpreting their modularity are discussed. Early possible ancestors, such as the khasaktids, Pulchrilamina, and sphinctozoans are evaluated. Branching and domical-laminar forms are present in the earliest labechiids. The bimodal history of the order with peaks of diversity in mid-late Ordovician and late Devonian times is traced and the ranges of genera plotted. Doubt is thrown on the origin of the clathrodictyids from labechiid stock and the relationship of the order to the actinostromatids is discussed.]^1";
- 4906 s[4903] = "BONDARENKO O.B. (1978).- Polymorfizm u paleozoyskikh tabulyatomorfnykh koralllov. [polymorphism in Paleozoic tabulatormorphous corals; in Russian].- Paleontologicheskii Zhurnal 1978, 2: 23-35.- FC&P 8-1, p. 56, ID=0239^Topic(s): polymorphism; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ^Es wird der Beweis gefuhrt, dass die heteromorphe komponente bei der Mehrzahl der tabulatormorphen Korallen durch die veranderlichkeit der Polypen bedingt ist. Bei den alten Heliolitoidea kongruiert so die Ausgestaltung der Koralliten, der Siphonoliten und der Cystoliten. * Betrachtet wird die allgemeine Gesetzmassigkeit der Entwicklung des innerkolonialen Polymorphismus. Es zeigt sich, dass bei den tabulatormorphen Korallen dimorphe (genetischer Polymorphismus), tri- und tetramorphe Kolonien (genetischer und funktionaler Typ des Polymorphismus) auftreten. Die Polymorphie der Kolonien erscheint unabhingig in verschiedenen Stammen der Heliolitoidea und Tabulata (heterochron parallel). Trimorphe kolonien entstehen als neue Komponente aus dimorphen als Resultat der Umgestaltung der Koralliten. Tetramorphe entwickeln sich aus trimorphen Kolonien als Resultat der Modifizierung der Cystoliten und Siphonoliten. Bei tetramorphen Kolonien fuhr die weitraumige Regelung in der Anordnung der Komponenten zur Entstehung von Bildungen, analog den Kormidien der rezenten Cnidaria.^1";
- 4907 s[4904] = "LAFUSTE J. (1986).- Polymorphisme des fibres de sclerenchyme chez le Tabules (Cnidaria, Paleozoique).- C.R. Acad. Sci. Paris 302 (II, 11): 761-763.- FC&P 15-1.2, p. 35, ID=0825^Topic(s): microstructures; Tabulata, calcification; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ^Ultra-thin sections (polished slides), whose thickness is some microns, allow measurement of diameter and length of sclerenchyma fibers of Tabulate Corals, as well as height and density of their surface embossements. Study of forms distributed from the Ordovician to Permian makes obvious a variability of these characters;

- on the other hand, invariability of them is a strict rule in all of the skeletons for each considered species. An accurate determination of fibers morphology appears henceforth as an indispensable component for the generic definition of Tabulate Corals. Its part at a higher level in their systematics cannot be presently estimated.¹";
- 4908 s[4905] = "LELESHUS V.L. (1981).- Evoluciya estestvennoy prodolzhitel'nosti zhizni polipov favozitid v paleozoe. [development of natural life-span of polyps in Favositida during the Paleozoic].- Dokl. Akad. Nauk Tadzh. SSR 24, 5: 311-314.- FC&P 11-1, p. 50, ID=1773^Topic(s): Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ^^1";
- 4909 s[4906] = "LAFUSTE J., PLUSQUELLEC Y. (1985).- Structure et microstructure de quelques Micheliniiidae et Michelinimorphes (Tabulata paleozoiques).- Bulletin du Museum national d'histoire naturelle, Paris, ser. 4, 7, C, 1: 13-63.- FC&P 14-2, p. 37, ID=0921^Topic(s): microstructures; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ^The present study deals with the group of micheliniioid Tabulate corals having in common convex incomplete tabulae, they are namely: Michelinia, Praemichelinia, Eumichelinia, Michelinopora, Protomichelinia, Cystimichelinia, Holacanthopora, Beaumontia, Rhizopora and Turnacipora nov. gen. Except for the lamellae in Praemichelinia their microstructure has been poorly known with only few illustrations given of the lamellar sclerenchyme within Michelinia and Holacanthopora. Ultra-thin sections bring new light on the wall structure of most of these Devonian to Late Permian genera. Michelinia shows parallel undulating lamellae; Praemichelinia has its lamellae diverging upwards; in Turnacipora the wall is composed of domed micro-lamellae as is the case in Beaumontia. The presence of a fibrous sterozone in Protomichelinia seems probable. The microstructure of Michelinopora and Cystimichelinia remains unknown. A genus close to Praemichelinia shows a lamellar wall still with the formation of fibres in its median part. Finally a totally fibrous composition is recorded in a Late Permian form. Concerning stratigraphy, forms having parallel lamellae are not found beyond the Middle Carboniferous; forms showing divergence are present up to the Late Permian whereas the microlamellar micheliniioids are good indicators of the Early Carboniferous. For the research of evolutionary trends, such characters as inclination of tabulae or presence of epitheca are revealed to be insignificant whereas microstructural patterns suggest phylogenetic relations between the principal micheliniioid genera. The interest of microstructure in generic definition of micheliniioid Corals is underlined. At the same time attention is drawn to problems arising by its introduction into family definition and the profound eventual changes to be expected in Tabulate corals' systematic.¹";
- 4910 s[4907] = "LIN B.-Y., TCHI Y.-Y., JIN C.-T., LI Y.-X., YAN Y.-Y. (1988).- Tabulatomorphic corals: Monograph of Palaeozoic corals 1 & 2.- Geological Publishing House, Beijing: 467 pp + 493 pp. [in Chinese, with English abstract].- FC&P 20-2, p. 57, ID=2936^Topic(s): tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy: Paleozoic; Geography: ^^1";
- 4911 s[4908] = "IVANOVSKIY A.B. (1977).- Nekotorye itogi izucheniya paleozyskikh kishchnopolostnykh v posledniye gody. [some recent results of research of Paleozoic coelenterates; in Russian].- Paleontologicheskii Zhurnal 1977, 2: 133-134.- FC&P 7-1, p. 26, ID=5577^Topic(s): research history; Coelenterata; Systematics: Cnidaria; Stratigraphy: Paleozoic; Geography: ^^1";
- 4912 s[4909] = "LIAO Wei-Hua (2002).- Advance in study of the taxonomy of Cnidaria and the origins and relationships of Palaeozoic corals. [in Chinese, with English summary].- Acta Palaeontologica Sinica 41, 3:

464-468.- FC&P 31-2, p. 13, ID=7119^Topic(s): phylogeny; Cnidaria; Systematics: Cnidaria; Stratigraphy: Paleozoic; Geography: ^Recently, Oliver, Jr. w.A. (1996) and Scrutton, C.T. (1997) published their important papers on the classification of the Cnidaria as well as the origins and relationships of Palaeozoic corals respectively. These papers have great value to us in the systematics of Cnidaria and the origins and relationships of various coral groups although these themes have been discussed for over 100 years. Integration of newly available global data of Cnidaria and Palaeozoic corals makes possible biologically significant advances in our understanding. The classification of Phylum Cnidaria recognizes three classes: Hydrozoa, Scyphozoa, and Anthozoa. Corals and ture anemones are anthozoans. They are referred to zoantharians. The Phylum Cnidaria is represented in the geological record principally by the corals. The two major Palaeozoic groups of corals have records from the Early Ordovician (Tabulata) and Middle Ordovician (Rugosa) to the end of Permian. The third major group (Scleractinia) ranges from Middle Triassic to Holocene. The Rugosa and Tabulata may have arisen as separate skeletonization events from some groups of anemones. None of Cambrian coralomorphs is regarded as directly ancestral to the post Cambrian coral clades. Scleractinia are considered to have evolved through skeletonization events among a group of anemones. The Rugosa are not considered to be ancestral to the Scleractinia. Some of the Cambrian coralomorphs can be dismissed as cnidarians, others may be non zoantharian, or even non anthozoan cnidarians. Some have been reassigned to other phyla, such as algae, bryozoan or sponges. Among them only a small number of genera are accepted as true zoantharian corals. The scleractiniamorph corals were found in the Ordovician from Scotland and northern Ireland as well as in the Permian from North Africa and South China respectively. It is likely that these Palaeozoic scleractiniamorph corals represent another small independent skeletonized clades. They disappeared at the end Permian extinction. The Palaeozoic corals were strongly affected by the mass extinction events. The end Ordovician (O/S) event and the Late Devonian (F/F) event distinctly reduced the diversity of Rugosa and Tabulata. Finally, these two groups became extinct at the end of Permian. [original abstract]^1";

- 4913 s[4910] = "TAPANILA L. (2004).- Life in a living hard substrate: the rise and fall of skeletal endosymbionts during the Paleozoic.- Geological Society of America, Abstracts with Programs 36, 5: 110. [abstract] - FC&P 34, p. 106, ID=1375^Topic(s): skeletal endosymbionts; ecology borings; Systematics: Stratigraphy: Paleozoic; Geography: ^^1";
- 4914 s[4911] = "FAGERSTROM J.A., WEST R.R., KERSHAW S., COSSEY P.J. (2000).- Spatial competition among clonal organisms in extant and selected Paleozoic reef communities.- Facies 42, 1: 1-24.- FC&P 29-1, p. 49, ID=1507^Topic(s): reefs, spatial competition; reefs ecology; Systematics: Stratigraphy: Paleozoic; Geography: ^Occurrences of densely packed benthic organisms in extant reefs are of two types: (1) live-live interactions, where two living organisms interact, and (2) live-dead associations, where only one is alive and uses the other as a substrate. The latter are common in reef deposits due to biostratinomic feedback, i.e. dense skeletal accumulations provide hard substrates for clonal recruitment, thus facilitating greater frequency of live-dead encounters than in lower biomass level-bottom communities dominated by solitary organisms. Differentiating between these two types in ancient reefs is difficult, often impossible. * Most live-live interactions among clones in extant reef communities involve competition for space. Clonal spatial competition is divisible into four types: (1) direct-aggressive: encrusting overgrowth; (2) indirect-passive: depriving neighbors of resources, chiefly sunlight, by growth above them; (3) stand-off: avoidance of competition by organisms adopting positions that avoid or

minimize direct polyp / zoid contact; and (4) overwhelming: one clone / species volumetrically or numerically overwhelms the other, meeting minimal resistance. Despite class-order level differences in taxa, our results indicate that extant analogs, based on the arrangement and distortion of skeletons, are valuable for recognizing live-live interactions in Silurian and Carboniferous reefs and interpreting the types of spatial competition represented. * Comparison of overhead (plan) views of live-live coral competition in Polynesian reefs with vertical sections of Silurian and Carboniferous sponge-dominated reefs and biostromes suggests that direct-aggressive competition is more common among extant than among Paleozoic reef-builders. Stand-offs showing clone margin distortion and overwhelming with minor skeletal distortion are most common in our fossil examples and probably relate to the dominance of these reefs by sponges. Success by extant sponges in spatial competition is largely due to allelochemical deterrence which may explain the predominance of stand-off and overwhelming confrontations in fossil sponges rather than tentacle-mesentery based direct aggression among extant corals and bryozoans. [original abstract]^1";

4915 s[4912] = "ALVARO J.J., ARETZ M., BOULVAIN F., MUNNECKE A., VACHARD D., VENNIN E. (2007).- Fabric transitions from shell accumulations to reefs: an introduction with Palaeozoic examples.- Geological Society, London, Special Publications 275 [Alvaro J. J., Aretz M., Boulvain F., Munnecke A., Vachard D. & Vennin E. (eds): Palaeozoic Reefs and Bioaccumulations: Climatic and Evolutionary Controls]: 1-16.- FC&P 35, p. 89, ID=2410^Topic(s): reefs sedimentology; reefs vs bioaccumulations; Systematics: ; Stratigraphy: Paleozoic; Geography: ^One unresolved conceptual problem in some Palaeozoic sedimentary strata is the boundary between the concepts of 'shell concentration' and 'reef'. In fact, numerous bioclastic strata are transitional coquina-reef deposits, because either distinct frame-building skeletons are not commonly preserved in growth position, or skeletal remains are episodically encrusted by 'stabilizer' (reef-like) organisms, such as calcareous and problematic algae, encrusting microbes, bryozoans, foraminifers and sponges. The term 'parabiostrome', coined by Kershaw, can be used to describe some stratiform bioclastic deposits formed through the growth and destruction, by fair-weather wave and storm wave action, of meadows and carpets bearing frame-building (archaeocyaths, bryozoans, corals, stromatoporoids, etc.) and/or epibenthic, non-frame-building (e.g. pelmatozoan echinoderms, spiculate sponges and many brachiopods) organisms. This paper documents six Palaeozoic examples of stabilized coquinas leading to (pseudo)reef frameworks. Some of them formed by storm processes (generating reef soles, aborted reefs or being part of mounds) on ramps and shelves and were consolidated by either encrusting organisms or early diagenetic processes, whereas others, bioclastic-dominated shoals in barrier shelves, were episodically stabilized by encrusting organisms, indicating distinct episodes in which shoals ceased their lateral migration.^1";

4916 s[4913] = "LELESHUS V.L. (1997).- Uralo-Tien-Shan paleozoogeographical province in Paleozoic.- In G.Kh. Salibayev (ed.): Paleontology and Stratigraphy of Phanerozoic of Tajikistan 1: 10-20. Donish, Dushanbe.- FC&P 27-1, p. 26, ID=3792^Topic(s): biogeography; Uralo-Tien-Shan province; Systematics: ; Stratigraphy: Paleozoic; Geography: ^Uralo-Tien-Shan paleozoogeographical province appeared at the beginning of Devonian and disappeared at the beginning of Permian. In early Permian on the most part of this area land was formed. To the north of it there were the seas of the Arctic realm and to the south of it there was the ocean Tethys. The most resemblance between the Urals and the Tien-Shan faunas was in Devonian and in early Carboniferous, and the most difference was in Cambrian, Ordovician, Artinskian, Kungurian and late Permian.^1";

- 4917 s[4914] = "FISCHER J.C., LAFUSTE J.G. (1971).- Sur la présence de fibres à bosselures chez les Chaetetida (Cnidaires) du Paléozoïque et du Mésozoïque.- C. R. Acad. Sci. Paris 272: 1488-1490.- FC&P 1-2, p. 25, ID=4701Topic(s): microstructures; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Paleozoic, Mesozoic; Geography: ^1";
- 4918 s[4915] = "BOGOYAVLENSKAYA O.V., BOIKO E.V. (1979).- Systematic position of the Stromatoporata.- Paleontologicheskii Zhurnal 1979, 1: 22-34.- FC&P 9-2, p. 50, ID=0361Topic(s): systematics; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic, Mesozoic; Geography: ^The authors conclude that the Paleozoic and Mesozoic Stromatoporata are closely connected in development and belong in the class Hydrozoa.^1";
- 4919 s[4916] = "DONG DEYUAN (1989).- Rise, development and extinction of stromatoporoids.- Acta Palaeontologica Sinica 28, 4: 546-549.- FC&P 19-1.1, p. 69, ID=2706Topic(s): phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic, Mesozoic; Geography: ^This paper makes a brief account on the rise and development of stromatoporoids together with their main characters and their interrelationship in different geological times. Why did they suddenly disappear from Early Carboniferous to Middle Triassic and reappear in Late Triassic? These problems are still unsettled, and therefore it is necessary to make a further study especially on their evolution and interrelationship in the coming days in order to solve all these problems. [part of extensive summary]^1";
- 4920 s[4917] = "DONG DEYUAN (1987).- Stromatoporoidea.- Science Press, Beijing, 186 pp. [in Chinese].- FC&P 20-1.1, p. 76, ID=2871Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Paleozoic, Mesozoic; Geography: ^A complete description of the Paleozoic and Mesozoic stromatoporoids with line drawings of typical species of most genera. Chapter headings: Research history, Microstructure, Taxonomic position, Origin, Development and extinction, Paleoecology, Stratigraphic distribution, Collecting and processing, Classification, Descriptions of families and genera, Indexes of terms in Latin and Chinese.]^1";
- 4921 s[4918] = "KISSLING D.L. (1977).- Population structure characteristics for some Paleozoic and modern colonial corals.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 497-506.- FC&P 6-1, p. 20, ID=0005Topic(s): population structure; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic - Cenozoic; Geography: ^Analyses of age groups in sample populations of rugose, tabulate and recent soleractinian corals.^1";
- 4922 s[4919] = "WENDT J. (1978).- Skelettbau und Entwicklung der massiven Kalkschwamme vom Jungpalaozoikum bis in die Gegenwart.- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 157: 91-98.- FC&P 8-1, p. 50, ID=0217Topic(s): skeletal formation; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Paleozoic - Recent; Geography: ^1";
- 4923 s[4920] = "WENDT J. (1978).- Development of skeletal formation, microstructure, and mineralogy of rigid calcareous sponges from the late Paleozoic to Recent.- International Collaborations CNRS, Biologie des Sponges, Paris, 9 pp.- FC&P 8-1, p. 50, ID=0218Topic(s): skeletal formation; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Paleozoic - Recent; Geography: ^1";
- 4924 s[4921] = "EDINGER E.N., COPPER P., RISK M.J., ATMOJO W. (2002).- Oceanography and reefs of Recent and Paleozoic tropical epeiric seas.- Facies 47, 1: 127-150.- FC&P 31-2, p. 53,

- ID=1418^Topic(s): reefs geography; reefs geography;
 Systematics: ; Stratigraphy: Paleozoic - Recent;
 Geography: ^The second part of this paper is an analysis of the
 variations in the reefs of the Onandaga unit of SW Ontario and New York
 State and comparison with those of the Java Seas. The distribution of
 stromatoporoid shapes are measured in several of the Devonian reefs.
 Stromatoporoids are distinguished as tabular or laminar but not
 identified taxonomically. The scarcity of tabular stromatoporoids and
 the dominance of phacelloid corals and dendritic branching corals in
 the Onandaga Formation (Appalachian Basin) are here explained by
 localized high productivity conditions driven by quasi-estuarine
 circulation. ^1";
- 4925 s[4922] = "WEBBY B.D., ELIAS R.J., YOUNG G.A., NEUMAN B.E.E., KALJO D.
 (2004).- Corals.- The Great Ordovician Biodiversification Event [B.D.
 Webby, F. Paris, M.L. Droser & I.G. Percival (eds); Columbia
 University Press, New York]: pp 124-146. ISBN 0231-12678-6.-
 FC&P 34, p. 107, ID=1378^Topic(s): diversification
 event; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy:
 Ordovician; Geography: ^^1";
- 4926 s[4923] = "RIDING R. (2004).- Solenopora is a chaetetid sponge, not an
 alga.- Palaeontology 47, 1: 117-122.- FC&P 33-1, p. 78,
 ID=7225^Topic(s): not alga; Chaetetida Solenopora;
 Systematics: Porifera; Chaetetida; Stratigraphy:
 Ordovician; Geography: ^For over 100 years the Ordovician
 fossil solenopora (Dybowski) has been widely considered to be a
 calcified red alga. The type species Solenopora spongoides consists of
 tubes with longitudinally flexuous walls, lobate-petalloid cross
 sections 30-175µm across with septal projections and sporadic cross
 partitions. This internal morphology is not characteristic of calcified
 red algae but is consistent with the original interpretations of
 Solenopora as a chaetetid and with subsequent recognition of chaetetids
 as sponges. Solenopora is widely misidentified in Silurian and younger
 rocks. Removal of Solenopora from the algae underscores the need to
 comprehensively reassess the palaeoecological and phylogenetic
 significance of numerous disparate Ordovician to Miocene fossils
 currently classed as Solenoporaceans. [original abstract]^1";
- 4927 s[4924] = "DIXON O.A., BOLTON T.E., COPPER P. (1986).- Ellisites, an
 Upper Ordovician heliolitid coral intermediate between coccoserids and
 proporids.- Palaeontology 29, 2: 391-413.- FC&P 15-2, p.
 36, ID=0722^Topic(s): confusing morphology; Heliolitida
 Ellisites; Systematics: Cnidaria; Heliolitida; Stratigraphy:
 Ordovician U; Geography: ^The Upper Ordovician heliolitid
 corals Ellisites labechioides gen. et sp.nov. and E. astomata (Flower)
 combine vesicular skeletal plates with zones of strongly dilated
 vertical trabeculae. In these characters they provide the first
 evidence of a phylogenetic link between the Coccoseridicae and
 Proporicae. They are referred to a new family, the Ellisitidae, and
 included in the Coccoseridicae, which necessitates taxonomic
 modification of the latter to include genera with vesicular skeletal
 plates. They show features most related to Coccoseris Eichwald 1855,
 and two of three species considered to have been erroneously referred
 to the stromatoporoid Dermatostroma Parks 1910. Their substantially
 vesicular skeletal development can lead them to be mistaken for
 strongly cystose labechiid stromatoporoids.^1";
- 4928 s[4925] = "BONDARENKO O.B., MINZHIN C. (1981).- Izmenchivost i
 morfogenez pozdneordovikskikh korallov Propora speciosa. [Variability
 and morphology of Late Ordovician coral Propora speciosa].-
 Paleontologicheskii Zhurnal 1981, 1: 10-20.- FC&P 11-1, p.
 49, ID=1766^Topic(s): variability; Heliolitida, Propora;
 Systematics: Cnidaria; Heliolitida; Stratigraphy:
 Ordovician U; Geography: ^^1";
- 4929 s[4926] = "BONDARENKO O.B. (1977).- Napravleniya razvitiya i
 sistematika pozdneordovikskikh korallov Proheliolitidae. [phylogenetic

- trends and systematics of Late Ordovician corals Proheliolitidae; in Russian].- Paleontologicheskii Zhurnal 1977, 4: 34-46.- FC&P 7-2, p. 15, ID=5615^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician U; Geography: ^Die Resultate einer Revision der Familie Proheliolitidae werden dargestellt sowie die Diagnosen der Familie, zweier Subfamilien - Proheliolitinae Kiaer 1899, und Sibriolitinae subfam.nov., und von sechs Gattungen - Protoheliolites gen.nov., Schmidella gen.nov., Sibriolites Sokolov 1955, Mongoliolites Bondarenko & Minzhin 1977 - gegeben. Die Entwicklung der Unterfamilien erfolgt in unterschiedlichem Tempo, jedoch mit einer Morphogenese, die dem Typus nahesteht und zu ahnlichen Endergebnissen fuhrt. Bestatigt wird die Abstammung der Proheliolitidae von der Tabulata-Familie Lichenariidae.^1";
- 4930 s[4927] = "OSPANOVA N.K. (1999).- Morfologiya i sostav novogo semejstva geliolitid wormsiporidae fam. nov. (Anthozoa).- Doklady Akademii Nauk Respubliki Tadzshikistan 42, 8: 19-24.- FC&P 31-1, p. 12, ID=7087^Topic(s): new taxa; Heliolitida wormsiporidae; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician Ashg; Geography: ^Genus wormsipora should be excluded from the family Proporidae because its coenenchyme has tendency to develop tubes. Wormsiporidae fam. nov. includes genera Wormsipora Sokolov 1955, Late Ordovician, Ashgillian and Neowormsipora Lin et Chow 1977, Late Ordovician, Ashgillian.^1";
- 4931 s[4928] = "YOHELSON E.L., STANLEY G.D.jr (1981).- An early Ordovician patelliform gastropod, Palaelophacraea, reinterpreted as a coelenterate.- Lethaia 14: 323-330.- FC&P 11-2, p. 27, ID=1835^Topic(s): Cnidaria vs Mollusca; Hydrozoa; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Ordovician L; Geography: ^Palaelophacraea criola is considered a possible chondrophore and several other Cambrian univalve genera may have cnidarian rather than molluscan affinities.^1";
- 4932 s[4929] = "ELIAS R.J. (1986).- Symbiotic relationships between worms and solitary rugose corals in the late Ordovician.- Journal of Paleontology 12: 32-45.- FC&P 15-2, p. 27, ID=0640^Topic(s): symbiosis, vermes; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: ^^1";
- 4933 s[4930] = "ELIAS R.J., BUTTLER C.J. (1986).- Late Ordovician solitary rugose corals preserved in life position.- Canadian Journal of Earth Sciences 23: 739-742.- FC&P 15-2, p. 27, ID=0641^Topic(s): ecology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: ^^1";
- 4934 s[4931] = "ELIAS R.J. (1986).- New late Ordovician solitary rugose corals with perforate septa.- Journal of Paleontology 60, 1: 14-25.- FC&P 15-1.2, p. 26, ID=0857^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U; Geography: ^Neotryplasma floweri n.sp. is an epizoic solitary rugose coral characterized by two orders of perforate, monacanthine, carinate septa, a complex axial structure of septal lobes and lamellae, and a well developed broad dissepimentarium. It occurs in the Late Ordovician (late Edenian to earliest Maysvillian; late Caradoc) Upham Dolomite Member of the Second Value Dolomite, Montoya Group, at El Paso, Texas, U.S.A. Neotryplasma Kaljo, 1957, also includes two Late Ordovician species from the Estonian S.S.R. and one from the late Middle and Late Ordovician of the northern and middle Ural region, U.S.S.R. This genus is assigned to the Neotryplasmataidae n. fam., which is placed in the Suborder Monacanthina Neuman, 1984.^1";
- 4935 s[4932] = "WEBBY B.D. (1971).- The new Ordovician genus Hillophyllum and the early history of rugose corals with acanthine septa.- Lethaia 04: 153-168.- FC&P 1-2, p. 19, ID=4670^Topic(s): new taxa; Rugosa, Hillophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician; Geography: ^^1";

- 4936 s[4933] = "WEYER D. (1973).- Uber Protozaphrentis Yu 1957 (Anthozoa, Rugosa, Mittelordoviz).- Palaeontol. Abh. A, 4, 4: 695-706.- FC&P 4-1, p. 40, ID=5151^Topic(s): ; Rugosa, Protozaphrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician M; Geography: ^1";
- 4937 s[4934] = "OSPAROVA N.K. (1980).- Sistematicheskoe polozhenie semeystva Cyrtophyllidae (korally). [systematics of the coral family Cyrtophyllidae; in Russian].- Akademiya Nauk Tadzhikskoy SSR, Doklady 1980, 23, 2: 96-97.- FC&P 9-2, p. 49, ID=0369^Topic(s): ; Rugosa, Cyrtophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician; Geography: ^[The Upper Ordovician family Cyrtophyllidae belongs neither to the Tabulata nor the Heliolitoidea. Regarding the tabulate corals these representatives are distinguished by the absence of independent walls of corallites, parricidal budding, development of septa of two orders (as in Rugosa), trabecular microstructure of the septa, a high number of septa (49-57) and the development of protosepta. Therefore, Ospanova regards the Cyrtophyllidae as being a particular family of the rugose corals.]^1";
- 4938 s[4935] = "SCRUTTON C.T. (1996).- The scleractiniamorph coral Kilbuchophyllia clarksoni at Kilbucho.- Scottish Journal of Geology 32, 1: 91.- FC&P 25-2, p. 44, ID=3087^Topic(s): scleractiniamorpha, new material ; Anthozoa Kilbuchophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Ordovician Car; Geography: ^The first well authenticated Palaeozoic examples of a scleractiniamorph coral were described by Scrutton & Clarkson (1991). The material was collected from fossiliferous mid-Ordovician (Caradoc) silt-grade greywackes of the Kirkcolm Formation in Tract 2 (of the accretionary prism model) of the Northern Belt of the Southern Uplands at Kilbucho, near Biggar. Subsequently, further material became available (Scrutton 1993), including a new, small specimen from the greywackes at Kilbucho which demonstrated hexamerall cyclic septal insertion with much greater clarity than any of the original material. The range of the type species, Kilbuchophyllia discoidea, was extended to further localities along strike to the southwest and a new species, K. clarksoni, was described. The new material from these additional localities, Wallace's Cast, Glenkip Burn, Snar Water and Duntercleuch, was all found in a poorly sorted, matrix-supported, quartz pebble conglomerate facies. However, despite extensive collecting no kilbuchophyllids had been found in the fossiliferous conglomerates underlying greywackes at Kilbucho. This note is to record the finding of a single specimen of K. clarksoni from the conglomerate facies at Kilbucho during a visit in August 1995, the first record of this species from any facies at that locality. This find provides further evidence to support the likelihood that throughout Tract 2, the kilbuchophyllids are occurring in fossiliferous conglomerate and greywacke obrution deposits at a single level in the Kirkcolm Formation (Clarkson et al. 1992). One further additional observation since the publication of Scrutton (1993) has been the rediscovery of the fossiliferous conglomerate localities in Glenkip Burn [NS 869174] and Snar Water [NS 859169]. Additional material of both species of Kilbuchophyllia was recovered from these localities, the original material having been collected in the last century during the survey by Peach and Horne (1899). The correlation of this level in the succession has contributed to a reassessment of the structure and history of the Northern Belt of the Southern Uplands shortly to be published (Armstrong et al. 1996).^1";
- 4939 s[4936] = "WEBBY B.D. (1994).- Evolutionary trends in Ordovician stromatoporoids.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 373-380.- FC&P 23-1.1, p. 24, ID=4094^Topic(s): phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: ^An attempt is made

to assess the early (that is, Ordovician) history of stromatoporoid genera using both cladistic and stratigraphical data. Only two relatively independent and homogeneous stromatoporoid groups have been recorded. The order Labechiida is the most diversified, with elements first appearing in the Middle Ordovician. The group is divided into four families based on differing morphological features and growth form: the rosenellids with their simple (?more primitive), small to large cysts, denticles, and encrusting, laminar to domical form; the labechiids with rounded pillars formed by superposition of denticles, and a trend in some to flatter, lamina-like cysts; the stylostromatids (fam. nov.) with mamelon columns and development of composite, blade-like pillars within columns; and the aulacerids with extended, mamelon-like, cylindrical to branching forms. The massively thickened, encrusting lophiostromatids may comprise a fifth group. The order Clathrodictyida has only a few members, and these make their first appearances in the Upper Ordovician; they differ from representatives of the Labechiida in showing downwardly inflected pillars and common astrorhizae. Given the distinctively different morphologies of the two groups, it may be suggested that they represent separate lines of descent from uncalcified sponge-like organisms. ^1";

- 4940 s[4937] = "WEBBY B.D. (1979).- The Ordovician Stromatoporoids (Presidential Address).- Proceedings of the Linnean Society of New South Wales 103, 2: 83-121.- FC&P 9-1, p. 53, ID=5840^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: ^[major review of all the Ordovician genera, profusely illustrated; in addition their stratigraphic distribution in each continent is considered, as well as their origins and evolutionary affinities]^1";
- 4941 s[4938] = "WEBBY B.D. (1980).- Biogeography of Ordovician Stromatoporoids.- Palaeogeography, Palaeoclimatology, Palaeoecology 032: 1-19.- FC&P 10-1, p. 60, ID=6022^Topic(s): biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: ^[the distribution of the Ordovician families of stromatoporoids is reviewed; two faunal provinces are recognized in the Early Caradoc and a third emerged in Middle Caradoc time; the stromatoporoids are inferred to be low-latitude, warm water organisms]^1";
- 4942 s[4939] = "KHROMYKH V.G. (1999).- Drevneishie rody stromatoporoidei. [???????????? ????? ?????????????????????; in Russian].- Geologiya i geofizika 40, 2: 221-230.- FC&P 29-1, p. 67, ID=7033^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: ^Some old (Ordovician) stromatoporoids are revised and their first appearance in different regions of the globe is shown. A new system for the genera beginning with Priscastroma is proposed. The oldest stromatoporoids were found in the Middle Ordovician strata of the Siberian platform (Moriero River), North America (Champlain Lake), Australia (Tasmania), and probably the Urals. It is suggested that stromatoporoids in these regions originated synchronously at the beginning of the Middle Ordovician when a new major sedimentary cycle in Earth history began. [original abstract; the paper contains discussions and diagnoses of the following genera: Priscastroma, Dermatostroma, Pseudostylodictyon, Cystostroma, Stromatocerium, Labechia, Pachystylostroma; the type species of Priscastroma is P. gemina Khromykh, 1999; the early genera are placed in a phylogenetic sequence]^1";
- 4943 s[4940] = "WEBBY B.D. (2004).- Stromatoporoids.- The Great Ordovician Bio-diversification Event [B.D. Webby, F. Paris, M.I. Droser & I.G. Percival (eds)]: 112-118; Columbia University Press, New York. ISBN 978-0-231-12678-6.- FC&P 33-1, p. 42, ID=7199^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician; Geography: ^The orders Labechiida (6 families, 22 genera) and Clathrodictyida (2 families, 4 genera) represent the class Stromatoporoidea of calcified sponges in

the Ordovician. One stromatoporoid community is associated with the reef facies; another is characterized by genera of columnar growth and is presumed to have lived in deeper water on carbonate ramps. All Ordovician stromatoporoid communities plot into paleolatitudes between 30 degrees north and thirty degrees south. The pulchrellinids comprise a family of doubtful affinity of large framebuilders that occur in the late Early Ordovician of North and South America. The rest of the labechiids first diversified in late Middle Ordovician and secondly in Caradoc time. The initial radiation of the clathrodictyids occurred in mid to late Caradoc with the appearance of *Ecclimadictyon*. Ordovician stromatoporoid diversity peaked in early to mid Ashgill and fell abruptly with the Hirnantian glaciations. Diversity curves for genera and species are presented as **normalized** and **range through** versions. The latter shows a steady increase in generic diversity from late Middle Ordovician to mid Late Ordovician and a sharp decline in the Hirnantian. The sensitivity of labechiids to oceanic cooling is discussed in the light of the hypotheses of Stearn (1987) and Nestor and Stock (2001). The relationship of the diversity trends to sea level changes is also considered.¹;

4944 s[4941] = "JULL R.K. (1976).- septal development during hysteroontogeny in the Ordovician tabulate coral *Foerstephyllum*.- Journal of Paleontology 50, 3: 380-391.- **FC**;P 6-2, p. 20, ID=0152^Topic(s): blastogeny; Tabulata, Foerstephyllum; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: ^Middle and Upper Ordovician specimens of *Foerstephyllum* from a number of localities in eastern North America were studied to determine the details of hysteroontogeny and most particularly the nature of sepal development in the genus. The increase is exclusively lateral in nature, most common in cericoid rugose corals and in tabulate genera. The dividing wall appears adjacent to the intercorallite wall or it appears to be formed by splitting of the intercorallite wall. The holotypes of *F. halli* (Nicholson), type species of the genus, and of *F. magnificum* (Okulitch) are illustrated and commented upon. Closely spaced serial acetate peels show that *F. halli* and forms comparable to *F. magnificum* lack an ordered sequence of sepal development such as is characteristic of rugose and scleractinian corals. Septa emerge in an apparently random manner around the corallite. Corallites of a specimen of *F. vacuum* (Foerste), however, show an early stage of development in which septa possibly equivalent to the cardinal and alar septa are present. Subsequent development in this specimen is more typical of other representatives of the genus. Remarks: The used term **intercorallite wall**; does not coincide with the definition of a corallite. According to Hill (1956: 247; in Moore R.C., Treatise on Invertebrate Paleontology, Part F) a corallite means **exoskeleton formed by an individual coral polyp**; . Therefore, it is proposed to use **corallite wall** only.¹;

4945 s[4942] = "ELIAS R.J., LEE D.-J., WOO S.-K. (2008).- Corallite increase and mural pores in *Lichenaria* (Tabulata, Ordovician).- Journal of Paleontology 82, 2: 377-390.- **FC**;P 35, p. 62, ID=2362^Topic(s): structures; Tabulata, Lichenaria; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: ^^1";

4946 s[4943] = "LAFUSTE J. (1979).- Microstructure de type **desmidoide**; chez *Lyopora Nicholson* & Etheridge 1878 (Tabulata, Ordovicien).- C. R. Acad. Sci. Paris 289: 719-722.- **FC**;P 9-1, p. 15, ID=5766^Topic(s): microstructures; Tabulata, microstructures; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician; Geography: ^Le terme **desmide**; s'applique à des bouquets de fibres à bosselures, coniques ou pyramidaux. Le type desmidoïde et le type trabéculaire sont regardés comme les deux stades finaux de l'évolution de la microstructure des Tabulata.¹;

- 4947 s[4944] = "LEE D.-J., ELIAS R.J. (1991).- Mode of growth and life-history strategies of a late Ordovician halysitid coral.- Journal of Paleontology 65, 2: 191-199.<http://www.jstor.org/pss/1305754>.- FC#038;P 20-2, p. 62, ID=2956Topic(s): growth mode, life strategies; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: ^The upper surface of the corallum of Catenipora rubra was often at or just above the sediment-water interface during life. The vertical growth rate was barely sufficient to keep pace with background sedimentation and possible subsidence of the corallum. Therefore, the colonies were in constant danger of being covered by influxes of sediment, especially during storms. This was compensated by the ability of polyps to respond to sedimentation events and by certain aspects of colony growth. Rapid regeneration following partial mortality involved budding of uninjured polyps and rejuvenation of damaged individuals, in some cases accompanied by a type of axial increase not previously known in tabulate corals. Rapid lateral expansion was possible because small, "immature" polyps could bud and grow in a reptant manner. Interconnected ranks of the cateniform corallum served to dam shifting sediment at the periphery of the colony. Lacunae within the colony were reservoirs for material that breached peripheral ranks and for sediment that settled on the ranks and was rejected by polyps or removed by passive flow. Polyps comprising the colony were distributed over a large area of the substrate surface, thereby decreasing the probability of complete mortality during sedimentation events and increasing the probability that a sufficient number of individuals would survive to ensure the optimum regeneration. The corallum, anchored in the substrate and with sediment filling the lacunae, provided a broad, stable base during high-energy events. It remains to be established how widespread these growth patterns and strategies were among other corals with cateniform colonies, a form that appeared in many unrelated stocks. Most previous workers emphasized physical strength when considering functional morphology, following a tacit assumption that the corallum rose high above the substrate and was therefore susceptible to breakage during high-energy events. An understanding of the origin of cateniform patterns and the phylogeny of these corals requires knowledge of their modes of growth and life-history strategies, which were genetically as well as environmentally controlled.^1";
- 4948 s[4945] = "ELIAS R.J., LEE D.-J. (1993).- Microborings and growth in Late Ordovician halysitids and other corals.- Journal of Paleontology 67, 6: 922-934.- FC#038;P 23-1.1, p. 67, ID=4046Topic(s): borings; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U; Geography: ^Microborings in the Late Ordovician tabulate corals Catenipora rubra (a halysitid) and Manipora amicarum (a cateniform nonhalysitid) and in an epizoid solitary rugose coral differ from nearly all of those previously reported in Paleozoic corals. These microborings were formed within the coralla by endolithic algae and fungi located beneath living polyps. Comparable structures in the Late Ordovician tabulate Quepora lagglomeratiformis (a halysitid) represent algal microborings, not spicules, and halysitids are corals, not sponges as suggested by Kazmierczak (1989). Endolithic algae in cateniform tabulates relied primarily on light entering through the outer walls of the ranks rather than through the polyps; lacunae within coralla permitted appropriate levels of light to reach many corallites. The direction of boring was determined by corallum microstructure and possibly also by the distribution of organic matter within the skeleton. There is an apparent inverse correlation between boring activity and coral growth rate. The location and relative abundance of pyritized microborings within calcareous coralla can be established quantitatively and objectively from electron microprobe determinations of weight percent sulfur along appropriate traverse of the coral skeleton. The

distribution of such microborings in *Catenipora rubra* and *Manipora amicarum* is comparable to algal banding in modern corals; this is the first report of such banding in the interiors of Paleozoic corals. Change in the intensity of boring within each corallum was evidently a response to variation in the linear growth rate of the coral, or to fluctuation in an environmental factor (perhaps light intensity) that could control both algal activity and growth rate in these corals. Change in the algal boring intensity and linear growth rate of the coral was generally but not always seasonal and usually but not invariably associated with changes in the density of coral skeleton deposition. Cyclic bands of boring abundance maxima within fossil colonial corals provide a measure of annual linear growth comparable to the widely accepted method based on skeletal density bands. Algal bands are more sporadically developed than density bands within and among coralla, thus increasing in difficulty of interpretation. Fluctuations in the abundance of algal microborings apparently provide a detailed record of changes in the linear growth rate of colonies and individuals within colonies. Combined analyses of microboring abundance and skeletal density will contribute significantly to our understanding of the biological and environmental factors involved in endolithic activity and coral growth.¹";

4949 s[4946] = "DIXON J. (1976).- Corallite increase and a new corallite type in Upper Ordovician Cateniform corals.- *Journal of Paleontology* 50, 5: 916-921.- FC&P 6-2, p. 19, ID=0149^Topic(s):polymorphism; Tabulata, Halysitidae; Systematics:Cnidaria; Tabulata; Stratigraphy:Ordovician U; Geography:^Variations of lateral and interstitial corallite increase are newly recognized in cateniform corals. These variations commonly occur in *Tollina Sokolov* 1949 (= *Manipora Sinclair* 1955) and less commonly in *Catenipora Lamarck* 1816. A new, large corallite type (megacorallite) occurs in specimens of two Upper Ordovician species of *Catenipora*. These megacorallites may have housed large polyps specialized for gamete production.¹";

4950 s[4947] = "MILLER A.I., MAO S. (1995).- Association of orogenic activity with the Ordovician radiation of marine life.- *Geology* 23, 4: 305-308.- FC&P 24-2, p. 79, ID=4557^Topic(s):phylogeny, orogeny; evolutionary radiation; Systematics:Animalia; Stratigraphy:Ordovician U; Geography:^The Ordovician radiation of marine life was among the most substantial pulses of diversification in Earth history and coincided in time with a major increase in the global level of orogenic activity. To investigate a possible causal link between these two patterns, the geographic distributions of 6576 individual appearances of Ordovician genera around the world were evaluated with respect to their proximity to probable centers of orogeny (foreland basins). Results indicate that these genera, which belonged to an array of higher taxa that diversified in the Middle and Late Ordovician (trilobites, brachiopods, bivalves, gastropods, monoplacophorans), were far more diverse in, and adjacent to, foreland basins than they were in areas farther removed from orogenic activity (carbonate platforms). This suggests an association of orogeny with diversification at that time.¹";

4951 s[4948] = "CARRERA M.G., RIGBY J.K. (1999).- Biogeography of Ordovician Sponges.- *Journal of Paleontology* 73, 1: 26-37.- FC&P 28-1, p. 48, ID=3983^Topic(s):biogeography; Porifera; Systematics:Porifera; Stratigraphy:Ordovician; Geography:^Sponges have an unrealized potential importance in biogeographic analysis. Biogeographic patterns determined from our analysis of all published data on distribution of Ordovician genera indicate Early Ordovician sponge faunas have relatively low diversity and are completely dominated by demosponges. Early Ordovician (Ibexian) faunas are characterized by the widespread co-occurrence of *Archaeoscyphia* and the problematic *Calathium*. This association is commonly found in biohermal structures, Middle Ordovician faunas show an increase in

diversity, and two broad associations are differentiated: Appalachian faunas (including Southern China and the Argentine Precordillera) and Great Basin faunas. Late Ordovician faunas show important changes in diversity and provincialism. Hexactinellid and calcareous sponges became important and new demosponge families appeared. Four Mohawkian-Cincinnatian associations are recognized here, including: 1) Mid-continent faunas; 2) Baltic faunas; 3) New South Wales faunas; and 4) western North American (California and Alaska) faunas. However, two separate biogeographic associations are differentiated based on faunal differences. These are a Pacific association (western North American and New South Wales) and an Atlantic association (Midcontinent Laurentia and Baltica). Distribution of sponge genera and migration patterns are utilized to consider paleogeographic dispositions of the different continental plates, climatic features, and oceanic currents. Such an analysis points to close paleogeographic affinities between the Argentine Precordillera and Laurentian Appalachian faunas. However, significant endemicity and the occurrence of extra-Laurentian genera suggest a relative isolation of the Precordillera terrane during the Late Ibxian-Whiterockian. The study also shows a faunal migration from the Appalachian region to South China during the Middle Ordovician and the migration of faunas from Baltica to Laurentia in the Late Ordovician. The occurrence of Laurentian migrants in New South Wales during the Late Ordovician could be related to inferred oceanic current circulation between these two areas, although other paleogeographic features may be involved.^1";

- 4952 s[4949] = "WEBBY B.D. (2002).- Patterns of Ordovician reef development.- SEPM Special Publications 72 (Phanerozoic Reef Patterns): 129-179.- FC&P 33-1, p. 42, ID=7198^Topic(s): geohistory; reefs; Systematics: ; Stratigraphy: Ordovician; Geography: ^A review of factors that may have influenced the major changes in Ordovician reef development is presented against an earth-system background of profound global and biotal change that includes a greenhouse climate, a sluggish, saline oceanic state, high sea levels, progressive ventilation of surface waters, intense episodes of volcanicity and orogeny, massive diversification of biotas, and an apparently short, sharp, end-Ordovician glaciation with accompanying extinction. Major controls on reef growth are inferred to include: (1) under the existing high levels of atmospheric carbon dioxide of the Early Ordovician, higher-than-normal temperatures promoting microbial reefal communities and cyanobacterial calcification processes - high temperatures may have exceeded adaptive ranges of many metazoans (excepting sponges), delaying their proliferation as reef builders; (2) sea-level fluctuations and elevated sea-level highstands of the Early Ordovician caused episodic drowning and influx of anoxic waters from an expanded oxygen-minimum zone over platforms and archipelagos, limiting reefal diversification to more rudimentary phases involving mainly microbial growth; (3) lower sea-level highstands during the Middle Ordovician restricted flooding to outer shelves, and consequently reef building occurred only in peripheral parts of platform areas, hence the lower abundances (only 18% of all preserved Ordovician reefs); (4) apparent rise in levels of oxygenation of tropical surface waters to a peak near the Middle-Late Ordovician boundary aided significantly the colonization of the reef habitat by sessile, respiring metazoans; and (5) elevated Late Ordovician sea-level highstands again causing episodic drowning over platforms, but this time influxes of oceanic waters had a limited, mainly regional, impact on reef development. Diversification and spread of reefs continued through the Ashgillian but, in the lead up to the end-Ordovician glaciation, late Ashgillian (Hirnantian) reefs developed in only a few sites, though they retained diverse biotas. [end-fragment of extensive summary]^1";
- 4953 s[4950] = "KALJO D., KALJO D.L., KLAAMANN E., KLAAMANN E.H.P. (1975).- Ordovician and Silurian Corals.- In A. Hallam (ed.): Atlas

- Palaeobiogeography: 37-45; Elsevier, Amsterdam.- FC&P 4-2, p. 58, ID=5274Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Ordovician Silurian; Geography: ^1";
- 4954 s[4951] = "SULTANBEKOVA Zh.S. (1986).- Rugozy i biostratigrafija verkhnego Ordovika i nizhnego Silura. [Rugosa and biostratigraphy of the Upper Ordovician and Lower Silurian; in Russian] .- Nauka (Alma-Ata): 123 pp., 7 figs, 40 pls.- FC&P 19-1.1, p. 49, ID=2658Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U - Silurian L; Geography: ^1";
- 4955 s[4952] = "WANG HONGZHEN, CHENG JIANQIANG (1991).- Late Ordovician and Early Silurian rugose coral biogeography and world reconstruction of palaeocontinents.- Palaeogeography, Palaeoclimatology, Palaeoecology 86: 3-21.- FC&P 21-1.1, p. 41, ID=3212Topic(s): biogeography, geography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician U - Silurian L; Geography: global^Two epochs of Early Palaeozoic rugose coral diversification, Caradocian-Ashgillian and Middle Llandoveryan-Early wenlockian, are chosen for biogeographical analysis at the generic level, following an overall revised classification of the Rugosa (wang et al. 1989). world reconstruction maps are based on palaeomagnetic, palaeotectonic and palaeobiogeographic data, and were constructed through an autograph programme on an IBM PC-AT microcomputer. The Caradocian and Ashgillian rugose corals are in 16 families and 71 genera, including 15% Cystiphyllida, 40% Streptelasmata and 44% Columnariida, in addition to the zaphrentoidid genus Protozaphrentis. Two biogeographical realms, the West Prototethyan and the East Prototethyan, may be discerned. The West Prototethyan Realm includes three provinces, the Siberian, the North American and the Kazakhstan-Hinganian. The East Prototethyan Realm also includes three provinces, the Southeast Asian (Yangtzean), the East Australian and the North European. The third area, the Gondwanan, is devoid of corals. In Middle and Late Llandoveryan and Early wenlockian, the rugose corals have 27 families and 130 genera, of which 26% are Cystiphyllida, 32% are Streptelasmata and 41% are Columnariida, in addition to the zaphrentoidid genus Duncanella. The West Prototethyan Realm contains three provinces, the Siberia-Mongolian, the North European and the North American. The East Prototethyan Realm consists of two provinces, the Southeast Asian (Yangtzean) and the Kazakhstan-Sinokorean, both bearing Ceriaster and Amplexoides.^1";
- 4956 s[4953] = "IVANOVSKIY A.B. (1970).- On systematic position of some Ordovician and Silurian Rugose Corals.- Geologiya i Geofizika 1970, 2: 120-122.- FC&P 2-2, p. 16, ID=4799Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician Silurian; Geography: ^1";
- 4957 s[4954] = "SULTANBEKOVA Zh.S. (1980).- Mikrostruktura skeleta i filogeniya nekotorykh ordovikskikh i silurijskikh rugoz Kazakhstana. [skeletal microstructure and phylogeny of some Ordovician and Silurian rugosans of Kazakhstan; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5828Topic(s): microstructures, phylogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician Silurian; Geography: ^1";
- 4958 s[4955] = "WEYER D. (1975).- Ueber dem Ursprung der Calostylidae Zittel 1879 (Anthozoa Rugosa, Ordoviz-Silur).- Freiburger Forsch. C, 1975, 282: 23-87.- FC&P 3-2, p. 43, ID=4968Topic(s): origins; Rugosa, Calostylidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician Silurian; Geography: ^Les Calostylidae ont pour ancêtre les Lambelasmata nov. fam. qui se subdivisent en Lambelasmatinae nov. subfam. et en Coelostylinae nov. subfam.^1";
- 4959 s[4956] = "NESTOR H., STOCK C.W. (2001).- Recovery of stromatoporoid

fauna after the Late Ordovician extinction.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 333-341.- FC&P 30-2, p. 33, ID=1600^Topic(s): extinctions O/S; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician / Silurian; Geography: ^The Late Ordovician extinction of stromatoporids was a gradual rather than an abrupt process of decrease in diversity through the Late Ordovician to Early Silurian transition. A transformation of a labechiid-dominated Ordovician stromatoporoid fauna into a clathrodictyid-dominated Early Silurian fauna embraced a wide time interval, from beginning of the late Caradoc to the end of the middle Llandovery (Aeronian). It roughly coincided with a supposed global cooling, ore "ice-house" period in Earth history. During this period the earliest labechiids with poorly calcified (probably aragonitic) skeletons were replaced by more advanced labechiids and clathrodictyids with well-calcified skeletons. The generic diversity of stromatoporoids reached its lowest value in the early Rhuddanian with representatives of only four genera, Clathrodictyon, Ecclimadictyon, Pachystylostroma and Forolina. During the late Rhuddanian and early Aeronian the earliest representatives of the families Actinostromatidae (Plectostroma) and Atelodictyidae (Intexodictyon) were added, respectively. Generic diversity abruptly increased in the late Aeronian (reaching at least 12 genera) when the first representatives of the Geronostromatidae (Petridiostroma), Pseudolabechiidae (Pachystroma), Stromatoporidae (Lineastroma) and Syringostromellidae (Syringostromella) appeared. During the Telychain the generic diversity of actinostromatids and stromatoporids increased further and the first densastromatids (Densastroma) appeared. A comparatively long duration of Late Ordovician extinction and Early Silurian recovery of the stromatoporoid fauna is probably best explained by general global cooling, including several glacial episodes in addition to the well-known end-Ordovician (Hirnantian) ice age, unfavourable for stromatoporoids as thermophilic organisms.^1";

4960 s[4957] = "NESTOR H. (1990).- Biostratigraphy: stromatoporoids.- Kaljo D. & Nestor H. (eds): Excursion Guidebook, Field Meeting Estonia: 46-51; Subcommission on Ordovician and Silurian Stratigraphy & Estonian Academy of Sciences.- FC&P 20-1.1, p. 78, ID=2878^Topic(s): stratigraphy, excursion guide; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Ordovician Ashg - Silurian Prid; Geography: ^[Twenty-three stromatoporoid communities in the Baltic are distinguished in rocks ranging in age from Ashgill to Pridoli. The communities are divided into 4 facies: lagoonal, shoal, open shelf, and slope. A large table shows the distribution of species in each community. Several species are useful for worldwide correlation of narrow time zones. Fifteen key species are illustrated in a plate.]^1";

4961 s[4958] = "YOUNG G.A., KERSHAW S. (2005).- Classification and controls of internal banding in Palaeozoic stromatoporoids and colonial corals.- Palaeontology 48, 3: 623-651.- FC&P 34, p. 108, ID=1380^Topic(s): sclerochronology; stroms, Anthozoa, growth banding; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: Ordovician Silurian; Geography: ^Palaeozoic corals and stromatoporoids exhibit a variety of internal banding phenomena, many of which have been commonly interpreted as annual growth bands. We evaluate bands through analysis of colonial corals and stromatoporoids from three stratigraphic intervals: Upper Ordovician of Manitoba, Canada, and Llandovery - Wenlock and Ludlow of Gotland, Sweden. Banding features are divided into four categories: (1) absence of banding; (2) density banding formed by variation in density or form of elements; (3) growth-interruptions banding including growth cessation and regeneration; and (4) postmortem banding caused by compaction or diagenesis. For discrimination of band types, it is essential to

examine internal structures and skeletal margins in thin sections or acetate peels. Species vary considerably in degree and type of banding; each has a distinct pattern of variation. We propose criteria to determine if banding is consistent with seasonally induced growth variation: (1) consistency in band character and thickness; (2) continuity of skeletal growth; (3) marginal features; and (4) evidence of diagenetic alteration. Density bands in tabulate and rugose corals probably represent annual variations, but results for stromatoporoids are more ambiguous; although stromatoporoids commonly show banding, unequivocal density banding is poorly developed and growth interruption generated most stromatoporoid banding. Cerioid rugose and tabulate corals possess the thickest density bands; the thinnest bands are in stromatoporoids and heliolitid tabulates.¹;

4962 s[4959] = "YOUNG G.A., ELIAS R.J. (1997).- Patterns of variation in Late Ordovician and Early Silurian tabulate corals.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 193-204.- FC&P 26-2, p. 14, ID=3684Topic(s): variation patterns; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U / Silurian L; Geography: ^A large data set on latest Ordovician and earliest Silurian tabulate corals from the East-central United States permits recognition and explanation of trends in intracolony and intraspecific variation. All common colonial coral species from this region were analyzed; these represent the orders Heliolitida, Halysitida, and Favositida. Comparison of patterns of intraspecific variation indicates that the inherent variabilities of the orders are different, and that certain types of variation tend to recur between species and orders. The variation pattern of each species was produced by the combination of structural and growth factors, working in concert with the coral's response to a particular set of environmental conditions. The development of external growth form was affected by environmental factors such as sedimentation rate and substrate stability. Interlocality variation within some species indicates that internal morphology was also strongly linked to environment. Correlation of internal characters with paleoenvironment probably reflects the control exerted on their development by space constraints determined by external corallum form. Assessment of the control of variation by structural factors can permit a more valid definition of coral species.¹;

4963 s[4960] = "ZAIKA Y. (2010).- Structure of the corallite wall of the Upper Ordovician and Silurian Favositidae (Tabulata) and its possible use in stratigraphic correlation.- Palaeoworld 19, 3-4: 256-267.- FC&P 36, p. 77, ID=6482Topic(s): wall structure; Tabulata Favositidae; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician U - Silurian; Geography: ^Based on an analysis of the significant collections of Favositidae (tabulate corals) from the Upper Ordovician-Lower Devonian of the Taimyr Peninsula, western Slope of the North Urals and the Tchernychev Uplift, this paper focuses on the macro- and micro-structure of the corallite wall. Seven structural types of the corallite wall have been recognized; some of them seem to have a definite stratigraphic range. The results contribute to the long-time discussion on the applicability of skeletal structure for systematics of the Favositidae, its evolutionary implications, and stratigraphic correlation. It has been held that the skeletal structure of the fossilized remains of Favositidae is inapplicable for such purposes because diagenetically, it is secondary, being a product of mineral replacement of the primary structure. In contrast, an assumption is made here that the "secondary" skeletal macro- and micro-structure may reflect in some way the "primary" skeleton. As a result, it is proposed that some evidence of evolution of the Favositidae may be obtained by evaluating the stratigraphic range of favositid representatives possessing different types of structure of the corallite wall.

- [original abstract]^1";
- 4964 s[4961] = "OSPANOVA N.K. (1991).- Order Heliolitida (heliolitids).- Atlas of fossil fauna and flora of Tajikistan. Ordovician, Silurian, Devonian: 11-17, 52-59; 171; Donish, Dushanbe. [atlas of fossils] - FC&P 23-1.1, p. 41, ID=4121^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Ordovician - Devonian; Geography: ^1";
- 4965 s[4962] = "OLIVER W.A.jr (1989).- Intraspecific variation in pre-Carboniferous rugose corals: a subjective review.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 1-6.- FC&P 19-1.1, p. 12, ID=2516^Topic(s): variation intraspecific; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous-pre; Geography: ^1";
- 4966 s[4963] = "LELESHUS V.L. (1970).- Position of the Equator during Late Ordovician, Silurian and Early Devonian times given by Tabulate Corals.- Doklady A.N. Tadjik. SSR 13, 6: 41-43.- FC&P 2-1, p. 17, ID=4723^Topic(s): geography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Ordovician - Devonian; Geography: ^1";
- 4967 s[4964] = "FEDOROWSKI J., GORYANOV V.B. (1973).- Redescription of Tetracorals described by E. Eichwald in "Palaeontology of Russia".- Acta Palaeontologica Polonica 18, 1: 3-70.- FC&P 2-2, p. 16, ID=4794^Topic(s): revision; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Ordovician - Permian L; Geography: ^Fifty-three species of tetracorals from Eichwald's collection have here been revised, described and illustrated. Stratigraphic range: Ordovician through Lower Permian. Most names given by Eichwald have lost their priority (nomen oblitum), but the present writers suggest to keep them for the species which were not described after Eichwald's publication.^1";
- 4968 s[4965] = "PICKETT J.W. (1975).- Continental reconstructions and the distribution of coral faunas during the Silurian.- Jl. Proc. r. Soc. NSW 108, 3/4: 147-156.- FC&P 5-1, p. 13, ID=5325^Topic(s): biogeography; coral faunas; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian; Geography: ^All published reconstructions have their problems; this study gives qualified support to an unpublished reconstruction by Rickard and Belbin, noting that the common mistake is to treat all Asia as a single unit.^1";
- 4969 s[4966] = "SCRUTTON C.T. (1989).- Corals and stromatoporoids.- National Museum of Wales, Geological Series, 9 [Holland C.H. & Bassett M.G. (eds.): The Global Standard for the Silurian System]: 228-230.- FC&P 19-2.1, p. 41, ID=2777^Topic(s): biostratigraphy; corals, stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Silurian; Geography: ^The distribution of stromatoporoids (at the generic level) in the Llandovery, Wenlock and Ludlow / Pridoli is outlined and their biostratigraphic potential assessed.^1";
- 4970 s[4967] = "YOUNG G.A., SCRUTTON C.T. (1991).- Growth form in silurian heliolitid corals: the influence of genetics and environment.- Paleobiology 17, 4: 369-387.http:// www.jstor.org/pss/2400751.- FC&P 21-1.1, p. 14, ID=3198^Topic(s): growth forms; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: ^Colony growth form in some silurian heliolitid corals is analyzed by the measurement of their shape in profile. Data are presented for seven species, Stelliporella parvistella, Heliolites interstinctus, H. megastoma, H. daintreei, H. spongodes, Propora tubulata, and Plasmopora scita from three localities in Gotland, Sweden, and three localities in England. Intraspecific growth-form variation is presented on triangle diagrams. These plots allow variation to be compared between species present at each locality

and between localities for each species. Results indicate that the overall potential for growth-form variation is genetically controlled and that levels of response to environmental stimuli may differ markedly between species. *Stelliporella parvistella* is a very plastic species, the only one developing branching growth in addition to other growth forms. *Heliolites interstinctus* is much less variable, dominantly tabular, domal, and low bulbous in form, but demonstrates a similar response. *Propora tubulata* has a tightly constrained bulbous growth form that shows little variation between localities. The other species are represented by few specimens, most of which parallel *H. interstinctus*. The likely moderating influences of light levels, substrate type, sedimentation rate, energy levels, and other variables on growth-form variation and species range are considered. The main environmental factor including ecophenotypic response is concluded to be sedimentation rate. A close correlation between this factor and growth form in *S. parvistella* indicates that form in this species is a particularly sensitive indicator of sedimentation rate and substrate conditions. No simple equations can be made between specific environments and one particular growth form in these corals. [original abstract]^1";

- 4971 s[4968] = "NEWALL G. (1970).- A symbiotic relationship between *Lingula* and the coral *Heliolites* in the Silurian.- Trace fossils [T.P. Crimes & I.C. Harper (eds)]: 335-343; Liverpool.- FC&P 6-1, p. 25, ID=5517^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: ^Many specimens of *Heliolites interstinctus* from the Aymestry Limestone (Ludlovian) of the Welsh Borderlands contain borings: the most commonly associated coral, *Favosites gothlandicus*, does not. The only fossil preserved intact in the now sediment filled borings is *Lingula* sp., which occurs in life position in some 28 borings. It is concluded that in some cases the corals were still alive when the borings were occupied. It is inferred that *Lingula* was unlikely to have made the borings and from the morphology of the borings themselves, annelids, bivalves or cirripeds were the most likely borers. It is concluded that *Lingula* occupied preformed sediment filled borings, in some cases living symbiotically with the live *Heliolites*. It is suggested that the structure of *Heliolites* was less resistant to boring attack than that of *Favosites*. [original abstract.]^1";
- 4972 s[4969] = "BONDARENKO O.B. (1977).- Morfologicheskiye osobennosti i sistematika siluriyskikh Heliolitoidiye Proporida i Heliolitida. [morphological peculiarities and systematics of Silurian heliolitids Proporida and Heliolitida; in Russian].- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii ??, 1: 158 [?158 pp].- FC&P 7-2, p. 15, ID=5616^Topic(s): ; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: ^^1";
- 4973 s[4970] = "BONDARENKO O.B., STASINSKA A. (1976).- Astogenez i morfogenez siluriyskogo roda *Laminopora* (korally - Heliolitoidi). [astogeny and morphogeny of Silurian genus *Laminopora*, corals - heliolitids; in Russian].- Vestn. Mosk. Univ. 1976, 6: 27-35.- FC&P 7-2, p. 16, ID=5618^Topic(s): ; Heliolitida, *Laminopora*; Systematics: Cnidaria; Heliolitida; Stratigraphy: Silurian; Geography: ^A detailed description of the astogenesis and morphogenesis of the Silurian species *Laminopora calyculata* (Lindstrom 1899), *L. pseudocalyculata* Bondarenko n.sp., and *L. tuberosa* Lindstrom 1899) is given. It is stated that *L. pseudocalyculata* derives from *L. calyculata* and is considered to be a transitorial form to *L. tuberosa*.^1";
- 4974 s[4971] = "GRICENKO V.P. (1980).- Iskopaemye kapsuly planul siluriyskikh geliolitoidi. [fossilized capsules of planulae of Silurian heliolitids; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 41, ID=5806^Topic(s): ; Heliolitida ?; Systematics: Cnidaria;

- 4975 Heliolitida; Stratigraphy: Silurian; Geography: ^1"; s[4972] = "ILYINA T.G. (1978).- Reviziya roda Anisophyllum (Rugosa).- Paleontologicheskii Zhurnal 1978, 3: 31-38.- FC&P 8-1, p. 50, ID=0219^Topic(s): revision; Rugosa, Anisophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: ^A description is given on the toptotypical material of Anisophyllum agassizi E. & H., 1850, from Upper Silurian deposits (Brownsport formation) of North America. Primary investigations on the inner structure and the trabecular microstructure of the septa, based on thin sections and peels, show that the genus Anisophyllum belongs to the family Plerophyllidae. The genus Anisophyllum is revised. [translated from the Russian by Oekentorp]^1";
- 4976 s[4973] = "EZAKI Y., YASUHARA Y. (2004).- Regular and flexible modes of division and hystero-ontogenetic growth in the Silurian rugose coral Stauria favosa.- Palaeontology 47, 5: 1075-1091.- FC&P 33-2, p. 15, ID=1113^Topic(s): blastogeny; Rugosa, Stauria; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: ^New modules arise in colonial corals as the result of asexual reproduction. The Silurian rugosan Stauria favosa ordinarily exhibits cerioid coralla with a characteristic cross-shaped axial structure and a typical pattern of parricidal increase. Quadripartite increase at the sites of the four protosepta is most common, whereas cases of tripartite increase are rare. Parental protosepta are transformed into dividing walls, where the four protosepta first appear with a definitive polarity in offset corallites. Daughter corallites inherit metasepta as metasepta, and catasepta as catasepta, within the same quadrants as those of the parents. Metasepta are inserted serially, following Kunth's rule, as is characteristic of rugosan protocorallites. As each daughter corallite derived immediately from the same parent is arranged with identical polarity, it grows equally and evenly both individually and as a group. Daughters thus form protosepta and metasepta under strict phylogenetic and developmental constraints. However, individual corallites grow and reproduce autonomously, by using all available skeleton and space of the parent. Although each module cannot modify essential modes of division, flexibility of the system was via changes in the density and arrangement of corallites, and regulating modes of growth, in tandem with adjacent corallites within the corallum. It is probable that regularity, due to constraints of several origins, as well as flexibility are typical of other rugosan colonies and played an important role in growth dynamics between corallites and corallum.^1";
- 4977 s[4974] = "YU CHANGMING, OEKENTORP K. (1983).- Electron microscopic study on the microstructure of the Silurian Ketophyllum djupviki wedekind, 1927 (Rugosa).- N. Jb. Geol. Palaont. Mh. 1983, 9: 561-575.- FC&P 12-1, p. 37, ID=1910^Topic(s): microstructures, SEM study; Rugosa, Ketophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: ^Based on electron microscopic observations two fundamental types of microstructures can be observed: a fibrous (1) and a lamellar one (2). Both of them - disregarding the original material - consist of minute calcite crystals. They can only be differentiated by the arrangement of these crystals, thus being either perpendicular (1) or parallel (2) to the surface of the skeletal elements.^1";
- 4978 s[4975] = "SCRUTTON C.T. (1996).- Ecophenotypic variation in the early Silurian rugose coral Palaeocyclus porpita.- Proceedings of the Yorkshire Geological Society 05, 1: 1-8.- FC&P 25-2, p. 45, ID=3088^Topic(s): variation; Rugosa, Palaeocyclus; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian L; Geography: ^Palaeocyclus porpita (Linnaeus) is a highly distinctive and biostratigraphically important early Silurian rugose coral, widespread in north-west Europe and with scattered records in North America. In eastern North America, Palaeocyclus rotuloides (Hall) occupies a similar biostratigraphical position, but differs from P.

- 4984 s[4981] = "IVANOVSKIY A.B. (1985).- O siluriyskikh odinochnykh triplazmatidakh (Rugozy).- Ezhegodnik vsesoyznogo Paleontologicheskogo Obshchestva 28: 259-263.- FC&P 15-1.2, p. 25, ID=0866^Topic(s): ; Rugosa, Tryplasmataidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian; Geography: ^^1";
- 4985 s[4982] = "WATKINS R. (1975).- Silurian brachiopods in a stromatoporoid bioherm.- Lethaia 8, 1: 53-61.- FC&P 4-1, p. 46, ID=5183^Topic(s): stromatoporoid bioherm dwellers; brachiopods; Systematics: Brachiopoda Cnidaria; Stromatoporoidea; Stratigraphy: Silurian; Geography: ^^1";
- 4986 s[4983] = "BOGOYAVLENSKAYA O.V. (1981).- Rasprostraneniye Przhidol'skikh Stromatoporat v nekotorykh Rayonakh SSSR [distribution of Pridolian Stromatoporoids in some regions of the USSR].- Akademiya Nauk SSSR, Ural'sk Nauchn. Tsentr. Sverdlovsk / / Biostratigrafiya i fauna srednego Paleozoya Urala, Sapelnikov, V.P. and Chuvashov, B.I. editors. / 27-35.- FC&P 13-1, p. 47, ID=0515^Topic(s): distribution; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian Prid; Geography: USSR^^1";
- 4987 s[4984] = "STEL J.H., STOEP E. (1982).- Interspecific Relaties en Boringen in einige Silurische Stromatoporen [interspecific relationships and cavities in some Silurian stromatoporoids].- Grondboor en Hamer 1982, 1: 11-23. [in Dutch].- FC&P 11-2, p. 44, ID=0908^Topic(s): borings within; stroms, borings; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: ^Interactions between stromatoporoids and syringoporines, rugose corals and trepostomes are described. It is demonstrated that the stromatoporoid-syringoporine intergrowth cannot be interpreted as commensalism. The stromatoporoid-rugose coral intergrowth is interpreted as neutralism, whereas space competition is demonstrated in the stromatoporoid-trepostome intergrowth. Six types of borings were found in silurian stromatoporoids from Gotland; three could be ascribed to bivalve borings, the other three to worms. [original summary]^1";
- 4988 s[4985] = "SEGARS M.T., LIDDELL W.D. (1989).- Microhabitat analysis of Silurian stromatoporoids as substrates for epibionts.- Palaios 03: 404-412.- FC&P 18-1, p. 53, ID=2309^Topic(s): epibionts of; stroms, epibionts; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: ^Thirty-two species of epibionts lived on the upper or basal surfaces of the Gotland stromatoporoid studied. The two surfaces have similar diversities of fauna and are zoned from inside to out.^1";
- 4989 s[4986] = "NESTOR H. (1990).- Autecology of Stromatoporoids in Silurian cratonic seas.- Spec. Pap. Palaeont. 32: 265-280.- FC&P 20-2, p. 71, ID=2975^Topic(s): ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: ^Stromatoporoids are fossils of problematical affinity that were probably colonial, benthic sessile, or liberossessile marine organisms with a basal ectodermal skeleton. They were most common on carbonate shelves bordering peneplaned continents in low palaeolatitudes. They were rare in shelve seas with a high influx of coarse elastics. Stromatoporoids were absent from seas of the Malvinokaffric Realm and late Silurian evaporitic epicontinental basins (Michigan basin, Tunguska basin). High-energy carbonate shoal environments were optimal for Stromatoporoids, and there they often formed parts of organic buildups (bioherms, biostromes, banks). Their role in reef building increased during the Silurian. Near-shore low-energy environments (lagoons, mud flats, restricted shelf) were less favourable for Stromatoporoids, especially when their hydrochemical regime declined from normal marine. Stromatoporoids were typical of low-energy open shelf environment, but their taxonomic diversity and frequency decreased offshore. They lived in normal marine

- conditions in warm water, at depth up to 70 m. They preferred agitated water and a hard or semi-soft, stable bottom. Ecological differentiation of Silurian stromatoporoid faunas was quite low.¹¹";
- 4990 s[4987] = "STOCK C.W., BURRY-STOCK J.A. (1998).- Two new genera of Upper Silurian actinostromatid stromatoporoids.- Journal of Paleontology 72: 190-201.- FC&P 27-1, p. 111, ID=3869Topic(s): new taxa; stroms, Actinostromatida; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian U; Geography: ^Two new genera of Upper Silurian stromatoporoids in order Actinostromatida are described. Genus Bicolumnostratum Stock, with type species, B. micum (Bogoyavlenskaya), is characterized by two kinds of pillars and nonaligned colliculi, and is assigned to the family Actinostromatidae. Genus Acosmostroma Stock, with type species A. ataxium Stock n.sp., contains irregular micropillars and microcolliculi, and is assigned to the family Densastromatidae. Two additional new species are Acosmostroma glascoense Stock and A. ? cobleskillense Stock. A fourth species is A. tenuissimum (Parks). Bicolumnostrata is known from Ludlow- and Pridoli-age strata, whereas the occurrences of Acosmostroma are strictly Pridoli in age.¹¹";
- 4991 s[4988] = "NESTOR H. (1994).- Main trends in stromatoporoid evolution during the Silurian.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 329-339.- FC&P 23-1.1, p. 23, ID=4090Topic(s): phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Silurian; Geography: ^The Silurian was a period of the most intensive diversification of the Palaeozoic stromatoporoid fauna. By the end of this period all the main phylogenetic branches of the Palaeozoic Stromatoporoids were formed. Half of the orders (Stromatoporellida, Actinostromatida, Stromatoporida) and most of the families originated in the Silurian. The most rapid expansion in diversity took place in Wenlock time. Progressive folding of the basal surface of the soft body, increasing the skeleton secreting ability of the basal pinacoderm, was the most general tendency in stromatoporoid evolution. The role of labechiids decreased and that of clathrodictyids increased rapidly. Stromatoporoids with regular continuous laminae (order Stromatoporellida), with a loose skeleton lattice (order Actinostromatida) and irregularly amalgamated structure (order Stromatoporida) appeared in the early Silurian. Parallel evolution of Stromatoporoids with different kinds of microreticulate microstructure (ortho-, clino- and akosmoreticulate) was characteristic of the Silurian.¹¹";
- 4992 s[4989] = "STEL J.H. (1980).- Morphology of the Silurian Demosponges Desmidopora Nicholson and Nodulipora Lindstrom: affinities of Favositids.- Munster. Forsch. Geol. Palaont. 52 [Kl. Oekentorp (ed.): A. von Schoupe jubilee commemorative volume]: ... pp.- FC&P 9-2, p. 14, ID=6300Topic(s): affinities; Porifera, Favositida; Systematics: Porifera Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: ^Skeletal morphology and its variation are described in Desmidopora alveolaris Nicholson and in Nodulipora acuminata Lindstrom. The features of these Silurian fossils suggest sclerosponge affinities. Pores are present in both species and the surface of Nodulipora carries astrorhizae. A comparison is made between skeletons of sclerosponges and tabulates: favositids are interpreted as the basal skeletons of demosponges.¹¹";
- 4993 s[4990] = "STASINSKA A. (1976).- Structure and blastogeny of Palaeofavosipora clausa.- Acta Palaeontologica Polonica 21, 4: 365-371.http://www.pan.pl/article/item/app21-365.html.- FC&P 6-2, p. 24, ID=0168Topic(s): nomenclature; Tabulata, Palaeofavosipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: ^The new generic name

- Palaeofavosipora is proposed for the preoccupied name Favosipora Stasinska 1967, characterized by corallites loosely arranged or connected together, rounded or polygonal in cross sections and then connected by angular pores. The representatives of the monotypic family Palaeofavosiporidae are considered to be the intermediate forms between the Auloporidae and Favositidae. *P. clausa* (Lindstroem 1865) multiplies by budding on the walls.¹";
- 4994 s[4991] = "YU CHANGMING, OEKENTORP K. (1984).- On the silurian tabulate coral genus Somphopora Lindstroem.- Muenstersche Forschungen zur Geologie und Palaeontologie 61; 42 pp.- FC&P 13-1, p. 45, ID=0499^Topic(s): revision; Tabulata, Somphopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: ^Since Lindstroem established the genus Somphopora in 1883, no further detailed revisional work has been undertaken. Based on a critical restudy of the available type material and additional specimens collected afterwards, the authors aim to clarify the main features of the forms assigned to Somphopora and to discuss the affinities between this genus and allied genera. Attempts are made to distinguish the species of Somphopora by biostatistic and biometric methods using the Videoplan equipment.¹";
- 4995 s[4992] = "LAFUSTE J., TOURNEUR F. (1988).- Microstructure du genre Favosites Lamarck 1816 (Tabulata) et de Favositides du Silurien, avec une revision du neotype de Favosites gothlandicus Lamarck 1816.- Annales de la Societe geologique de Belgique 110: 189-198.- FC&P 17-2, p. 31, ID=2191^Topic(s): microstructures; Tabulata, Favosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: ^The neotype of Favosites gothlandicus Lamarck 1816, the type species of the genus Favosites Lamarck 1816, is redescribed in detail. Its walls are composed of microlamellae flanking a median plate made of plaquettes. This typical microstructure also occurs in numerous Silurian species of Favosites and Paleofavosites Twenhofel 1914. Diagnoses of these two genera are consequently emended to include these microstructural details.¹";
- 4996 s[4993] = "HUBMANN B. (1991).- Silurian Catenipora Lamarck - a guide to ancient latitudinal and faunal relationships.- Österreichische Akademie der Wissenschaften, mathematisch-naturwissenschaftliche Klasse, Anz. 128: 113-120.- FC&P 21-1.1, p. 50, ID=3254^Topic(s): ecology, biogeography; Tabulata, Catenipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: ^During silurian times representatives of Catenipora (tabulate corals) were distributed worldwide. When plotted on a palaeogeographical map the localities show a significant clustering between 30° N and 30° S of the palaeoequator. Affinities between species of Laurussian and Gondwanan assemblages are pointed out.¹";
- 4997 s[4994] = "JIN C. (1997).- Brief Description of New Tabulatan Genus.- Tethyan Geol. 21: 177-181.- FC&P 27-1, p. 84, ID=3826^Topic(s): ; Tabulata, Chotianopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian; Geography: ^A new Silurian tabulate genus, Chaotianopora, which resembles Coenites is briefly described.¹";
- 4998 s[4995] = "LELESHUS V.L. (1971).- A Revision of representatives of the Lower Silurian genus Palaeofavosites. Computer application to biological classification.- Izv. fiziko-matemat. i geologo- Khim. Nauk 4, 42: 64-69.- FC&P 2-1, p. 16, ID=4718^Topic(s): numerical classification; Tabulata, Favosites; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian L; Geography: ^^1";
- 4999 s[4996] = "POWELL J.H., SCRUTTON C.T. (1978).- Variation in the Silurian tabulate coral Paleofavosites, and the status of Mesofavosites.- Palaeontology 21, 2: 307-319.- FC&P 7-2, p. 18, ID=5622^Topic(s): variation, nomenclature; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy:

Silurian; Geography: ^Paleofavosites asper (d'Orbigny) is redescribed on the basis of the holotype and additional material from its type area of the Welsh Borderland. The species shows considerable variation, particularly in the form and location of intercorallite pores, from colonies with pores, including a high proportion of solenia, almost exclusively located in corallite angles to those with up to 40% of pores within corallite walls. This species, the type species of Paleofavosites Twenhofel 1914, includes variants with the structural features considered characteristic of Mesofavosites Sokolov 1951. We, therefore, regard Mesofavosites as a junior subjective synonym of Paleofavosites. [original summary]^1";

5000 s[4997] = "POWELL J.H. (1980).- Palaeoecology and taxonomy of some Wenlock tabulate corals and stromatoporoids.- Leeds Inst. of Geol. Sciences, unpublished Ph.D. thesis.- FC&P 9-1, p. 25, ID=5788^Topic(s): ; Tabulata, Stroms; Systematics: Cnidaria Porifera; Tabulata Stromatoporoidea; Stratigraphy: Silurian Wen; Geography: ^The stratigraphy of the Wenlock Series of the Welsh Borderlands is briefly reviewed and the application of the standard East European coral biozones discussed. * The taxonomy of some Wenlock tabulate and heliolitid corals from the Welsh Borderlands and South Wales is revised. The taxa comprise 13 genera and 28 species including new species of Favosites (2), Thamnopora (1), and Halysites (1), as well as species of Paleofavosites, Thecia, Angopora, Coenites, Cladopora, Alveolites, Cystihalysites, Heliolites, Plasmopora, and Propora. Observations are made on the concepts of some genera particularly Paleofavosites, Angopora and Halysites. Some Wenlock stromatoporoids are briefly described along with commensal associations of Diplostroma yavorski and calcareous algae, Cornulites and heliolitids, and chimney shaped burrows in Thecia. * Periodic zones of skeletal thickening in favositids are shown to be related to levels of increase in colonies, and the seasonal nature of periodic thickening is discussed. Serial sections of Favosites have revealed pits at three corallite junctions and confirm lateral increase in favositids. Wall structure and septal spine development in the Halysitidae is revised and their taxonomic significance outlined. * Poorly defined tabulate - heliolitid coral associations have been established in the reef and inter-reef facies of the Much Wenlock Limestone. The associations are related to phases of reef development and location on or off-reef. Growth rates and longevity in favositids are comparable with Scleractinian corals. * Analysis of reefs within the sequentially developed (inter-reef) facies of the Much Wenlock Limestone of Wenlock Edge has shown that the reefs of the stratigraphically lower, clay-rich facies are dominated by heliolitids, whereas the reefs of the uppermost grainstone facies show a decrease in heliolitids with a marked increase in favositids and stromatoporoids. This pattern is attributed to a gradual shallowing through the deposition of the Limestone, but with only the uppermost facies deposited within wave base. * Regional faunal - facies variations in the Wenlock of the Welsh Borderlands and South Wales indicate a high diversity focus in the Wenlock-Dudley area with a decreasing diversity gradient towards deeper water and non-reef facies. Local variations are apparent, such as the bryozoa dominated reef at Usk. Comparison of Wenlock coral faunas between the Welsh Borderlands and the Baltic province indicates few palaeozoogeographical links between these areas.^1";

5001 s[4998] = "NIELD E.W. (1984).- The boring of Silurian stromatoporoids - towards an understanding of larval behaviour of the Trypanites organism.- Palaeogeography, Palaeoclimatology, Palaeoecology 048: 229-243.- FC&P 16-2, p. 35, ID=2086^Topic(s): Trypanites borings in Stroms; Stroms; Systematics: problematica; Stratigraphy: Silurian; Geography: ^[most boring are found at the top of stromatoporoids due to progressive burial of their bases, but independent of this tendency, the boring organism tended to favor prominences for settlement.]^1";

- 5002 s[4999] = "COPPER P., BRUNTON F.R. (1991).- A global review of Silurian reefs.- Special Papers in Palaeontology 44 [Bassett M.G., Lane P.O. & Edwards D. (eds): The Murchison Symposium: Proceedings of an International Conference on the Silurian System]: ... pages.- FC&P 20-1.1, p. 15, ID=2791^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: ^^1";
- 5003 s[5000] = "WATKINS R. (1996).- Skeletal composition of Silurian benthic marine faunas.- Palaios 11: 550-558.- FC&P 26-1, p. 78, ID=3654^Topic(s): benthos, ecology; benthic faunas; Systematics: ; Stratigraphy: Silurian; Geography: ^Bulk skeletal composition of 162 samples from Europe and North America are plotted on triangle diagrams. Apices are 1. Stromatoporoids + corals + bryozoans, 2. Echinoderms, 3. Brachiopods + mollusks + arthropods. Faunal mixes correspond to various environments. Nearshore clastic environments are of low diversity dominated by 3. Offshore clastic environments are of higher diversity and contain all three groups; reefs and subtidal carbonates are of high diversity and characterized by groups 2 and 1.^1";
- 5004 s[5001] = "BRUNTON F.R., SMITH L., DIXON O.A., COPPER P., NESTOR H., KERSHAW S. (1998).- Silurian reef episodes, changing seascapes and paleobiogeography.- In: Landing E. and Johnson M. E. (eds): Silurian Cycles [James Hall Centennial Volume]. New York State Museum Bulletin 491: 265-282.- FC&P 28-2, p. 36, ID=4031^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Silurian; Geography: ^Eight global Silurian reef-building episodes coincide with climatic and oceanic conditions characterized by inferred warmer, high-latitude climates; salinity-dense bottom waters; and accompanying low diversity, planktic and nektonic faunas. Periodic removal of reef and bottom-level community habitats by tectophases and relative sea-level falls appears to have stimulated reorganization and evolution of invertebrate communities during subsequent transgressive intervals. Latest Ordovician and early-middle Llandovery metazoans-parazoans gradually reestablished shallow- and deeper-water reef ecosystems. Evolutionary radiations of coral and stromatoporoid faunas are evident in the upper Llandovery and lower Wenlock. Although corals and stromatoporoids reached their Silurian acmes in the Wenlock, stromatoporoids maintained similar diversities in the Ludlow. Numerous coral species disappeared by the early Ludlow, in part coinciding with the end-Wenlock extinctions of different planktic and benthic faunas. Calcimicrobial communities and calcareous algae were important constructors in many early-middle Llandovery reefs, are less conspicuous in many late Llandovery-early Wenlock reefs, and were volumetrically important reef constructors in many Late Silurian reefs. Morphological innovations of selected Ludlow benthos and associated lithofacies show a "Devonian carbonate bank archetype";, with distinguishable forereef, reef, backreef, and lagoonal facies. Partially reef-rimmed, late Ludlow, distally-steepened, carbonate banks reflect a change in reef patterns from the patchiness that characterized most Early Silurian flat-topped carbonate bank seascapes. Wenlock and late Ludlow reef tracts were larger in areal extent than modern reef tracts and were concentrated in subtropical and equatorial climatic belts [See also: Brunton F. R., Copper P. & Dixon O. A., 1997, Silurian reef-building episodes. Proceedings 8th International Coral Reef Symposium 2: 1643-1650].^1";
- 5005 s[5002] = "OLIVER W.A.jr (1987).- James Hall and Fossil Corals.- Earth Sci. History 6, 1: 99-105.- FC&P 19-1.1, p. 40, ID=2616^Topic(s): biographical; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Silurian Devonian; Geography: ^During his long career, James Hall named and described over 250 species and several genera of fossil corals, mostly of Middle Silurian to Middle Devonian age. Hall's principal coral works were published in 1843, 1877, 1882-84, and (with G. B. Simpson)

1887. Sporadic work on corals continued to 1898, the year of his death. In spite of shortcomings, his four main contributions provided the taxonomic base for much of the later work on Helderberg, Onondaga and Hamilton corals in New York and adjacent areas. Beginning in 1868, George B. Simpson was one of Hall's many assistants. He began as illustrator, became a describer of corals and bryozoans, and ultimately co-author of the 1887 work. His own study of Paleozoic coral genera, based on thin section analyses, began the post-Hall era of coral work in eastern North America.¹¹;

- 5006 s[5003] = "WEYER D. (1984).- Das Rugosa-Genus *Duncanella* Nicholson 1874 (Anthozoa, Silur-Devon).- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 12, 5: 29-52.- FC&P 13-2, p. 38, ID=0468Topic(s): ; Rugosa, *Duncanella*; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: ^Studies on the morphology of the type species *Duncanella borealis* Nicholson 1874, from the Waldron Shale (upper Wenlockian) of Waldron (Indiana), result in a redefinition of the genus, which is classified because of its aulos as a member of Laccophyllinae, with probable synonym *Petronella* Birenheide 1965. Distribution of *Duncanella* reaches from lower Wenlockian to upper Eifelian throughout Europe, Asia, and North America. Additionally described species are *Duncanella*? n.sp. A from the Kitaigorod horizon (early Wenlockian) of Podolia, and *Duncanella* n.sp. B from the Haragan formation (Lochkovian) of Oklahoma. *Duncanella borealis* occurs in Wenlock limestones/shales near Dudley (England). * Missing apical wall structures in *Duncanella* and some few similar genera (of Laccophyllidae, Hapsiphyllidae, Plerophyllidae, Polycoeliidae) may be explained by a special mode of asexual reproduction, well known from several Scleractinian corals as gemmation by transverse fission. Comparative materials of European Miocene *Kionotrochus* (*Cylindrophyllia*) Yabe & Eguchi 1937 are figured, with signs of transverse fission. There was no proof for the Adradosiid growth model proposed by Plusquellec (1981). Records of a wall-free apex run from Lower Silurian to Upper Permian (Wenlockian-Dzhulfian). The curious feature obviously is of no taxonomic use at the generic level, and some taxa perhaps might become synonyms of identical parallel genera provided with normally developed archaeothecate corallum tips (*Gymnaxon* Birenheide & Soto 1977 = *Laccophyllum* Simpson 1900; *Hapsizaphrentis* Kong 1981 = *Adradosia* Birenheide & Soto 1977; *Barbarella* Flügel 1972 = *Pentaphyllum* de Koninck 1872; *Groenlandophyllum* Flügel 1973 = *Calophyllum* Dana 1846). [original summary]¹¹;
- 5007 s[5004] = "WEYER D. (2001).- *Muenstraia*, ein neues Rugosen-Genus (Anthozoa) aus dem Obersilur und Unterdevon.- Mitteilungen des Museum für Naturkunde Berlin, Geowissenschaftliche Reihe, 4: 71-82.- FC&P 31-1, p. 61, ID=1629Topic(s): new taxa; Rugosa, *Muenstraia*; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U, Devonian L; Geography: ^The new taxon, one of the most ancient members of the Ahermatypic suborder Cyathaxoniina, includes the type species *Muenstraia franconica* n.sp. (Ludlovian, Elbersreuth, Orthoceratites Limestone Formation, Upper Franconia, Germany) and three further species: *Muenstraia squarrosa* (Sutherland 1965) (lower Ludlovian, Henryhouse Formation, Oklahoma, USA), *Muenstraia* sp. (upper Lochkovian, Yukon Territories, Canada), *Muenstraia thuringica* n.sp. (middle/upper Pragian, Tentaculitid Limestone Formation, Thuringian Mountains, Germany, and middle Pragian, Tafiltal, Morocco). The genus descends from the isolated Upper Middle Ordovician *Protozaphrentis* Yu 1957, only known from Xinjiang in China; it is the ancestor of two new phylogenetic lines starting in the Ludlovian with *Laccophyllum* Simpson 1900 and *Sutherlandia weyer* 1972.¹¹;
- 5008 s[5005] = "WEYER D. (1980).- Das silurisch-devonische Rugosa-Genus *Petraia* Münster 1839.- Freiburger Forsch.-Hft C357: 25-42.- FC&P 10-1, p. 49, ID=5982Topic(s): ; Rugosa,

Petraia; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: ^Morphology and systematic position of Petraia Muenster 1839 are unknown, not one of the five genosyntypes being sufficiently studied for generic determination. The revision proposed by Schindewolf in 1931 must be rejected because of serious errors concerning morphological observation and nomenclature. * The type species Petraia decussata Muenster 1839 is probably of Upper Devonian rather than of Upper Silurian age. A series of 14 syntypes (Berlin museum) has been found in Famennian clymeniid limestones at the locality Schubelhammer. Up to a future revision based on a lectotype to be selected and perhaps offering basic taxonomical alterations, the best way will be to retain the traditional idea of Petraia in the sense of Schindewolf, using one of his specimens (1931, text-figs. 5-9) as a provisional standard. * The coral fauna of the Upper Silurian "orthoceratite limestone" at the locality Elbersreuth includes species of several genera: Palaecoyathus Foerste 1888, Petraia Muenster 1839 (sensu Schindewolf 1931), Sutherlandinia Weyer 1972, Laccophyllum Simpson 1900. The lectotype of Petraia radiata Muenster 1839, used by Schindewolf to define the genus Petraia, is a coral without contrasting minor septa, most probably belonging to Palaecoyathus. [original summary]^1";

5009 s[5006] = "LAFUSTE J. (1983).- Disparite microstructurale entre Calceola Lamarck et Goniophyllum Dybowski (Tetracoralla, Devonien et Silurien).- C. R. Acad. Sci., Paris 96: 1749-1752.- FC&P 13-1, p. 26, ID=0406^Topic(s): microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: ^Le sclerenchyme de Goniophyllum, est compose de microlamelles cupulaires du type connu chez les Celenteres paleozoiques. Les microlamelles de Calceola sont plus minces, plus larges et presentent parfois une morphologie "en tenaille". II est propose de considerer Calceola comme un genre incertae sedis, rattache toutefois a la famille des Goniophyllidae.The sclerenchyme of Goniophyllum is made of cupular microlamellae, of the kind encountered in Paleozoic corals. The microlamellae of Calceola are thinner, broader and sometimes exhibit a pincers-shape morphology. It is proposed that Calceola be considered as a genus incertae sedis, which nevertheless bears some resemblance with the Goniophyllidae family.^1";

5010 s[5007] = "BIRENHEIDE R. (1974).- Zur Herkunft der devonischen cystimorphen Rugosa.- Senckenbergiana lethaea 54, 5/6: 453-473.- FC&P 3-1, p. 23, ID=4875^Topic(s): origins; Rugosa, Cystiphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian Devonian; Geography: ^Examples of the Silurian Cystiphyllinae Araeopoma and Hedstroemophyllum as well as of the Goniophyllinae Goniophyllum and Calceola demonstrate that the minor septa between the counter septum and its neighbouring major septa are absent. This peculiarity probably also occurs in Cystiphyllum and Rhizophyllum. Together with the similar architecture shown in longitudinal sections this character reveals strong relations between all these genera and the Devonian Digonophyllinae (= Plasmophyllinae sensu Birenheide 1964). The systematics of the "Cystimorpha", outlined in Birenheide 1964, are completed. By subsequent designation (Stumm 1949: 44) the lectotype of Mesophyllum defectum is the colony figured in Goldfuss 1826: pl. 17 fig. 5e, being at the same time the lectotype of Cyathophyllum vesiculosum Goldfuss 1826. The subsequent change of the lectotype by Tsien 1970 is invalid.^1";

5011 s[5008] = "PEDDER A.E.H., OLIVER W.A.jr (1982).- Stauromatidium and Stauromatidiidae, new genus and family of Upper Silurian and Lower Devonian rugose corals.- Bulletin geol. Surv. Can. 352; 43 pp.- FC&P 12-1, p. 39, ID=1917^Topic(s): new taxa; Rugosa, Stauromatidiidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian U, Devonian L; Geography: ^The Stauromatidiidae [fam.nov.] include seven named and at least two unnamed species assigned to two genera, Stauromatidium [gen.nov.] and

Farabophyllum. In earlier works, species of the family were referred, either firmly or tentatively, to no less than nine genera, representing seven families. Although stauromatidiid species range from upper Ludlow or early Pridolian to late Dalejan or early Eifelian and are found in both the Eastern Americas and Old World Devonian faunal realms, the family, on the whole, is rare and as currently known is confined to just four of twelve Early Devonian coral provinces. The stauromatidiidae probably evolved from the Tryplasmataceae and possibly gave rise to the Stringophyllidae. New species are *S. strigosum* from the upper Ludlow or early Pridolian part of the Road River Formation, Yukon Territory; *S. sentum* from the Pragian part of the same formation and region; and *S. montjolicum* from the Lochkovian Mont Joli Formation, Quebec.¹¹;

- 5012 s[5009] = "PLUSQUELLEC Y., CHUDINOVA I. (1976).- The microstructure of *Parastriatopora* Sokolov 1949 (Siluro-Devonian Tabulata).- *Annales de la Societe geologique du Nord* 97: 127-130.- FC&P 10-1, p. 53, ID=5994Topic(s): microstructures; Tabulata, Parastriatopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Silurian Devonian; Geography: ^Thin sections with polished faces were made in specimens of *Parastriatopora rhizoides* Sokolov from the Llandovery of the Podkamennaya Tunguska river near the type locality showing a microlamellar microstructure of tabulae and wall of this genus. This type of microstructure is encountered in Devonian species too. [original summary]¹¹;
- 5013 s[5010] = "BOGOYAVLENSKAYA O.V., ABUSHIK A.F. et al. (1983).- Atlas pozdnesiluriiskoi i rannedevonskoi fauny [Atlas of the Late Silurian and Early Devonian fauna].- *Opornye razrezy pogranychnykh otlozhenii silura i devona Propolarnogo Urala*.- FC&P 14-1, p. 54, ID=1036Topic(s): atlas of fossils; Systematics: ; Stratigraphy: Silurian U, Devonian L; Geography: ^^1";
- 5014 s[5011] = "HODGES L.T., ROTH A.A. (1986).- Orientation of corals and stromatoporoids in some Pleistocene, Devonian, and Silurian reef facies.- *Journal of Paleontology* 60, 6: 1147-1158.- FC&P 16-1, p. 72, ID=2007Topic(s): reefs, orientation of bioconstructors; reefs ecology; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: Silurian Devonian Pleistocene; Geography: ^A quantitative study was made of the orientation of corals and stromatoporoids in reef core, flank, and interreef rocks representig three geological periods at eight sites, including the Florida Keys (Pleistocene), Ridgemount, Ontario (Devonian), and Pekin, New York, Maumee and Rockford, Ohio, and Bluffton and Delphi, Indiana (Silurian). Orientation, width, and height were measured for each fossil as seen in outcrop. Fossils in Pleistocene and Silurian reef core facies have pronounced upward orientation, suggesting that most fossils are in growth location, or that the reefs were moved to their present location without appreciable tilting. Silurian distal flank facies have approximately random coral orientations with some upward bias. Coral width is greater than or equal to coral height (on outcrop) for 79% of the corals at all flank sites, and for 80% of the corals at the interreef site, an indicator of transport when taken with orientation data. This study permits reef facies differentiation and illustrates that fossil orientation is a useful technique for studying reefs.¹¹;
- 5015 s[5012] = "KULLMANN J. (1997).- Rugose corals in non-reef environments - the case of the "Cyathaxonia fauna".- *Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica* 92, 1/4: 187-195.- FC&P 26-2, p. 28, ID=3712Topic(s): non-reef facies; Rugosa, Cyathaxonia fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: Silurian - Permian; Geography: ^The "Cyathaxonia faunas" consist in general of small solitary corals without dissepiments; they have a small number of septa and tabulae. They belong mainly to the suborders Metriophyllina, Plerophyllina and Stereolasmatina and are widespread

from Silurian up to late Permian times. The *Cyathaxonia* faunas settled exclusively in non-reef environments and are frequently associated with ammonoids. The ecological range comprises mainly basinal facies in moderately deep to shallow environments with poorly circulating waters.¹¹;

- 5016 s[5013] = "RIEGRAF W. (1991).- Grosse Palaeontologen. Clemens August Schlueter (1835-1906).- Fossilien 1991, 6: 374-376. [in German].- FC&P 20-2, p. 67, ID=2966Topic(s): biographical; Anthozoa research; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: ^ [A short biography. Schluter is well-known because of his works on cephalopods but on corals, too.]¹¹;
- 5017 s[5014] = "SPASSKIY N.Ya., DUBATOLOV V.N., KRAVTSOV A.G., BOGOYAVLENSKAYA O.V., (1975).- Coelenterata and palaeobiogeographical division of Devonian seas.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 68-78.- FC&P 5-2, p. 7, ID=5415Topic(s): biogeography, list of genera; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian; Geography: ^ A general account of Devonian coral provincialism with generic lists for the provinces within the USSR.¹¹;
- 5018 s[5015] = "BIRENHEIDE R. (1985).- Errata to *Chaetetida* und tabulate Korallen des Devon (Birenheide 1985).- FC&P 14, 2: 51.- FC&P 14-2, p. 51, ID=6719Topic(s): errata; Chaetetida, Tabulata; Systematics: Porifera Cnidaria; Chaetetida Tabulata; Stratigraphy: Devonian; Geography: ^ [p. 17, line 1: read Chaetetida for Chetetida; * p. 73, line 18 below: read Termier & Termier 1948 for Termier & Termier 1848; * p. 90, line 4 below: read Lecompte (1936b) for Lecompte 1936b; * p. 126, line 4 below: read außer in Anfangslagen for außen in Anfangslagen; * pl. 30, fig. 2: read X 3 for X 6; * pl. 34, fig. 3: read X 2 (measurements in text = X 1/2) for X 1]¹¹;
- 5019 s[5016] = "WRZOLEK T. (1993).- Reconstruction of the distal cone in the Devonian heterocoral Oligophylloides.- Courier Forschungsinstitut Senckenberg 164: 179-183. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 1].- FC&P 22-2, p. 16, ID=3452Topic(s): morphometry; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Devonian Fam; Geography: ^ The reconstruction of the distal cone in the Famennian heterocoral Oligophylloides pachytheucus Rozkowska from the Holy Cross Mts., Poland, is based on the widely accepted assumption that heterothecae increase in thickness by successive overgrowth of the conical tabulae. The calculations based on 50 corallites with 39 thin sections prove apical angles from 1 to 7, commonly 1.5 to 2.5 degrees; the calculated height of the distal cone varies from 4 to almost 200mm. Preliminary calculations for the Carboniferous genera Heterophyllia and Hexaphyllia prove similar values of apical angles; on the other hand in Longlinophyllia Lin & Wu this angle attains 40°. ¹¹;
- 5020 s[5017] = "OLIVER W.A. jr (1983).- Symbioses of Devonian rugose corals.- Memoirs Association Australasian Palaeontologists 01 [J. Roberts & P.A. Jell (eds): Dorothy Hill Jubilee Memoir]: 261-274.- FC&P 13-1, p. 22, ID=0399Topic(s): symbionts; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^ Calcareous tubes, apparently the dwelling places of commensal or parasitic animals ('worms') have been described from fossil and living corals, where they tend to occur in the wall separating adjacent corallites or on the outer sides of the coralla. Here, tubes are reported centrally located within the skeletons and parallel to the axes of individual corals. These tubes were apparently deposited by the coral polyps to protect themselves from a parasitic wormlike animal. The tubes open into the calice of the coral in such a way as to indicate that the parasite probably projected through the basal disc and into the polyp's gastric cavity, where presumably

- it fed upon organic matter taken in or discarded by the polyp. A long vermiform groove on the theca of a solitary coral is interpreted as the dwelling place of a tube worm, possibly a polychaete, by analogy with living examples. Other known examples of metazoan/ rugose coral symbioses are briefly reviewed.^1";
- 5021 s[5018] = "OLIVER W.A. jr, PEDDER A.E.H. (1984).- Devonian rugose coral biostratigraphy with special reference to the Lower-Middle Devonian boundary.- Current Research A, Geological Survey of Canada 84-1A: 449-452.- FC&P 13-2, p. 35, ID=0536^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian L/M; Geography: ^Although corals have negligible value in worldwide or intercontinental correlation, they have been successfully used for correlation within basins or biogeographic provinces. The factors responsible for their limited value in correlation make them excellent indices of environment and provinciality. Analyses of the distribution of over 300 genera of Devonian rugose corals in 20 regions of the world and in six stages shows a maximum of endemicity and provinciality in the late Early Devonian. Because of this, corals are of least value in Devonian correlations near the Lower-Middle boundary. They are more useful in the Lochkovian, Givetian and Frasnian than in the intervening Pragian to Couvinian stages.^1";
- 5022 s[5019] = "PEDDER A.E.H. (1986).- The Devonian rugose coral genera Haplothechia, Kuangxiastraea and Scruttonia.- Papers of geological Survey Canada 86-1A: 649-661.- FC&P 15-1.2, p. 25, ID=0873^Topic(s): ; Rugosa, Haplothechia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^^1";
- 5023 s[5020] = "TSIEN H.-H. (1984).- Analysis of evolutionary changes in Hexagonaria and Phillipsastrea.- Palaeontographica Americana 54: 476-482 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 47, ID=0985^Topic(s): phylogeny; Rugosa, Hexagonaria, Phillipsastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^^1";
- 5024 s[5021] = "FALL L.M. (2005).- Famennian rugose corals live it up; increased longevity of rugose corals following the end-Frasnian extinction.- Geological Society of America, Abstracts with Programs 37, 7: 384. [abstract] - FC&P 34, p. 32, ID=1230^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: ^^1";
- 5025 s[5022] = "LIAO Wei-Hua, SOTO F. (2001).- Hebukophyllum Liao and Cai (Devonian Rugosa) and its related genera.- Acta Palaeontologica Sinica 40, 1: 44-50.- FC&P 30-1, p. 25, ID=1531^Topic(s): systematics; Rugosa, Hebukophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: ^In this paper the morphology, ontogenesis and systematic description of the genus Hebukophyllum Liao and Cai, 1987 are reviewed and compared with those of its related genera Circellia Ye and wang, 1983, Conilophyllum Poty and Boland, 1996 and Siphonophyllia Scouler MS in McCoy, 1844. In the youngest stages, axial ends of the major septa in the specimens of Hebukophyllum are united each other to form an aulos, which is never present in the related genera. For this reason, Hebukophyllum is certainly assigned to the Family Laccophyllidae Grabau, 1928. Conilophyllum and Siphonophyllia seem to show typical characters of caninoid rugose corals; and Circellia, in consequence of their rudimentary or degenerated septa along the ontogeny, could be assigned to the family Amplexidae Chapman, 1893.^1";
- 5026 s[5023] = "WRZOLEK T. (2002).- Devonian history of diversity of the rugosan Cyathaxonia fauna.- Acta Palaeontologica Polonica 47, 2: 397-404.- FC&P 31-2, p. 42, ID=1682^Topic(s): Cyathaxonia fauna; Rugosa; Systematics: Cnidaria; Rugosa;

Stratigraphy: Devonian; Geography: ^Literature data indicate above average diversity of the Cyathaxonia fauna in the Devonian period, both in absolute numbers of (sub)families and genera per age and also with respect to taxonomic diversities as calculated per Ma (106 years). The Emsian and Famennian faunas, although represented by most numerous (sub)families and genera have less than average diversities, due to their more than average durations, whereas the shorter intervals of the Pragian and Givetian have the highest values for diversity per Ma, and the Frasnian faunas the lowest diversities, for both (sub)families and genera. The post-Givetian crisis may have been responsible for the Frasnian minimum, although limited temporal resolution of the analysis does not allow for a more precise description of the Givetian/Frasnian transition. However, "silent taxa" are extremely numerous in the Frasnian, i.e. taxa which are present both prior to and after the Frasnian, but missing from the Frasnian record itself indicating that the Famennian Cyathaxonia fauna contains significant numbers of Lazarus and/or Elvis taxa.^1";

5027 s[5024] = "PLUSQUELLEC Y. (1980).- Microstructure et mode de croissance de Adradosia Birenheide et Soto 1977 (Tetracoralliaire, Devonien).- Bulletin Soc. geol. France, 22; 359-368.- FC&P 11-2, p. 26, ID=1833^Topic(s): microstructures, growth mode; Rugosa, Adradosia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^Development in this genus is distinct from most rugosans (adradosid). During an apical stage, the protosepta and several metasepta are inserted with typical rugosan pattern whilst the skeleton is completely enveloped in soft tissue. In a post-apical stage, septal insertion continues but the edge zone of the polyp withdraws to the calicular margin to deposit an epitheca.^1";

5028 s[5025] = "SORAUF J.E., PEDDER A.E.H. (1986).- Late Devonian rugose corals and the Frasnian-Famennian crisis.- Canadian Journal of Earth Sciences 23: 1265-1287.- FC&P 16-1, p. 57, ID=1956^Topic(s): extinctions F/F; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra/Fam; Geography: ^^1";

5029 s[5026] = "WRZOLEK T. (2007).- A revision of the Devonian rugosan phillipsastreid genus Smithicyathus.- Acta Palaeontologica Polonica 52, 3: 609-632.www.a pp.pan.pl/article/item/app52-609.html.- FC&P 35, p. 60, ID=2358^Topic(s): revision; Rugosa, Smithicyathus; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra; Geography: ^The rugose coral genus Smithicyathus is diagnosed in this paper as massive to phaceloid phillipsastreid, with common horseshoe dissepiments and major septa that are very short in the tabularium. Revised taxonomy of this genus is based on analysis of over 20 numerical characters measured in sections and/or extracted from the literature data. Species are distinguished either by morphometric non-overlap in at least one, key feature or by geographic-stratigraphic isolation. The earliest possible representatives of the genus are known from the Eifelian of Angara (S. ? emendatus and S. ? russakovi). In the Upper Frasnian Smithicyathus is represented by seven species; in western Euramerica occur S. cinctus and S. mcleani sp.nov.; south-eastern Euramerican shelf area is with S. lacunosus, S. cf. lacunosus, S. smithi, S. cf. smithi, and S. lubliniensis, one probable species is recorded in Angara: S.? belkovskiense. The genus did not survive the Frasnian-Famennian crisis. Smithicyathus lived in tropical and sub-tropical shallow-marine carbonate environments, with the possible exception of the northern mid-latitudes species from Siberia. In the Holy Cross Mountains, S. lacunosus and S. smithi show a preference for restricted-marine facies. They may make up over 90% of all rugosan colonies collected in such locations, whereas in the more open-marine settings they are rare both in numbers and in proportion to other rugosan species.^1";

5030 s[5027] = "SORAUF J.E. (1989).- Rugosa and the Frasnian-Famennian

extinction event: a progress report.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 327-338.- FC&P 19-1.1, p. 14, ID=2551^Topic(s): extinctions F/F; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fra/Fam; Geography: ^^1";

5031 s[5028] = "PEDDER A.E.H., OLIVER W.A.jr (1990).- Rugose coral distribution as a test of Devonian palaeogeographic models.- Geological Society Memoir 12 [McKerrow W. S. & Scotese C. R. (eds): Palaeozoic palaeogeography and biogeography]: 267-275.- FC&P 19-1.1, p. 40, ID=2622^Topic(s): distribution database, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^A data bank, based on stage by stage distributions of 420 rugose coral genera in 25 regions of the world is analysed, mostly by means of Otsuka coefficients, to test an Emsian reconstruction of the world proposed by Scotese. Devonian rugose corals inhabited a narrower range of facies than some other benthic groups, and even without regard to facies, provide a tool for testing geographic reconstructions. Basin dwelling coral genera typically have longer temporal and broader geographic ranges than corals living in shallower environments, and are less suitable for palaeogeographic studies. They are treated separately in this work. For the most part, conclusions drawn from the analysis are either consistent with, or positively supportive of, the Scotese reconstruction. However, large but poorly known rugose coral faunas from Mongolia and the Amur Basin are at about 60° N in the reconstruction, and other well known coral faunas, from Altai-Sayan, are at 45-50° N. In the light of known distributions of both modern corals and Devonian southern hemisphere corals, in all recently proposed palaeogeographic reconstructions, it is questionable that the original latitude of any large northern hemisphere Devonian coral fauna would have exceeded 45.^1";

5032 s[5029] = "SORAUF J.E. (1988).- The Devonian Rugose Coral Genus Tabulophyllum Fenton and Fenton 1924.- Dept. of Geol. Sci., S.U.N.Y., 397-412.- FC&P 19-2.1, p. 32, ID=2749^Topic(s): ; Rugosa, Tabulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^The predominantly Middle Devonian and Frasnian coral genus Tabulophyllum is highly characteristic of the cosmopolitan faunas of the latter part of the Devonian system and approximately 99 species have been described from all major areas of marine Devonian outcrop. At least 20 of these are wrongly assigned and should be placed in Carboniferous or other Devonian genera, and in addition the status of some of the remainder must be regarded as possible synonyms due to the highly variable nature of those species that are thoroughly known. In this study all post-Frasnian corals are excluded from the genus, with the questionable exception of one species from Czechoslovakia. * The genus has a characteristic diagenetic lamellar wall structure in thin-section; its septal structure is of very fine monacanthine trabeculae and fibro-normal flanks in well preserved specimens. Long, complete tabulae are typically marked by peripheral gutters, gracefully downcurved (as seen in longitudinal section), while the characteristic lonsdaleoid dissepimentarium is marked by large presepiments which interrupt the septa in peripheral areas. Some Frasnian species show the development of large individuals with a cardinal fossula and marked bilaterality. This is most marked in species of the latest Frasnian, preceding the Frasnian-Famennian extinction event. Adaptation to substrate played an important role in the success of Tabulophyllum species. Those inhabiting soft, muddy substrates are commonly characterized by thin, leaf-like expansions of the corallite through large presepiments, along with a sharply pointed apex positioned within the substrate. Several species were apparently adapted for a sandy (shifting?) substrate, with

- the apical part of the skeleton filled by biogenic calcite. Species living on a firm substrate have well developed talons and normal growth above, forming a large base.^1";
- 5033 s[5030] = "OLIVER W.A.jr, PEDDER A.E.H. (1994).- Crises in the Devonian history of rugose corals.- *Paleobiology* 20, 2: 178-190.- FC&P 23-2.1, p. 32, ID=4227^Topic(s): biohistory, extinctions; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^Detailed analysis of the stratigraphic ranges of Devonian rugose coral genera within the Old world and Eastern Americas Realms gives new information on faunal extinctions and other bioevents in both realms. Various origination and extinction metrics are calculated from tabulations of occurrences in each stage. The most significant faunal changes were near or at the ends of the Lochkovian and Frasnian stages. The former marks the gradual transition from dominance by Silurian families and genera to the characteristic Devonian coral assemblages; the latter marks the virtual extinction of the Devonian families and genera. Other coral events are related to the two major changes. The data provide new bases for comparing the histories of the two realms. Most of the events are recorded in both, giving support to previous suggestions that the causes were worldwide. The coral record shows an increase (probably episodic) in environmental deterioration persisting through the Middle Devonian and culminating in extinction at the end of the Frasnian. Eustatic sea level fluctuations may have caused the precursor events and a bolide impact may have caused the end-Frasnian extinction. ^1";
- 5034 s[5031] = "JULL R.K. (1973).- Ontogeny and Hystero-Ontogeny in the Middle Devonian Rugose Coral *Hexagonaria anna* (Whitfield).- In Boardman, Cheetham, and Oliver (eds): *Animal Colonies* (Dowden, Hutchinson & Ross, Inc., Stroudsburg, Pa.): 59-68.- FC&P 3-2, p. 38, ID=4951^Topic(s): ontogeny offsetting; ontogeny blastogeny; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian M; Geography: ^protocorallite and hystero-corallite development in colonies of *Hexagonaria anna* are described in detail. The specimens originate from the Givetian Bell Shale and Ferron Point Formation in Michigan. Comparison of the characters of growth between the two types of corallites shows that the very early stage of protocorallite development when it is initially infilled with sclerenchyme, followed by an aseptate phase, is lacking in the hystero-corallite. Otherwise details of development in both types of corallites compare closely, especially with regard to the inobvious nature of protosepta throughout development and the lack of typical patterns of rugosan septal insertion.^1";
- 5035 s[5032] = "ULITINA L.M. (1973).- Ontogenèse des colonies de *Phillipsastraea hennahi*.- *Paleontologicheskii Zhurnal* 1973, 1: 97-101.- FC&P 3-2, p. 42, ID=4964^Topic(s): blastogeny; Rugosa astogeny; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^^1";
- 5036 s[5033] = "OLIVER W.A.jr (1975).- A gastropod enclosed in a skeleton of a Devonian Rugose coral.- *Journal of Paleontology* 49, 1: 153-159.- FC&P 4-1, p. 36, ID=5127^Topic(s): growth mode; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^A bellerophontid gastropod shell was found completely surrounded by primary skeletal calcite in a Devonian cystimorph coral. The shell is sediment-filled, and similar sediment fills the former calice of the coral around the shell. The coral polyp survived the introduction of shell and sediment, "roofed over" the shell with its own skeletal deposits, and continued upward growth. Comparison with a previously described occurrence leads to the interpretation that the shell entered the coral calice between the polyp and the side of the calice at a time when the polyp was injured and occupied only part of its normal space.^1";
- 5037 s[5034] = "ROZKOWSKA M. (1974).- *Gorizdronia soshkinae* sp. n., a new type species of *Gorizdronia Rozkowska*, 1969.- *Acta Palaeontologica*

- Polonica 19, 4; 1 p.- FC&P 4-1, p. 37, ID=5131Topic(s):nomenclature; Rugosa, Gorizdronia; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian Fam; Geography:^^1";
- 5038 s[5035] = "TSYGANKO V.S. (1974).- Nadotia, nouveau genre de Tétracoralliaires coloniaux du Dévonien.- Ezhegodnik Inst. geol., Komi filiala AN SSSR 1974: 86-89; Syktykvar, 1974.- FC&P 4-2, p. 56, ID=5263Topic(s):new taxa; Rugosa, Nadotia; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:^^1";
- 5039 s[5036] = "ULITINA L.M. (1974).- Growth of massive rugose colonies.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 172-179.- FC&P 5-2, p. 8, ID=5421Topic(s):blastogeny; Rugosa astogeny; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:^Observations on the development of colonies of Hexagonaria spp.^1";
- 5040 s[5037] = "SPASSKIY N.Ya. (1977).- Devonskiye rugozy SSSR. [Devonian Rugosa of the USSR; in Russian].- Leningrad University Press; 285 pp., 29 pls.- FC&P 7-1, p. 27, ID=5585Topic(s):; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:USSR^[review of Devonian Rugose Corals of the USSR]^1";
- 5041 s[5038] = "PEDDER A.E.H. (1977).- Systematics and biostratigraphic importance of the Lower Devonian rugose coral genus Exilifrons.- Papers of geological Survey Canada 77-1B: 173-180.- FC&P 7-2, p. 21, ID=5635Topic(s):systematics, biostratigraphy; Rugosa, Exilifrons; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian L; Geography:^[illustrates the holotype of the type species and refines the definition of Exilifrons which appears to be a good index of the Upper but probably not uppermost, Lower Devonian in western North America]^1";
- 5042 s[5039] = "OEKENTORP K. (1979).- Book review - R. Birenheide: Rugose Korallen des Devon.- FC&P 8, 1: 19.- FC&P 8-1, p. 19, ID=5680Topic(s):book review; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:^This book is a first modern standard description of the most important and common European Devonian rugose corals, and the author's great experience on European Devonian Rugosa renders this edition a very useful guide-book. [conclusion of the review]^1";
- 5043 s[5040] = "OLIVER W.A.jr, PEDDER A.E.H. (1979).- Rugose corals in Devonian stratigraphical correlation.- Spec. Pap. Palaeont. 23 [M.R. House, C.T. Scrutton & M.G. Bassett (eds): The Devonian System]: 233-248.- FC&P 8-2, p. 38, ID=5710Topic(s):biostratigraphy, biogeography; Rugosa, stratigraphy, biogeography; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:^[contains a tabulation of ranges by stage of all Devonian rugose corals genera arranged by provinces]^1";
- 5044 s[5041] = "ROZKOWSKA M. (1981).- Upper Devonian habitats of rugose corals.- Acta Palaeontologica Polonica 25, 3-4: 597-611.- FC&P 10-1, p. 46, ID=5976Topic(s):ecology; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian U; Geography:^[external morphology of corals, their calicular shape, septal ornament and arrangement of skeletal elements reflect their habitats; this is illustrated in the Upper Devonian of Poland where biostromes and bioherms of Frasnian age are succeeded by more terrigenous facies in the Famennian]^1";
- 5045 s[5042] = "TSYGANKO V.S. (1980).- The growth forms of Glossophyllum discoideum (Rugosa).- Paleontologicheskii Zhurnal 1980, 2: 27-31.- FC&P 10-2, p. 68, ID=6086Topic(s):growth forms; Rugosa, Glossophyllum; Systematics:Cnidaria; Rugosa; Stratigraphy:Devonian; Geography:^[describes a new morphological form of rugose coral as "pulley-shaped" (trochlear)]^1";
- 5046 s[5043] = "BIRENHEIDE R. (1974).- Grypophyllum frechi nom. nov., pro

Grypophyllum mirabile Birenheide 1972.- FC&P 3, 1: 7-8.- FC&P 3-1, p. 7, ID=6248Topic(s): nomenclature; Rugosa, Grypophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^Dr. G. Cotton kindly informed me that Grypophyllum mirabile Birenheide 1972 (p. 417) is a junior objective homonym of Grypophyllum mirabilis Sytova 1968 (p. 65) of the Borshchov horizon of Podolia (probably Gedinnian-Lower Siegenian). I herewith rename my species from the Middle Devonian of the Eifel in Grypophyllum frechi nom. nov., in memoriam of Fritz Frech. [first part of a short nomenclatorial note]^1";

5047 s[5044] = "WEYER D. (1999).- Revision der Gattung Czarnockia Rozkowska 1969 (Anthozoa, Rugosa; Oberdevon).- Abhandlungen und Berichte für Naturkunde 21: 75-107.- FC&P 29-1, p. 58, ID=7047Topic(s): revision; Rugosa Czarnockia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam; Geography: ^Czarnockia is known by three specimens from the Upper Famennian Clymenia and Wocklumeria genozones of the Holy Cross Mountains in Poland and of the Tafelberg in Morocco. The redescription (based on additional sectioning of both holotype and paratype) leads to a classification within the phyletic line Neaxon > Petraia > Famennelasma > Czarnockia of the ahermatypic family Petraiidae Koninck, 1872 (synonym Neaxoninae Hill, 1981). The more common ancestor Famennelasma Weyer, 1973, which is found in the same Upper Famennian time span from Poland through Germany and France to Morocco, differs in the lack of dissepiments occurring only in the mature calice of Czarnockia. * A redefinition (quite different from that proposed by Schindewolf, 1931) for Petraia Munster, 1839 is included in order to attain taxonomic stability of its family taxon by selection and illustration of a lectotype of the true type species Petraia decussata Munster, 1839 from the Upper Famennian (Clymenia genozone) of Upper Franconia in Germany (anticipating a future more detailed revision of that genus). * Another pleonophorous descendant from Neaxon is Nicholsoniella Soshkina, 1952, with type species Nicholsoniella baschkirica Soshkina, 1952, from the Upper Frasnian of the western slope of the southern Ural Mountains in Russia. After reillustration of its type series, this genus is grouped into a phyletic line Neaxon > Neosyringaxon > Nicholsoniella. [original summary]^1";

5048 s[5045] = "GUDO M., HUBMANN B. (2001).-'Engineering morphology" of the rugosan Argutastrea quadrigemina: new views on the reconstruction of soft body behaviour during parricidal budding.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 041-049.- FC&P 30-1, p. 19, ID=7061Topic(s): ; Rugosa Argutastrea; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^Two general types of budding can be distinguished in massive colonies of Rugosa, Tabulata or Scleractinia: extratentacular and intratentacular budding. A remarkable variation of intratentacular budding, so called "parricidal increase", is studied in the rugose coral Argutastrea quadrigemina. Instead of creating a new corallite, an existing one is divided into four new ones by "killing" the mother corallite. * To understand the character of this special kind of reproduction we reconstruct the process by which fleshy soft parts divide into four new individuals. On the basis of considerations of engineering morphology (i.e., constructional morphology) we present a model to explain the generation of structures observable in skeletal tomography of Argutastrea quadrigemina during the budding process. Our hypothetical soft body is a polyp with distinct engineering and structural functional constraints: it is supplied with single mesenteries (in contrast to scleractinian corals!) which are added symmetrically in four sectors. Due to the remarkably deep calyces and quite short septa our polyp has rather short mesenteries. * Arrangements of mesenteries and positions of their insertion imply that from each growth sector, the body wall of the

polyp increases until enough body mass is present to divide the existing polyp into four new ones. Thus the new body walls are arranged in a definite way as proposed by D'Arcy Thompson for four bubbles in close contact. [original abstract]^1";

5049 s[5046] = "GUDO M. (1998).- The Soft Body of *Calceola sandalina*: Summary of Morphological Reconstruction, Function, Ontogeny, and Evolutionary History.- *FC&P* 27, 1: 21-26.- FC&P 27-1, p. 21, ID=3909^Topic(s): soft body; Rugosa, Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^This article is a summary of an original manuscript on the morphological reconstruction of the soft body of *Calceola sandalina* on the basis of various structural-functional principles. This manuscript also deals with particular aspects of the ontogeny and evolutionary history of the slipper-shaped corals. [introductory part of a paper]^1";

5050 s[5047] = "WRIGHT A.J. (2010).- Septal architecture and palaeoecology of *Calceola* (Cnidaria, Calceolidae), with comments on the phylogeny of Devonian operculate tetracorals.- *Memoirs of the Association of Australasian Palaeontologists* 39: 159-176. ISSN 810-8889.- FC&P 36, p. 71, ID=6472^Topic(s): morphology, ecology, phylogeny; Rugosa Calceolidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^In *Calceola sandalina* the full complement of counter major septa was established very low in the calyx, extending from the counter septum across to the edge of the counter face. At about mid-height of the calyx, a counter-lateral major septum was generated on either side of and from the counter septum. Serial minor septal insertion was initiated adjacent to the counter-lateral septa at a slightly later stage and continued throughout the subsequent ontogeny of the corallite, with minor septa (schizosepta?) arising on the median side of major septa and bifurcating from them. Alar fossulae are seen in the calyx of mature corallites, on the counter side of a low ridge near the lateral extremity of the inner surface of the counter face. Insertion of major septa in the alar fossula has been observed rarely on the external counter face of worn corallites. The median septum in the operculum of *C. sandalina* is a compound structure which incorporates adjacent minor septa. * In an Emsian(?) corallite of ?*Chakeola* sp. minor septa are derived from major septa, new-minor septa being generated on the outer side of major septa. This corallite also exhibits minor septa adjacent to the K septum, thus casting doubt on Birenheide's generalisation that the counter-lateral septa of *C. sandalina* are not separated from the counter septum by minor septa. In the Emsian *Chakeola whitehousei* minor septa are present adjacent to the counter septum of the operculum. * The distal, anteriorly facing, projecting peg of the K septum of the corallite articulated within the large socket in the opercular K septum, and subsidiary grooves and plates on the socket and septum further facilitated interlocking. Knobs and/or small lists are developed along the posterior edge of the operculum, in the shelf inside the counter edge; septal pegs developed by septa in the corallite were accommodated within this shelf. The opercular septal blades interlocked loosely between the anteriorly facing, distal parts of septa of the corallite. * Rare opercula show one or more (abortive?) attempts to overcome damage which led to displacement of the operculum relative to the corallite, and rejuvenescence is exhibited to various degrees in many opercula. One operculum was apparently broken (bitten?) in half as a juvenile, but was reconstructed to reach a mature form. Other specimens show epifauna, borings and bioerosion either on the external surface of the operculum or on the external cardinal surface of the corallite. 'Galls' on the inner opercular surface are interpreted as stereome deposited to seal off some type of internal parasite. In *C. sandalina*, tubules containing tabulae are located just inside the counter face, and may have served to house soft parts associated with the operculum. Changes of opercular septal morphology

- suggest that the phylogeny of Devonian genera of the Calceolidae is Rhizophyllum > Savageola > Chakeola > Richtereola and ultimately, > Calceola. [original abstract]^1";
- 5051 s[5048] = "YU CHANGMING (2007).- Dimorphism in Calceola sandalina (Linné 1771).- Science in China Series D: Earth Sciences 50: 1761-1766.- FC&P 36, p. 73, ID=6474^Topic(s): dimorphism; Rugosa Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^^1";
- 5052 s[5049] = "GUDO M. (2000).- Die Weichkörperkonstruktion von Calceola sandalina (Rugosa, Anthozoa) - Konstruktionszusammenhänge, Ontogenese, Evolution und Funktionsweisen.- Paläontologische Zeitschrift 74, 1/2: 37-49.- FC&P 29-1, p. 50, ID=7043^Topic(s): soft body; Rugosa Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^The slipper-like corallum of Calceola sandalina comprises the calyx and the lid. It was generated by an anthozoan-like coral. Anthozoan polyps have a barrel-like shape that is produced and maintained by the activity of internal tethering elements and muscular structures in the body wall. All these structures counteract the hydrodynamics of the gastrovascular cavity* In this reconstruction of the soft parts of Calceola the functional aspects pointed out by Richter (1929) will be reviewed and revised and partially corrected. Calceola was reconstructed on the basis of the model of rugose polyps. Consequently it consisted of single mesenteries which were added in four sectors in a serial manner. The lid was formed on the counter side and is explained as a bulge of the basal parts of the soft body. The lid was connected coherently by the mesenteries to the whole construction. It could be closed by contraction of the mesenteries and opened by regeneration of the hydraulic volume in the gastric cavity. As a mechanical consequence of moving the lid a straight hinge was developed between the calyx and the lid. The soft body of Calceola developed by quite simple structural modifications of a rugose coral. The most important modification was the bulging of the basal parts of the soft body on the counter side which formed the lid. This bulge enlarged the surface for adhesion to the substrate and might have been an advantage in survival as well. The soft body generated its own substrate giving it the specific slipper shape. This shape prevented Calceola from sinking into the soft or muddy substrate by the principle of a snowshoe which enabled Calceola to conquer new territories. The lid meant protection where enemies and pollution were concerned. The slipper shape and the lid of Calceola indicated a complex evolutionary pathway, but they evolved by simple modifications of an ancestor with a round diameter. The slipper shape is just a mechanical consequence of a flappable lid. [original English summary]^1";
- 5053 s[5050] = "MCLEAN R.A. (1993).- The Devonian rugose coral family Charactophyllidae Pedder.- Courier Forschungsinstitut Senckenberg 164: 109-118. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 13, ID=3444^Topic(s): systematics; Rugosa, Charactophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Eif - Fra; Geography: ^The rugosan family Charactophyllidae Pedder is primarily composed of small, solitary forms and its representatives are common in strata of Eifelian to Frasnian age. Diagnostic morphological features include coarse, monacanthine trabeculae, commonly flexed to varying degrees in a vertical plane, small, globose dissepiments, and a broad, clearly defined tabularium. The high degree of intraspecific variability evident in large populations of many North American charactophyllid species indicates that only the genera Charactophyllum Simpson, Spinophyllum wedekind, Temnophyllum walther, Sinodisphyllum Sun, Hunanophrentis Sun, Alaiophyllum Goryanov, Piceaphyllum Rozkowska, Chostophyllum Pedder and Ceciliaphyllum McLean can be recognized within the family, at least provisionally. It is clearly important for such

variability to be assessed in species from other regions, especially many relevant type species. *Mictophyllum* Lang & Smith has commonly been regarded as a member of the Charactophyllidae, but restudy of the type species, *M. nobile* Lang & Smith, indicates it is unrelated to that family. Its affinities lie with the kyphophyllid genus *Tabulophyllum* Fenton & Fenton.¹;

- 5054 s[5051] = "BESPROZVANNYKH N.I., IVANOVSKIY A.B. (1975).- *Cystiphyllum* Lonsdale 1839, *Plasmophyllum* Dybowski 1875, *Cystiphylloides* Chapman 1893, etc.- In *Biostratigraphie du Dévonien et Carbonifère de Sibérie*. Trudy Inst. Geol. Geofiz. AN SSSR, Sib. Otd. 220: 28-52.- FC&P 4-2, p. 55, ID=5255Topic(s): classification; Rugosa, Cystiphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^^1";
- 5055 s[5052] = "SORAUF J.E. (1997).- *Septotheca* in the Devonian rugose corals *Tabulophyllum*, *Smithiphyllum* and *Tarphyphyllum*: Biogenic structure and diagenetic modification.- *Coral Research Bulletin* 05: 229-238.- FC&P 27-1, p. 76, ID=3887Topic(s): microstructures, diagenesis; skeletal structures, septotheca; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^The Family Kyphophyllidae wedekind (McLean & Pedder 1984) contains the widespread Devonian genera *Tabulophyllum*, *Smithiphyllum* and *Tarphyphyllum*. These, and presumably the whole family, have species with an outer wall composed of laterally expanded septal bases coated by epitheca. The biogenic structure of this septotheca is shown in several best preserved individuals of *Tabulophyllum traversensis* collected from Givetian rocks in Michigan. The structure is fibrous, with calcitic fibers directed towards those of neighboring septa to form septotheca by lateral coalescence, with banding of magnesium providing a geochemical indicator of growth pattern. Diagenetic change of this structure progressively alters in to a septotheca with lamellar structure within septal bases, but with boundaries of remaining distinct. In *T. traversensis*., the lamellar wall structure thus is demonstrably diagenetic in origin. Similar lamellar structures occur in other species of *Tabulophyllum*, and in *Smithiphyllum* and *Tarphyphyllum* from Frasnian strata of Iowa. As yet, pristine biogenic structure is known in this family only in *T. traversensis*. A uniform style of diagenetic modification is envisaged for all genera of the Kyphophyllidae, although only the three have been studied to date. Additional data is needed prior to generalizing microstructure in other families and higher taxa of the Rugosa and *Tabulata*.¹;
- 5056 s[5053] = "JIA HUIZHEN (1984).- Evolutionary sequence in Grypophyllidae with description two new genera.- *Acta Geologica Sinica* . 1: 27-34.- FC&P 15-1.2, p. 25, ID=0867Topic(s): phylogeny, new taxa; Rugosa, Grypophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian; Geography: ^^1";
- 5057 s[5054] = "WEYER D. (1985).- Zur Kenntnis eurasiatisch-nordafrikanischer Emsium/Eifelium-Hapsiphyllidae (Anthozoa, Rugosa; Devon).- *Abhandlungen und Berichte für Naturkunde und Vorgeschichte* 06: 15-35.- FC&P 15-1.2, p. 26, ID=0855Topic(s): Rugosa, Hapsiphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Ems Eif; Geography: ^^1";
- 5058 s[5055] = "WARSHAUER S.M., SMOSNA R.A. (1977).- Biofacies relations in Lower Devonian Stromatoporoid reef Complex. [abstract].- *American Association of Petroleum Geologists Bulletin* .: .- FC&P 7-1, p. 26, ID=0197Topic(s): facies, strom reefs; reefs; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: ^^1";
- 5059 s[5056] = "BOGOYAVLENSKAYA O.V. (1982).- Analiz rasprostraneniya stromatoporat v svyazi s obsuzhdeniem garnitsy nizhnego i srednego devona. (Analysis of the distribution of the stromatoporates in connection with the discussion of the boundary of the Lower and Middle

- Devonian.)- Biostratigrafiya pogranichnykh otlozheniy nizhnego i srednego devona. L. "Nauka" 27-30.- FC&P 14-1, p. 54, ID=1031^Topic(s): stratigraphy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L/M; Geography: ^1";
- 5060 s[5057] = "BOGOYAVLENSKAYA O.V., DANSHINA N.V. (1984).- Novyye devonskiye subtsilindricheskiye Stromatoporaty [new Devonian subcylindrical stromatoporata].- Paleontologicheskii Zhurnal 1984, 2: 15-15.- FC&P 14-1, p. 54, ID=1034^Topic(s): new taxa; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^Six new species of the genus Stellopora and a new genus, Novitella with the type species N. tschussovensis (Yavorsky 1955) and 5 of its new species are described from the Devonian in the Chelyabinsk (w. Urals) and Volgograd regions.^1";
- 5061 s[5058] = "STOCK C.W., BURRY-STOCK J.A. (2003).- Originations and extinctions of stromatoporoid genera and their roles in the Frasnian-Famennian extinction.- Geological Society of America, Abstracts with Programs 35, 5: 385.- FC&P 33-2, p. 43, ID=1199^Topic(s): extinctions F/F; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra/Fam; Geography: ^1";
- 5062 s[5059] = "STEARNS C.W. (1987).- The effect of the Frasnian / Famennian biotic crisis on the stromatoporoids.- Geology 15: 677-679.- FC&P 16-2, p. 35, ID=2088^Topic(s): extinctions F/F; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra/Fam; Geography: ^at least 24 genera of stromatoporoids are found in post-Frasnian rocks; they do not become extinct suddenly at the F / F crisis; the resurgence of the labechiids suggests they were better adapted to cool water than other groups]^1";
- 5063 s[5060] = "COCKBAIN A.E. (1989).- Distribution of Frasnian and Famennian stromatoporoids.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 339-345.- FC&P 19-1.1, p. 14, ID=2552^Topic(s): distribution; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra/Fam; Geography: ^The stratigraphic distribution of stromatoporoids in western Australia and the decline in diversity over the Frasnian / Famennian boundary are documented; the most important event in their history was their extinction at the end of the Devonian and not the F/F crisis^1";
- 5064 s[5061] = "MISTIAEN B. (1991).- Nouvelle interpretation morphofonctionnelle du Stromatopore Frasnien Stachyodes australe (Wray 1967).- Geobios M.S. 13: 175-182.- FC&P 21-2, p. 47, ID=3201^Topic(s): structures; stroms, Stachyodes; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fra; Geography: ^The phase with convex laminae of this inocruster originally called keega, is considered the poorly calcified upper part of the stromatoporoid where the living tissue was located. The older part represents skeleton progressively deserted by living tissue. The trabecular structure is described as original. The upper part of the skeleton was secreted as spherules (cf. Astrosclera) that were progressively calcified into the "jet d'eau" microstructure of the base.^1";
- 5065 s[5062] = "MAKARENKO S.N. (1990).- Podklass Stromatoporata.- Trudy Akademii Nauk SSSR, Sibirskoye Otdelenie, Institut Geologii i Geofiziki 766 [Tesakov Y.I. (ed.): Stratigrafiya paleozoiskikh otlozheniy yugo-vostoka Zapadno-Sibirskoy plity]: 47-50.- FC&P 21-1.1, p. 59, ID=3275^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L M; Geography: ^Species of Actinostroma, Pseudoactinodictyon and Amphipora are

- described from Lower and Middle Devonian; none of the taxa is new]^1";
- 5066 s[5063] = "RUSH P.F., CHAFETZ H.S. (1991).- Skeletal mineralogy of Devonian stromatoporoids.- Journal of Sedimentary Petrology 61: 364-369.- FC&P 21-1.1, p. 59, ID=3276^Topic(s):skeletal mineralogy; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^Stromatoporoids in the Helderberg strata of New York State were originally composed of high-magnesium calcite. Structural elements are represented by a neomorphic fabric of microdolomite-rich zones of inclusions in low-magnesium calcite. Coexisting fossils originally composed of low-magnesium calcite show better preservation and no microdolomite. Fossils of aragonite shells show complete loss of ultrastructure. Preservation of the stromatoporoids is comparable to that of associated echinoderms.^1";
- 5067 s[5064] = "MISTIAEN B., HOU HONGFEI, WU XIANTAO (1997).- Identite des genres Stylostroma Gorskiy 1938 et Pennastroma Dong De-Yuan 1964, stromatopores du Famennien superieur (Strunien).- Geobios 20: 407-414.- FC&P 27-1, p. 108, ID=3862^Topic(s):systematics; Stroms, Stylostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Fam; Geography: ^After an historical review of the genus Pennastroma Dong De-Yuan 1964, the relationships between this genus and some similar labechiid genera are studied. The generic features proposed by Dong De-Yuan 1964, for the establishment of Pennastroma are then investigated; they concern the shape of primary and secondary pillars arranged penniformly and their V-shaped aspect in tangential section. These features seem to be inadequate to validate the genus Pennastroma which is a junior synonym of Stylostroma Gorskiy 1938.^1";
- 5068 s[5065] = "STEARNS C.W. (1997).- Intraspecific variation, diversity, revised systematics, and type of the Devonian stromatoporoid Amphipora.- Palaeontology 40: 833-854.- FC&P 27-1, p. 109, ID=3866^Topic(s):revision; stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^Understanding of the morphological variation and defining characters of the abundant and ubiquitous dendroid stromatoporoid genus Amphipora has been hindered by the loss of the holotype specimen of the type species, *A. ramosa* (Phillips). In the absence of the type, the boundaries of the genus could only be defined vaguely, yet 12 genera of Amphipora-like fossils have been named to constitute the family Amphiporidae Rukhin and about 175 species of these genera have been described. Assemblages of amphiporids in a single bed show a wide range of variation but are considered to be the remains of a monospecific stand because a comparable range of variation can be demonstrated along the length of single stems. Some highly variable characters have been used to distinguish genera and species. In particular, the expression of the axial canal, nature and presence of peripheral membranes., thickness of skeletal elements, and density of the skeletal network are shown to be of dubious value as criteria for characterizing genera or species. A neotype for *A. ramosa* is selected from collections made from the Chercombe Bridge Limestone at Broadridge wood quarry, Newton Abbot, Devon, and revised diagnoses of the species and genus are formulated. The presence of distinct pillars in the neotype and all examined specimens from Devon, shows that the four genera whose distinctness from Amphipora was based on the presence of this character, should be regarded as junior synonyms. Four other genera are also placed in synonymy with Amphipora. The amphiporid animal is reconstructed as a small cylindrical, branching, calcified sponge in which the dermal membranes covering the vestibules were locally calcified to form the peripheral membranes and vesicles.^1";
- 5069 s[5066] = "RIDING R. (1974).- The Devonian genus Keega (Algae) reinterpreted as a stromatoporoid basal layer.- Palaeontology 17, 5: 565-577.- FC&P 4-2, p. 64, ID=5305^Topic(s):systematic position; stroms, Keega; Systematics: Porifera;

- Stromatoporoidea; Stratigraphy: Devonian; Geography: ^1[le genre Keega attribué aux algues corallinacées est interprété comme étant une forme laminaire de Stromatoporoidés du genre Stachyodes Bargatzky]^1";
- 5070 s[5067] = "KHROMYKH V.G. (1976).- Devonian stratigraphy and stromatoporoids of the Ulakhan-Sis range. [in Russian].- Trudy Inst. Geol. Geofiz. AN SSSR, Sib. Otd. 302; 103 pp.- FC&P 7-2, p. 15, ID=5611^Topic(s): stratigraphy; stratigraphy, stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: Russia, Ulakhan-Sis^[many new species of stromatoporoids distributed among 18 genera are described; a monograph]^1";
- 5071 s[5068] = "KHROMYKH V.G. (1977).- The Lower Devonian amphiporid paleopopulations from the Omulev Mountains. [in Russian].- Trudy Inst. Geol. Geofiz. AN SSSR, Sib. Otd. 345 [Some new data about the fauna and stratigraphy of the middle and late Paleozoic of the USSR]: 3-12.- FC&P 7-2, p. 15, ID=5612^Topic(s): ; stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian L; Geography: Russia, Omulev Mts^[several new subspecies of Amphipora are described]^1";
- 5072 s[5069] = "KOBLUK D. (1978).- Reef stromatoporoid morphologies as dynamic populations: applications of field data to a model and the reconstruction of an Upper Devonian reef.- 002 Bulletin Can. soc. Petrol. Geology 26: 218-236.- FC&P 7-2, p. 15, ID=5614^Topic(s): growth forms; stroms, morphologies; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian U; Geography: ^[a model of the distribution of shapes on a reef is applied to the interpretation of stromatoporoids in the Miette Reef complex of western Alberta, Canada]^1";
- 5073 s[5070] = "LESOVAYA A.I. (1978).- Stromatoporoids.- Trudy Inst. geol. i geofiz. Sib. otd. AN SSSR, number unknown [B.S. Sokolov & V.G. Garkovets (eds): Atlas of Paleontological Plates - Supplement to Field Guide of the meeting Int. Commission on Devonian Stratigraphy, Samarkand]: plate numbers unknown.- FC&P 8-2, p. 50, ID=5729^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^[eleven plates, with numerous illustrations designated by Lesovaya as of new species]^1";
- 5074 s[5071] = "STEARNS C.W. (1979).- Biostratigraphy of Devonian Stromatoporoids.- Palaeont. Assoc. Spec. paper 23 [The Devonian System]: 229-232.- FC&P 9-1, p. 53, ID=5837^Topic(s): biostratigraphy; stroms, stratigraphy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^[review of biostratigraphic potential of Devonian stromatoporoids with a chart of generic ranges]^1";
- 5075 s[5072] = "MISTIAEN B. (1982).- Comments on the stratigraphic distribution of stromatoporoids around the Middle-Upper Devonian Boundary.- Papers on the Frasnian-Givetian Boundary, Subcommittee on Devonian Stratigraphy & Geological Survey of Belgium: 92-100.- FC&P 12-1, p. 47, ID=6199^Topic(s): stratigraphy; stratigraphy, stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian Giv/Fra; Geography: ^[The correlation of limestones around the Frasnian-Givetian boundary in France, Belgium, Poland, Czechoslovakia and China is examined. The author concludes that in reefal formations stromatoporoids can serve to establish valuable correlations.]^1";
- 5076 s[5073] = "CEJCHAN P., HLADIL J., GALLE A. (2009).- Stromatoporoid skeletal growth as a quasi-periodic process.- 10th Anniversary Conference of the Czech, Polish, and Slovak Paleontologists, October 13-15, 2009, Banská Bystrica, Slovakia. Poster Session Supplementary Paper 2. Banská Bystrica, Slovakia, 2 pp. [poster] - FC&P 36, p. 28, ID=6390^Topic(s): growth mode; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy:

Devonian; Geography: ^A unique specimen of Givetian stromatoporoid Actinostroma ... registered three accretional regimes: (1) two zones of the growth deceleration within one-year cycle, corresponding to Recent rhythms in the monsoonal realms, (2) regime with the single growth deceleration within the year's cycle, known for instance on the west coast of Atlantic, and (3) extremely varying regime, analogous to that in the realms of frequent storms, as known for instance from the neighbourhood of today's Japan. [extracted from results of research]^1";

5077 s[5074] = "LISY P., CEJCHAN P., GALLE A., FILIP J., SLAVIK L. HLADIL J., BABEK O. (2010).- Stromatoporoid growth-band series: optical logs as a scale for magnetic susceptibility sampling.- IGCP 580 Meeting [D. Chen & A.C. da Silva (eds.): Applications of Magnetic Susceptibility on Paleozoic Rocks; 28th November-4th December 2010, Guilin, China]; Meeting Programme and Abstracts: 29-30; Beijing. [abstract] - FC&P 36, p. 34, ID=6399^Topic(s): growth rates; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^The annual increments in skeletons of Devonian stromatoporoids are 1-8 (3-6) mm thick. The primary elements calcified during several days were thin and/or minute and correspond to immediate CaCO₃ accretion rates 0.05-0.12 g/cm²/yr. Such accretion is one order of magnitude less than for present scleractinians but up to several orders of magnitude more than for present calcareous sponges. According to thousands of specimens assessed worldwide, there are no doubts that more than 90% of backreef Givetian and Frasnian stromatoporoids display a conspicuously developed seasonal bandings. [fragments of the abstract]^1";

5078 s[5075] = "LUCZYNSKI P. (2008).- Stromatoporoid shape and burial ratio changes during growth history and their methodological consequences in morphometrical analyses.- Lethaia 39, 4: 339-358.- FC&P 36, p. 34, ID=6400^Topic(s): morphometry; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^Eight Devonian stromatoporoids with clearly exposed arrangements of latilaminae were subjected to detailed morphometrical analyses. Distinctive sets of latilaminae were marked on photographs taken from polished specimens, which allowed reconstruction of their individual growth histories by presenting consecutive stages of their growth. The growth forms measured above the sediment surface and the overall shapes of the skeleton at a given time have proved to differ distinctly between each other throughout the growth history of these stromatoporoids. The morphometrical features of individual specimens (both of their growth forms and of their whole skeletons) distinctly changed throughout their development. Changing environmental factors directly influenced the growth form above the sea floor, and each specimen shows its own specific history of growth form changes. Instead, overall shapes of the skeleton of most of the studied specimens changed in a similar general manner resulting from growth during sediment accumulation. Basing the palaeoenvironmental considerations only on the stromatoporoids's final shapes may thus be very misleading. It is therefore suggested that the ascription of a specimen to a particular morphometrical category should be based on the mode of its growth history represented by a curve recording the V/B changes (vertical height versus basal length) during consecutive growth stages. Certain sedimentary processes have their direct reflection in the mode of stromatoporoid growth, and are recorded by the attributes of the shape profile (V/B), and burial ratio (BR) curves, which allows deciphering such features as, for example, periodicity of sediment supply, substrate consistency and tempo of sediment cementation. This is particularly valuable when the deposits are recrystallized and the sedimentary structures are not visible. The paper also tests the applicability of the new definitions of the parameters describing the stromatoporoid shape introduced recently by the author. [original abstract]^1";

- 5079 s[5076] = "STOCK C.W. (1990).- Biogeography of the Devonian stromatoporoids.- The Geological Society Memoir 12 [W.S. McKerrow & C.R. Scotese (eds): Palaeozoic Palaeogeography and Biogeography]: 257-265.- FC&P 19-1.1, p. 67, ID=6820^Topic(s): biogeography; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian; Geography: ^Stromatoporoids were a common component of shallow carbonate environments of North America, Eurasia, and Australia during the Devonian. They were least abundant during the Early Devonian. After that time abundance increased, and remained high steadily through the Frasnian. At the Frasnian-Famennian boundary the number of stromatoporoids was greatly diminished, but they did not become extinct until the end of the Devonian (at the end of the Strunian). The geographic extent of stromatoporoids expanded and contracted concurrently with increases and decreases in total population size. Provincialism at the genus level prevailed during the Early Devonian, with stromatoporoids inhabiting the Old World and Eastern Americas Realms; none are known from the Eastern Americas during the Siegenian. For the remainder of the Devonian stromatoporoids were cosmopolitan at the genus level. The abundance of stromatoporoids varied directly with eustatic sea level during the Devonian. Variations in depositional conditions apparently controlled the local distribution of genera. [original abstract]^1";
- 5080 s[5077] = "TSIEN H.-H. (1984).- Constructeurs de récifs devoniens: stromatoporoids, coraux tabuleux et rugueux et microorganismes.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 26.1-26.21.- FC&P 13-2, p. 48, ID=0573^Topic(s): reefs constructors; paleontology, reef-builders; Systematics: Porifera Cnidaria A; Stromatoporoidea Anthozoa; Stratigraphy: Devonian; Geography: ^The Stromatoporoids are divided into 10 growth form groups and each is assigned to a particular paleoenvironment.^1";
- 5081 s[5078] = "HLADIL J. (1980).- The Givetian tabulate coral Nitkovicpora gen.n.- Vestnik Ustredniho ustavu geologickeho 55, 2: 101-104.- FC&P 9-2, p. 46, ID=0354^Topic(s): nomenclature; Tabulata, Nitkovicpora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Giv; Geography: ^Nitkovicpora gen.n., a new genus of tabulate corals, family Coenitidae, subfamily Natalophyllinae, is described and its earlier homonymy discussed. This coral occurs in Upper Givetian limestones below the Carpathian Foredeep sediments and shows affinities to the genera Natalophyllum Radugin and Scoliopora LaSmith & Thomas. The type species is Nitkovicpora orbicularis sp.n., assigned in an earlier paper (see above) to the new genus Crassialveolitella which is a nomen nudum and was, moreover, already occupied for another tabulate coral by Tchi (1966).^1";
- 5082 s[5079] = "GOODGER K.B. (1985).- The tabulate corals and Devonian world palaeogeography.- Proceedings of the Ussher Society 2: 268-269.- FC&P 15-1.2, p. 25, ID=0865^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^^1";
- 5083 s[5080] = "FERNANDEZ-MARTINEZ E., PLUSQUELLEC Y., MISTIAEN B., TOURNEUR F. (1999).- Crenulipora Le Maitre, 1956 (Tabulata, Dévonico): Revision del material original y estado actual de conocimientos.- Temas Geologico-Mineros ITGE 26: 594-598.- FC&P 31-1, p. 62, ID=1633^Topic(s): revision; Tabulata, Crenulipora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^^1";
- 5084 s[5081] = "LAFUSTE J., TOURNEUR F. (1988).- Precisions sur la structure et la microstructure du genre Roemeria Milne-Edwards et Haime 1851 (Tabulata, Devonien moyen d'Allemagne et de Belgique).- Paläontologische Zeitschrift 62, 1-2: 11-48.- FC&P 17-2, p. 31, ID=2192^Topic(s): microstructures; Tabulata, Roemeria; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian

M; Geography: ^Three Middle Devonian tabulate coral species assigned to the genus *Roemeria* Milne-Edwards et Haime 1851 are described. *R. infundibulifera* (Goldfuss 1829) the type species of the genus and *R. minor* Schlueter 1885, both from the Rheinisches Schiefergebirge and a new species, *R. cubiniensis* from the Couvin area of Belgium. Their external and internal characters and microstructures are described in detail. The dominant morphological features they have in common are cerioid and locally fasciculate corallites and tabulae with an infundibuliform profile. The microstructure of the corallite walls is characterized by an hitherto undescribed association of an internal fibrous zone and a peripheral lamellar zone flanking a median plate made of small granules and larger elements of stellate form. The only microstructural variation between the three species lies in the proportions of these components.^1";

5085 s[5082] = "TOURNEUR F. (1988).- Mise au point sur le genre *Trachypora* Milne-Edwards et Haime 1851 (Tabulata, Devonien).- *Annales de la Societe geologique de Belgique* 110: 297-308.- FC&P 17-2, p. 32, ID=2193^Topic(s): nomenclature; Tabulata, Trachypora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^The genus *Trachypora* Milne-Edwards et Haime 1851 was originally established for the species *T. davidsoni* Milne-Edwards et Haime 1851, which is insufficiently known; therefore the use of this generic name should be avoided. Most of the Devonian species of the Old World assigned to this genus by subsequent authors belong very probably to the genus *Hillaepora* Mironova 1960. The American Devonian species are either members of the family Dendroporidae de Fromentel 1861, or species of the genus *Thamnoptychia* Hall 1877. Consequently, the use of the family name Trachyporidae Waagen et Wentzel 1886 should be avoided.^1";

5086 s[5083] = "LAFUSTE J., TOURNEUR F. (1991).- Biocristaux et elements fonces de la muraille chez *Thamnopora* Steininger 1831 (Tabulata, Devonien).- *Annales de Paleontologie* 77, 1: 3-20.- FC&P 20-2, p. 31, ID=2891^Topic(s): microstructures; Tabulata, Thamnopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^In the axial part of *Thamnopora* corallum, the wall is composed of a median lamina in large vertical elements flanked by perpendicular fibers; in the middle part of the corallum, the median lamina broadens out and becomes made of pennate rods; in the cortical part of the corallum, the skeleton is entirely fibrous. Biocrystals of the median lamina enclose dark granulae whose dimensions and location are not hazardous. Interfaces of biocrystals are strongly underlined (by organic matter ?) between the median lamina and the fibers, but considerably less pronounced between rods and fibers themselves. Microstructure of Tabulate corals must be studied in various parts of the corallum. *Thamnopora* is a good example of fibrization, a tendency which is a general feature of Tabulata. In its axial part, the skeleton of *Thamnopora* is analogous to that of *Pachyfavosites*. Problems of relations between Pachyporidae-Thamnoporidae (with peripherically thickened skeleton) and Favostidae (with walls of uniform thickness) are evocated.^1";

5087 s[5084] = "SORAUF J.E., STEIN W.E.jr (1993).- Biological fabric and the study of growth in the Devonian tabulate coral genera *Lecfedites* and *Favosites*.- *Courier Forschungsinstitut Senckenberg* 164: 159-168. [P. Oekentorp-Kuster (ed.) *Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera*, Vol. 1].- FC&P 22-2, p. 15, ID=3450^Topic(s): biological fabric, growth study; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^Study of tabulate corals has been plagued by a lack of consistently definable anatomical features. Conspicuously absent are homologous point-for point correspondences between corallites. Corallite size, growth patterns, colony form and polymorphism comprise much of the basis for current systematics, but these commonly are only informally descriptive. This study approaches corallite pattern and

growth from a numerical standpoint by means of biological fabric. Biological fabric is defined as a morphological pattern in which there are multiple subunits displaying complex relationships between individuals and also between neighborhoods. In these patterns, variability and position of subunits are parameters as important as overall pattern means, or central tendencies. Measurements of corallite sizes, shapes, relative locations, and orientations in colonies of the genera *Lecfedites* and *Favosites* have been collected from transverse sections using a microcomputer based videometric system. Methods have been developed for consistent characterization of corallite fabric: these are interpreted as variations in rates of skeletal growth and budding. Regions of faster and slower growth and a dynamic hummock-hollow behavior of the colony surface are seen in *Lecfedites*. Measurable variability in corallite size and shape are interpreted in terms of intracolony population structure. In contrast, species of the genus *Favosites* studied tend to be homogeneous both at the level of individuals and in larger regions of colonies. However, some areas of more patterned budding are present and these are easily distinguished. Further success in using the morpho-metric characterization of biological fabric in the study of the Tabulata will lead to more accurate definition of species and genera. ^1";

5088 s[5085] = "MAY A. (1997).- Statistics on *Thamnopora* (Tabulata, Devonian).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 217-230.- FC#038;P 26-2, p. 15, ID=3686^Topic(s): statistical analysis; Tabulata, *Thamnopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^*Thamnopora* is a ramose tabulate coral that was abundant world-wide in the Devonian (Lochkovian to Frasnian). Its simple morphology allows the testing of statistical methods. 312 descriptions of 148 species and subspecies of *Thamnopora* and *Gracilopora* were assembled from 73 publications. Every description has been entered into a data bank with the following morphological data: growth of the corallites in the branches, septal elements, diameter of branches, diameter of corallites in the central (resp. peripheral) part of the branch, thickness of the walls in the central (resp. peripheral) part of the branch, diameter and spacing of mural pores, and distance between tabulae. Some morphological characters show interdependent positive correlations, and peripheral corallite diameter is a good indicator for the size of the polyp, which is at least partly genetically controlled. It is not possible to discriminate between *Gracilopora* and *Thamnopora*: therefore *Gracilopora Tchudinova* 1964 is a junior synonym of *Thamnopora Steininger* 1831. *Thamnopora* shows a phylogenetic increase in size. A cluster analysis performed with the aim of discriminating true species from synonyms failed.^1";

5089 s[5086] = "YU CHANGMING, OEKENTORP K. (1997).- Morphogenesis, taxonomy and microstructures of *Beiliupora* Yu & Deng 1974 (Devonian, Tabulata), with bearing on Devonian stratigraphy in Beiliu, Guangxi (South China).- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 245-260.- FC#038;P 26-2, p. 16, ID=3688^Topic(s): morphogenesis, taxonomy, microstructures; Tabulata, *Beiliupora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^*Beiliupora* Yu & Deng is a tabulate coral genus erected in 1974 with the monotypic species *Beiliupora beiliuensis* Yu & Deng in wang, Yu & Wu 1974 from the Lower Devonian, Emsian, Beiliu Formation in Beiliu, Guangxi, South China. The present restudy based on the topotypic material collected by Kl. Oekentorp during his visit to the type locality in 1982 reveals that the coral is mainly characterized by its peculiar colonial growth form, which is named here the lattice-framework form. The branches grow to a certain level and extend horizontally almost in all directions (never downwards). Subsequently, they grow further in the vertical direction, either isolated or in combination with another branch extending from the opposite direction.

The corallites radiate from the axial part of the cylindrical branch extending upward to the surface of the branch at a sharp to rectangular angle. All branches show continuous growth. The walls are recrystallized, e.g. the thickening of the walls at the calical portions with fibrous structures are secondary caused by reorganization of the crystals. Because of the peculiar colonial form, the genus is best placed under a distinct family, regarding the well developed polygonal to subrounded corallite walls, the mural pores, the more or less complete tabulae and the transition from anormal type of septal spines to squamulae. It is believed that family and genus are reasonably placed in the Favositina. Forms of Beiliupora have a wide distribution not only in Guangxi, South China, but also in Da Hinggan Ling, Northeast China, and in Gansu province, Northwest China. They have been assigned to Graciloporella Tchi 1982 and to Gracilopora Tchudinova 1964; the former is believed to be synonymous with Beiliupora. They all occur in Lower Devonian Emsian beds; commonly within the so-called Zdimir-limestone. Some tabulate corals with small corallites and peculiar colonial form described as species of Gracilopora in the former Soviet Union Territory may be a form of Beiliupora. A form occurring in the Zdimir-bearing limestone beds near Oviedo, Spain, once recognized by Yu during a field-trip, might also be referred to Beiliupora.¹¹;

5090 s[5087] = "IVEN C., MISTIAEN B., TOURNEUR F. (1997).- New data on the morphology and microstructure of the genus Caliapora Schlueter 1889 (Tabulata, Middle Devonian): systematic implications and reflections on the function of squamulae.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 261-271.- FC&P 26-2, p. 16, ID=3689Topic(s): morphology, microstructures; Tabulata, Caliapora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: ^The examination of exposed calices as well as of thin sections of coralla overgrown by stromatoporeoids has revealed that, in addition to the swallow-nest shaped squamulae, pillars in the corners of the calices rising above the colony surface and leaving large open gaps between them are important characters of the genus Caliapora. This character corresponds with the microstructure and the arrangement of growth bands delineating former growth stages. The pillars are centres, from which the fibres constituting the skeleton originate and rise steeply to the middle of each wall. The function of the squamulae seems to have been to enlarge the surface of the digestive and resorptive tissue of the polyp and to improve the stability of the polyp, which is assumed to have been necessary due to the large gaps between the pillars, which was probably spanned by soft tissue. The family Caliaporidae Mironova 1984 is regarded as valid and separate from the Favositidae as well as from the Alveolitidae because of the peculiar characters described.¹¹;

5091 s[5088] = "HLADIL J. (1998).- Evolution of intraspecific morphological variability and its relationship to environment (Caliapora battersbyi, Devonian).- Vestník Ces. geol. ustavu 73, 1: 61-74.- FC&P 27-1, p. 82, ID=3823Topic(s): variability, phylogeny; Tabulata, Caliapora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^Quantitative evaluation of morphology including parameters of environment provided these results: Morphological variability of the species decreased slowly but continuously, beginning from the stage of its initial biotic radiation. Episodes of increased variability corresponded to agitated water and strokes of sedimentary clasts. Local maxima of variability are correlated with the longevity of coral colonies. Surprisingly, the changes of morphological variability are almost independent of the changes of diversity of accompanying corallomorph fauna and flora. Variability displayed negative correlation with direct biological attack during the initial 3/5 of the Givetian history of the species. Then a change arose and during the remaining times until the end of the Givetian, the variability displayed a negative correlation with the

direct biological attack. The weakly positive correlation of variability with the density of the populations has been documented. Similar but not identical complexes of morphological features in conjunction with a specific decrease/increase in variability were found during several ecological crises during the Middle and Late Givetian (a primary control by marine regressions on carbonate platforms). To conclude, the study about *C. battersbyi* indicates that the intraspecific morphological variability of tabulate corals is not only dominantly controlled by energy of waves and quality of the sedimentary substrate, as it would correspond to state-of-art of the discipline before this study. The morphological variability reflects distinctively also the ecological and evolutionary situations.¹¹;

- 5092 s[5089] = "WEYER D. (1997).- Actinotheca Frech 1889 (Anthozoa, Tabulata) im eurasiatischen Famenne (Oberdevon).- Coral Research Bulletin 05: 247-264.- FC&P 27-1, p. 86, ID=3830^Topic(s): taxonomy; Tabulata, Actinotheca; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fam; Geography: ^The forgotten genus, with type species Actinotheca parallela Frech 1889 (Lower Visean of Germany, probable senior synonym Trachypora siemensii Frech 1885), is classified as a member of Palaeacidae Roemer 1883 (with synonym Trachypsammidae Gerth 1921). Some of their genera were treated as doubtful Tabulata, perhaps being even Porifera or Octocorallia. Two misidentified Rugosa are transferred to Actinotheca, Petraia tenuicostata Muenster 1839, and synonym Pseudamplexus granulatus Rozkowska 1969. This second species of Actinotheca is of Middle-Upper Famennian age; the genus reaches into Upper Visean beds and should be the ancestor of Middle Permian Trachypsammia Gerth 1921. Actinotheca tenuicostata (Muenster 1839) occurs in the Clymenia and Wocklumeria genozones of Mid-European Variscan Mountains (Renohercynian Rhenish and Holy Cross Mountains; Saxothuringian Upper Franconia, Thuringia, and Lower Silesian Sudetes), and in Prolobites horizon and Clymenia genozone of the Asian Southern Urals (Russian Kia section, Kazakhstanian Kara-Dzhar section.¹¹;
- 5093 s[5090] = "MAY A. (1998).- Statistische Untersuchungen an der tabulaten Koralle Thamnopora (Anthozoa; Devon).- Geologica et Palaeont. 32: 141-159.- FC&P 28-1, p. 39, ID=3969^Topic(s): statistical analysis; Tabulata, Thamnopora; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^The simple morphology of the ramose tabulate coral Thamnopora allows to test the use of statistical methods. 312 descriptions of 148 species and subspecies of Thamnopora and Gracilopora are collected from 73 publications. Every description has been entered into a data bank with detailed data concerning provenance and morphology. Some morphological characters show interdependent positive correlations, and the peripheral corallite diameter is a good indicator for this at least partly genetically controlled size of the polyp. It is not possible to discriminate Gracilopora from Thamnopora, therefore Gracilopora Tchudinova 1964 is a junior synonym of Thamnopora Steininger 1831. Thamnopora shows a phylogenetic increase of size. A cluster analysis with the aim to discriminate true species from synonyms failed.¹¹;
- 5094 s[5091] = "OLIVER W.A.jr (1975).- Dimorphism in two new genera of Devonian tabulate corals.- US Geol. Surv. Prof. Paper 743-D: 1-11.- FC&P 5-1, p. 33, ID=5387^Topic(s): dimorphism; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^"Dimorphism"; in most tabulate corals consists of a bimodal distribution of corallite diameters; this can better be termed "dimetrisim";. Demonstration of a morphologic difference, other than size, between forms has been rare. "Favosites" canadensis (Billings) has two kinds of corallites - large ones with squamulae and small ones with normal, complete tabulae. "Favosites" arbor Davis also has two kinds of corallites - one with a deep calice and possibly two distinct ontogenetic stages and a second that is smaller, having a shallow calice and possibly only the

- second ontogenetic stage. * Dimorphism, corallite ontogeny, and microstructure are emphasized in descriptions of the species and two new genera: *Lecfedites* (type species *F. canadensis*) and *Bractea* (type species *F. arbor*). The genera are known only from rocks of Emsian and Eifelian ages in the Eastern North American Biogeographical Province.^1";
- 5095 s[5092] = "TOURNEUR F., LAFUSTE J. (1986).- Précisions sur la structure et la microstructure du genre *Roemeria* Milne-Edwards & Haime 1851 (Tabulata, Dévonien moyen).- *FC&P 15-2*, p. 16, ID=6745^Topic(s): microstructures; Tabulata *Roemeria*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: ^Les murailles chez ces trois espèces [de *Roemeria*] se révèlent constituées de manière identique, seule la proportion des éléments microstructuraux se montrant variable: (1) une lame médiane à granules ténus et éléments plus larges, de type "stelloïdes"; (2) deux flancs de sclérenchyme à fibres à bosselures, (3) deux enveloppes finales en lamelles onduleuses, présentant une disposition en dièdre ouvert vers le haut, qui est une des caractéristiques principales de ce genre. * En conclusion, nous améliorons par ces données la diagnose du genre *Roemeria* et de la famille *Roemeriidae*; par ailleurs, des diagrammes sont fournis pour illustrer le nouveau mode d'association fibres-lamelles que révèle l'étude des *Roemeria*. [final fragment of a short note]^1";
- 5096 s[5093] = "DUBATOLOV V.N. (2002).- Evolution of tabulate assemblages and paleobiogeography around the Frasnian-Famennian boundary.- *Coral Research Bulletin 7*: 039-046. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 33, ID=7098^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Fra/Fam; Geography: ^The evolution of species assemblages of Tabulata corals in the Salair, Altai and west Siberian Seas, which were located in Siberia in the Devonian Period, is discussed. Three species assemblages are established in the Salair and Altai Seas: Early Frasnian, Late Frasnian and Famennian. In the west Siberian Sea only one specific assemblage has been found, namely Early Frasnian. Tabulate assemblages in the Famennian consisted of solitary species. Evolution of tabulate assemblages is discussed for the entire Late Devonian. It is recognised that a major reconstitution of tabulate species assemblages occurred across the Frasnian-Famennian boundary. This reconstitution is expressed not only in a sharp change of taxonomic composition, but also in the mass extinction of many groups of corals and other organisms. Based on the analysis of temporal-spatial distribution of tabulates it is concluded that seas in Australia and Eurasia in the Frasnian could be treated as one Australia-Eurasian paleobiogeographical province. [original summary]^1";
- 5097 s[5094] = "POTAMOVA M.N. (1992).- Nekotorye aspekty izmenchivosti *Alveolitella* (Tabulata) [some aspects of variability in *Alveolitella* (Tabulata)].- In Sokolov B.S. & Ivanovskiy A.B. (eds): *Vnutrividovaya izmenchivost korallov i stromatomorfid* [intraspecific variability in corals and stromatoporoids]. *Russ. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.*; 101 pp.- FC&P 22-1, p. 30, ID=3372^Topic(s): variability; Tabulata, *Alveolitella*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^^1";
- 5098 s[5095] = "PLUSQUELLEC Y., TOURNEUR F. (1998).- Persistence de *Favositides* microlamellaires (Cnidaria, Tabulata) dans le Dévonien.- *C.R. Acad. Sci. Paris* 1998, 326: 283-289.- FC&P 27-1, p. 85, ID=3829^Topic(s): microstructures; Tabulata, *Favositida*; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian Eif; Geography: ^The structural and microstructural study of some devonian "*Favositides*" shows the persistence of the microlamellar species related to Paleofavosites until the lower Eifelian. The evolution of the wall is characterized by an increase of the size of the microlamellae and the substitution of the granules of

- the median dark line by fiber-like units.^1";
- 5099 s[5096] = "WRIGHT A.J., BYRNES J.G. (1980).- Review of occurrences of Halysitid corals in Devonian strata.- Alcheringa 04: 183-202.- FC&P 11-1, p. 52, ID=1779^Topic(s): review; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^A review of reported and new occurrences of 'Devonian' halysitids indicate that most are older than Devonian. Reports of Emsian halysitids from Chios are best attributed to errors in the compilation of Bassler (1950). The occurrences of halysitids in Quebec in strata considered Early Devonian provide the only plausible examples of the existence of this family in the Devonian. Thus, only Cystihalysites and Quepora appear to linger into the Devonian. Five Australian occurrences, yielding seven taxa, are described and interpreted as Silurian or older halysitids. All are from allochthonous material in the Early Devonian of New South Wales and include: Schedohalysites murrampirra sp.nov., Halysites suesmilchi Etheridge and an indeterminate specimen from the Mulla muddy Formation near Mudgee; Schedohalysites sp. cf. S. ? chillagoensis from the Sutchers Creek Formation, also near Mudgee; Quepora sp. indet. from the Jesse Limestone at Limekilns; cf. S. orthopteraides (Etheridge) from the Nubrigyn Formation near Stuart Town; and ? Halysites sp. indet. from the Sharpeningstone Conglomerate near Bowring. The type material of Schedohalysites ? chillagoensis (Etheridge) is redescribed and a lectotype is selected. ^1";
- 5100 s[5097] = "PLUSQUELLEC Y. (2007).- Histoire naturelle des Pleurodictyiformes (Cnidaria, Tabulata, Devonien) du Massif Armoricaïn et des regions Maghrebo-Europeennes principalement.- Memoirs de la Societe Geologique et Mineralogique de Bretagne 32 (2007): 1-138.- FC&P 35, p. 65, ID=2370^Topic(s): natural history; Tabulata, Pleurodictyiformes; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian; Geography: ^The present memoir consists of three main chapters distributed as follows: 1- general considerations about the morphology, structure and microstructure of the Pleurodictyum-like corals, 2- systematic, stratigraphic and paleobiogeographic studies of the genera belonging to the Micheliniidae and the Cleistoporidae, 3- global conclusions dealing with biostratigraphy and paleobiogeography. [firs part of extensive summary]^1";
- 5101 s[5098] = "PLUSQUELLEC Y. (1973).- Précisions sur la systématique de quelques Tabulé pleurodictyiformes.- C. R. Acad. Sci. Paris 277, Sér. D: 153-156.- FC&P 2-2, p. 18, ID=4810^Topic(s): new taxa; Tabulata, Pleurodictyiformes; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian M; Geography: ^Description of three new genera of Pleurodictyiform Tabulate from Lower and Middle Devonian: Paracleistopora nov. gen., Cleistodictyum nov. gen., Ligulodictyum nov. gen.^1";
- 5102 s[5099] = "DUBATOLOV V.N. (1978).- Granica niznego i srednego devona v SSSR po tabulatormorfnyh korallam. [Lower / Middle Devonian boundary in the USSR as marked by tabulatormorphic corals; in Russian].- Trudy Inst. geol. geofiz. AN SSSR, Sib. otd. 401 [O.A. Betekhtina & R.T. Gratsianova (eds): Fauna i stratigrafiya srednego i verkhnego paleozoya Sibiri]: 4-14.- FC&P 8-2, p. 45, ID=5703^Topic(s): ; tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian L/M; Geography: USSR^Analysis of generic and species complexes of tabulate corals from the late Lower and early Middle Devonian of the USSR renders feasible a correlation of coeval Lower and Middle Devonian deposits from different regions. * Drawing of boundary between the Lower and Middle Devonian is proposed at the base of the Favosites regularissimus zone of these corresponding deposits.^1";
- 5103 s[5100] = "RAKOCINSKI M. (2010).- Sclerobionts on upper Famennian cephalopods from the Holy Cross Mountains, Poland.- Senckenbergiana lethaea [Palaeobiodiversity and

- palaeoenvironments]1007/s12549-010-0045-x.- FC&P 36, p. 132, ID=6589^Topic(s): epibionts; epibionts; Systematics: Mollusca; Stratigraphy: Devonian Fam; Geography: ^[recorded are crinoid holdfasts, problematic worms, bryozoans, microconchids, possible cornulitids and "organisms of uncertain affinities"; although corals, both Rugosa and Tabulata, are recorded from the investigated horizon at Kowala quarry, neither group is mentioned by the author as settling on cephalopods]^1";
- 5104 s[5101] = "HLADIL J. (1986).- Trends in the Development and Cyclic Patterns of Middle and Upper Devonian Buildups.- Facies 15: 1-34.- FC&P 15-2, p. 41, ID=0735^Topic(s): reefs, global cyclity trends; reefs microfacies; Systematics: ; Stratigraphy: Devonian M U; Geography: ^A comprehensive review of Middle and Upper Devonian reefs, based on about 350 papers describing the reef development within 44 areas all over the world, resulted in the recognition of four reef megacycles (Upper Eifelian; Givetian; Uppermost Givetian to Frasnian; Upper Frasnian to Lower Famennian). These megacycles are characterized by the occurrence of typical reef types and by characteristic microfacies associations. Twelve microfacies associations can be distinguished using lithological, paleontological and microfacies criteria; each microfacies association includes several standard microfacies types.^1";
- 5105 s[5102] = "ZIEGLER W., WERNER R. (1986).- Devonian Series Boundaries - Results of worldwide Studies.- Courier Forschungsinstitut Senckenberg 75:1-415.- FC&P 15-1.2, p. 41, ID=0765^Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: ^The present volume of the Courier of the Senckenberg Research Institute is entirely devoted to articles (29) relevant to Devonian stratigraphy of the world. They particularly concentrate on scope and bearing of the new intra-Devonian Series Boundaries. The Subcommittee on Devonian Stratigraphy (SDS) of the International Commission on Stratigraphy had stimulated the Devonian stratigraphers of the world in 1973 to work toward a revision of series and stage boundaries. More than a dozen regional field trips and meetings by SDS and numerous scientific articles and Devonian symposia have promoted the work since then. [from the foreword]^1";
- 5106 s[5103] = "EDER F.W., MEISCHNER D., WEDEPOHL K.H. (1986).- Erhaltung hoher Sr-werte in mitteldevonischem Riffdetritus.- Kurzfassungen erstes Treffen deutschsprachiger Sedimentologen.- FC&P 15-1.2, p. 41, ID=0766^Topic(s): reefs, Sr; reefs, chemistry; Systematics: ; Stratigraphy: Devonian M; Geography: ^^1";
- 5107 s[5104] = "IKONNIKOVA N.F. (1982).- Ekologicheskoye soobshchestvo i stratigraficheskiye granitsy v devone khrebt Kalkanata [Ecological assemblages and stratigraphic boundaries in the Devonian of the Kalkanata Range].- Paleontologiya i detal'naya stratigraficheskaya korrelyatsiya, Chast' I [Kruchinina N. V. (ed.); AN SSSR; Vsesouzhnoye Paleontologicheskoye Obshchestvo]: 94-96.- FC&P 14-1, p. 55, ID=1043^Topic(s): ecology, stratigraphy; ecology, stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: Russia?, Kalkanata Range^^1";
- 5108 s[5105] = "WEDDIGE K. (ed.) (2002).- Devonian Correlation Table.- Senckenbergiana lethaea [Palaeobiodiversity and Palaeoenvironments] 81, 2: 435-462.- FC&P 31-1, p. 55, ID=1620^Topic(s): stratigraphy, correlation table; stratigraphy; Systematics: ; Stratigraphy: Devonian; Geography: ^^1";
- 5109 s[5106] = "COPPER P. (2002).- Reef development at the Frasnian-Famennian mass extinction boundary.- Palaeogeography, Palaeoclimatology, Palaeoecology 181, 1-3: 27-65.- FC&P 32-1, p. 34, ID=1739^Topic(s): extinctions; reefs; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^A newly compiled global reef database indicates that the 5-6 Myrs long Frasnian (Late Devonian) metazoan reef episode had

relatively low diversity compared to middle Devonian highs (with over 200 genera of calcitic rugose and tabulate corals). Following an initial early rise after late Givetian coral and stromatoporoid extinctions, reefs expanded for the last time during mid-Frasnian sea-level highstands but declined markedly in the late Frasnian (rhenana-linguiformis conodont zones) below the Frasnian/Famennian (F/F) boundary. Globally metazoan reefs were wiped out by the end Frasnian: some Famennian reefs while partly retaining the structure of the underlying carbonate platform, were built by cyanobacterial consortia such as Rothpletzella, Girvanella and Epiphyton. During the Famennian, foraminifera with calcite walls became abundant for the first time in the Phanerozoic adding a new dimension to carbonate platforms. Colonial rugose corals (phacelloid, cerioid and thamnastraeoid modules) were absent in the early post-extinction phases up into the mid-Famennian and very rare and non-reefbuilding later, but solitary deep-water Lazarus corals survived locally. Coral-sponge reefs are unknown from the 21 Myr long Famennian, also a time of very low platform carbonate production. Rare small isolated stromatoporoid sponge and lithistid sponge patch reefs returned episodically during the Famennian in North America, western Europe, Australia, and China. The aragonitic stromatoporoids became extinct at the end of the Famennian. During a late Devonian tectonically very active collisional Caledonian mountain-building phase, oceanic and atmospheric cooling accompanied by sea-level lowstand systems, exposed most carbonate platforms accelerating coastal erosion and karsting. This increased the amount of clastics in the shelf-slope setting, in the last 1-3 Myrs prior to the F/F boundary often burying reefs. Immediately following there were protracted losses in practically all major tropical shelf marine invertebrates exceeded only by the end-Permian extinctions in severity. There is no apparent link between black organic-rich horizons and reef demise at, or close to, the F/F boundary. The F/F boundary not also (sic) marks the largest change from widespread flooded Early and mid-Paleozoic continental cratons to narrow distal shelves but also spikes the largest known global Paleozoic shift in atmospheric O₂ enrichment and CO₂ draw down. This threshold matched the rise of the first tropical rainforests and expansion of terrestrial biomes on the tropical central lowlands formerly occupied by carbonate platforms.¹¹;

5110 s[5107] = "BOGOYAVLENSKAYA O.V., PANCHENKO E.V. (1986).- K stratigraphii sredniedevonskikh i franskikh otlozheniy Aiskoi struktury [on stratigraphy of the Middle Devonian and Frasnian deposits of the Aisk structure].- Sredniy devon SSSR ego granitsy i jarusnoe raschleneniye; Nauka, Moskva.- FC&P 17-1, p. 39, ID=2152^Topic(s): geology; geology, stratigraphy, fossils; Systematics: ; Stratigraphy: Devonian Eif - Fra; Geography: Russia?^11";

5111 s[5108] = "COPPER P., SCOTESE C. (2003).- Megareefs in Mid-Devonian supergreenhouse climates.- Geological Society of America Special Paper 370 [Extreme depositional environments: mega end members in geologic time]: 209-230.- FC&P 33-1, p. 84, ID=2417^Topic(s): greenhouse climate; reefs; Systematics: ; Stratigraphy: Devonian; Geography: ^A newly refined reef database, modified to calculate reef tracts in relation to major tectonic plates, and with new paleogeographic maps, indicates that the largest known, and latitudinally most widespread Phanerozoic reefs developed during the Middle Paleozoic (Siluro-Devonian), with an acme in the Middle Devonian. Expanding during times of exceptional sea-level highstands and widespread epicontinental shallow seas, this 26 m.y. long acme of coral-sponge reef growth coincided with the warmest global temperatures known for the Phanerozoic, i.e. with a "supergreenhouse" climate mode well above Holocene interglacial norms. During the Middle Paleozoic, reefs were particularly abundant, occupying large, continental seaboard, carbonate platforms, and vast inland epicontinental seas. Examples of such "extremes" occurred mostly on passive margin settings, and extensively flooded continental

interiors, e.g. the 1700-3000km long tracts of the western Canada Sedimentary Basin, Canadian arctic (Innuitian platform), eastern Laurentia "Old Red Continent" (linked United Kingdom to Poland), eastern Russian Platform (northeast Laurussia), Ural "Fold Belt" (eastern slopes of Urals), Siberia, northwest Africa, and South China. Smaller scale reef belts between 700 and 1300km long were constructed on isolated tectonic terranes facing Gondwana on the north (Pyrenees, Afghanistan-Pakistan), Mongolia, Kolyma-Chukotka, and North China. Large basins and flooded shelf areas, and the reefs featured within them, were not persistently developed throughout the Middle Paleozoic. They especially characterized the middle Emsian through Givetian (late Early Devonian - Middle Devonian). The following Frasnian (Late Devonian) showed more restricted and confined distribution of coral - stromatoporoid reefs, and during the Famennian, coral-stromatoporoid reefs "crashed" and were replaced by calcimicrobial reefs and platforms. During the latter phases of the Frasnian / Famennian mass extinctions, such microbial reefs were confined to relatively small areas, and metazoan reefs were nearly entirely obliterated, being confined to rare stromatoporoid patch reefs or lithistid mounds. Coral reefs were completely absent during the 21 m.y. long Famennian interval, and no real recovery of "keystone" frame-building, colonial corals took place in reef settings. The Famennian coincided with repeated glaciations, sharp sea-surface cooling events, sea-level drawdowns, and concurrent, matching stable isotope excursions. [original abstract]^1";

5112 s[5109] = "JOACHIMSKI M.M., BUGGISCH W. (1996).- The Upper Devonian Reef Crisis: Insights from the Carbon Isotope Record.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 45, ID=3618^Topic(s): reefs extinctions, stable isotopes C; reefs extinctions; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^Perturbations in the Upper Devonian carbon cycle are evidenced by prominent variations in the inorganic carbon isotope record. The decline of the Devonian stromatoporoid - coral reef ecosystem is interpreted to be caused by the ultimate consequences of these perturbations. The Frasnian is characterized by a second order sealevel rise culminating in a maximum sealevel highstand and maximum greenhouse conditions near the Frasnian / Famennian boundary. High sea-surface temperatures, a sluggish oceanic circulation and low fertility may have stressed low latitude shallow-water habitats. Superimposed transgressive - regressrve cycles resulted in a maximum flooding of the epicontinental shelves, maximum formation of warm saline deep waters and the spread of sub-pycnocline anoxic waters onto the shallow water platforms. The latter resulted in the deposition of organic rich sediments (Kellwasser Horizons) inducing climatic cooling especially in high latitudes. Reduction of benthic habitats, upwelling of sulfidic waters or toxic algal blooms represent possible consequences of the transgressive pulses. The Devonian stromatoporoid - coral ecosystem may have been highly stressed during the Late Frasnian and superimposed transgressive pulses resulted in an increase of ecological stress that may have been lethal especially for low latitude shallow water ecosystems.^1";

5113 s[5110] = "WILDER H. (1994).- Death of Devonian reefs - implications and further investigations.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 241-247.- FC&P 23-1.1, p. 20, ID=4080^Topic(s): extinctions; reefs; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^The microfacial and geochemical investigation of seven profiles comprising the transition of reef to non-reef facies showed that especially the Devonian biostromal reefs were highly susceptible to any kind of change in the continental hinterland which

might have influenced the equilibrium of the reef habitat. As regards the Devonian stromatoporoidal reefs, living conditions disimproved during the Frasnian stage (doIβ/γ) leading to cyclic reef growth mainly on the unprotected shelf platform of the Eifel/Ardennes. One of the main factors controlling stromatoporoidal reef-growth turned out to be the periodical blooming of microorganisms (e.g. phytoplankton) which was triggered off by the periodical influx of nutrients from the Old Red Continent. This led to a widespread depletion of oxygen and light plus to an increased sedimentation of organic matter in the reef habitat, thus inhibiting growth of reef dwellers, causing latilaminae in stromatoporoids and also leading to cyclic reef growth. A prolonged and more widespread event of this kind finally terminated stromatoporoidal reef growth at the southern rim of the Old Red Continent and resulted in widespread deposition of euxinic sediments in Europe (Matagne-shales, doIδ). In further works light should also be shed on the concurrent effects on associated platform dwellers like corals, brachiopods and possibly conodonts. Investigation of further Devonian profiles should render more spatial conclusions if the obtained results were also valid at a larger scale.^1";

5114 s[5111] = "MACHEL H.G., HUNTER I.G. (1994).- Facies Models for Middle to Late Devonian Shallow-marine Carbonates, with Comparisons to Modern Reefs: a Guide for Facies Analysis.- Facies 30: 155-176.- FC&P 23-1.1, p. 89, ID=4205^Topic(s): facies, analysis; reefs; Systematics: ; Stratigraphy: Devonian; Geography: ^shallow marine tropical Devonian carbonates commonly were deposited in two major geologic settings, i.e., shallow shelf with shelf margin reef, and gently sloping ramp that grades into peritidal to supratidal, in places evaporitic facies. The facies types within these two settings can be grouped into a few distinct zones on the basis of water energy, texture, amount of micrite, porosity, fossil assemblages, and indicator fossils. These zones have been integrated into a composite facies model for shallow marine, tropical Devonian carbonates. The facies zones are easily recognizable in hand specimen and core, and can be used for fast and accurate facies analysis. Some facies recognizable in hand specimen or core do not easily fit into the integrated model and represent facies of short-lived depositional events, such as hurricanes or slump deposits, or spatially restricted areas, such as channel fills. Such facies have to be interpreted on a case-by-case basis by comparison to the surrounding facies and depositional framework through time. Comparisons with Cenozoic reefs reveal a number of similarities. In particular, large metazoans in both Devonian and Cenozoic reefs display a range of growth forms that is not species-specific. Furthermore, several metazoans display comparable growth forms in equivalent facies zones. For example, dendroid stromatoporoids, such as Stachyodes, and branching corals, such as Porites porites, occur in equivalent facies zones.^1";

5115 s[5112] = "WEBB G.E. (1994).- The Frasnian-Fammenian extinction event: dominance of extrinsic over intrinsic factors in the recovery of reef communities.- New Developments regarding the KT event and other catastrophes in earth history. Lunar and Planetary Institute, University of Houston, Clear Lake, Contribution 825: 132-133.- FC&P 23-2.1, p. 56, ID=4404^Topic(s): reef communities, extinctions, recoveries; reef communities; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^The causes of the late Devonian demise of stromatoporoid reefs and the lack of similar reefs in late Paleozoic rocks is considered. It is concluded that the Devonian / Carboniferous boundary may have been a more important one for reefs than the F / F one, and that the length of the recovery of the late Paleozoic was caused by a variety of environmental causes and events, rather than the severity of the late Devonian event.^1";

5116 s[5113] = "THAYER C.W. (1974).- Substrate specificity of Devonian epizoa.- Journal of Paleontology 48, 5: 881-894.- FC&P 4-2,"

- p. 62, ID=5297^Topic(s): epibionts, substrate specific; epizoans; Systematics: ; Stratigraphy: Devonian; Geography: ^Un Tabulé tel que le Cladochonus vit fixé sur le sédiment.^1";
- 5117 s[5114] = "SMOSNA R.A., WARSCHAUER S.M. (1979).- A very Early Devonian patch reef and its ecological setting.- Journal of Paleontology 53: 142-152.- FC&P 8-2, p. 50, ID=5731^Topic(s): reefs, patch reefs; reefs stroms; Systematics: ; Stratigraphy: Devonian L; Geography: ^^1";
- 5118 s[5115] = "SPASSKIY N.Ya. (1981).- Paleobiogeograficheskiye poyasa devona. [paleobiogeographic belts of the Devonian; in Russian].- Paleontologiya, paleobiogeografiya i mobilizm: 75-82; Magadan.- FC&P 12-1, p. 17, ID=6310^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Devonian; Geography: ^^1";
- 5119 s[5116] = "GALLE A., HLADIL J. (1995).- 70th birthday of Vlasta Zúkalová.- FC&P 24, 2: 19-21.- FC&P 24-2, p. 19, ID=6864^Topic(s): biography, bibliography; stroms; Systematics: ; Stratigraphy: Devonian; Geography: ^[Vlasta Zúkalová] added to the knowledge of the stratigraphic significance of Devonian stromatoporoids, particularly the branching forms, which are now handled with greater esteem. Furthermore, she followed developing fields of investigation, such as complex biostratigraphy, employing several fossil groups simultaneously. She also always stressed close relations between sedimentology and fauna. In Moravia, the paleontological studies in slightly metamorphosed limestones, studies about the cyclicity and rhythms, and investigations of the Devonian bioevents have been also initiated by her. [excerpt from the biographic note; attached is a list of publications of V. Zúkalová, from the years 1958-1988]^1";
- 5120 s[5117] = "MURPHY A.E., SAGEMAN B.B., HOLLANDER D.J. (2000).- Eutrophication by decoupling of the marine biogeochemical cycles of C, N, and P: A mechanism for Late Devonian mass extinction.- Geology 28, 5: 427-430.- FC&P 30-1, p. 34, ID=7079^Topic(s): extinctions; mass extinction; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^The Late Devonian mass extinction was unusually protracted and ecologically selective, with preferential diversity losses among reef-building organisms and tropical, shallow-water faunas in general. We have investigated the link between the extinction's unique characteristics and changes in biogeochemical cycling through analyses of the δ13C and C:N:P atomic ratios of organic matter buried across the Kellwasser Horizons in western New York State. Each horizon is characterized by (1) a long-term, +4%-5% excursion in δ13C, ~3% of which occurs within the horizon, and (2) a dramatic increase in the burial ratios of C:N:P, from values of ~100:15:1 to an average of ~5000:170:1. On the basis of these results, we propose that (1) increased efficiency of biolimiting nutrient recycling, resulting from cyclic water column stratification and mixing, promoted eutrophication during Kellwasser deposition in New York, and (2) the isotope excursions represent the composite effect of long-term, global organic C burial, and local changes in photosynthetic C isotope fractionation related to nutrient availability. This eutrophication model forges a mechanistic link between proposed Late Devonian climatic cooling and the selective demise of taxa likely to have been narrowly adapted to oligotrophic conditions. [original abstract]^1";
- 5121 s[5118] = "MCGHEE G.R.jr (2001).- The'multiple impacts hypothesis' for mass extinction: a comparison of the Late Devonian and the late Eocene.- Palaeogeography, Palaeoclimatology, Palaeoecology 176, 1-4: 47-58.- FC&P 31-1, p. 72, ID=7110^Topic(s): extinctions, multiple impacts; mass extinctions; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^Application of the lag-time multiple impacts hypothesis [Poag

1997b: *Palaios* 12: 582-590; Poag et al. 2001: Columbia Univ. Press] to the Late Devonian leads to the prediction that the Frasnian-Famennian pulsed extinctions were triggered by a rapid drop in global temperature that followed an impact-produced anomalous warm interval, which interrupted the global cooling trend from the Middle Devonian greenhouse to the Early Carboniferous icehouse. In actualistic comparison with the late Eocene, the lag-time multiple impacts hypothesis would predict that a Frasnian interval of multiple impacts should have occurred between 367.7 and 366.7 Ma. The fact that three impacts (the Alamo, Siljan and Flynn Creek) do occur either within this predicted interval, or close to it in time, is corroborative evidence that the lag-time multiple impacts hypothesis may indeed provide the causal mechanism for the Frasnian-Famennian mass extinction. Based on the application of the lag-time multiple impacts hypothesis to the Frasnian-Famennian mass extinction, it is here suggested that future searches for evidence of impact events in the Late Devonian be concentrated in strata that occur in the Frasnian transits to Early Frasnian interval, and not in strata immediately below or above the Frasnian-Famennian boundary. [original abstract]^1";

5122 s[5119] = "JOACHIMSKI M.M., BUGGISCH W. (2002).- Conodont apatite δ180 signatures indicate climatic cooling as a trigger of the Late Devonian mass extinction.- *Geology* 30, 8: 711-714.- FC&P 31-2, p. 56, ID=7135^Topic(s): mass extinctions; paleotemperatures; Systematics: ; Stratigraphy: Devonian Fra/Fam; Geography: ^The oxygen isotope composition of conodont apatite from two Frasnian-Famennian boundary sections was measured in order to reconstruct variations in marine paleotemperatures during the late Frasnian extinction event. The measured conodont δ180 values reveal two positive excursions with maximum amplitudes of +1% to +1.5% that parallel positive excursions in the carbonate δ13C have been interpreted as consequences of enhanced organic carbon burial rate resulting in a decrease in atmospheric CO2 concentrations. Climatic cooling as a potential consequence of lower atmospheric CO2 concentration is confirmed by the conodont δ180 records, which translate into cooling of low latitude surface waters by 5-7°C. Repeated cooling of the low latitudes during the late Frasnian had a severe impact on the tropical shallow-water faunas that were probably adapted to warm surface-water temperatures and severely affected during the late Frasnian crisis. These prominent variations in ocean-water temperatures were stressful to the tropical shallow-water fauna and potentially culminated in low origination rates of new species, one of the major factors of the decline in diversity during latest Frasnian. [original abstract]^1";

5123 s[5120] = "HOUSE M.R. (2002).- Strength, timing, setting, and cause of mid-Palaeozoic extinctions.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 181, 1-3: 5-25.- FC&P 32-1, p. 35, ID=7148^Topic(s): extinctions; mass extinctions; Systematics: ; Stratigraphy: Devonian; Geography: ^Much has been written over the last 20 yr on the Upper Kellwasser Event (Frasnian/Famennian or F/F boundary) as the major extinction event of the Middle Palaeozoic (Devonian) and as the fifth largest extinction event in the Phanerozoic; this opinion was based on analysis of family range data. These views are misleading. A current analysis of family extinction data, largely based on *The Fossil Record 2*, but updated in some respects, supersedes the data base of Raup and Sepkoski (1982) and shows that the Famennian has the highest total family extinction of marine taxa, with the Givetian in second and Frasnian in third place. If these new data are related to current (unreliable) estimated length of stages, then the severest extinction rates are: first, the Givetian at 14.2 family extinctions per Ma, secondly the Frasnian at 11.2 and thirdly the Eifelian at 6.8. Many short-term 'events' have been named for the Devonian based on short-term distinctive sedimentary

and/or faunal perturbations. A review of these shows how they are often transgression/regression couplets, many with an association of anoxia and poor in benthos, or spreads of pelagic faunas, and some are phased and complex. Evidence is presented to suggest that the transgressive pulses correspond to warm temperatures which are terminated by cooling. Possible links with orbitally forced patterns are considered. A common explanation seems required, not just for the Kellwasser Event, but for all these events. The relation of the family stage extinctions, especially the Kacak, Taghanic, Kellwasser and Hangenberg Events, which are of much more limited duration, is discussed particularly in relation to new and more precise data of the extinction events known within these stages. In the absence of detailed studies for many groups, those that have been well documented may serve as a temporary proxy for others. [original abstract]^1";

- 5124 s[5121] = "RACKI G., HOUSE M.R. (eds) (2002).- Late Devonian Biotic Crises: ecological, depositional and geochemical records.- Palaeogeography, Palaeoclimatology, Palaeoecology 181, 1-3; 374 pp.- FC&P 32-1, p. 35, ID=7149^Topic(s): extinctions; mass extinctions; Systematics: ; Stratigraphy: Devonian U; Geography: ^[thematical volume of 3xPalaeo]^1";
- 5125 s[5122] = "SANDBERG C.A., MORROW J.E., ZIEGLER W. (2002).- Late Devonian sea-level changes, catastrophic events and mass extinctions.- Geological Society of America, Special Paper 356 [C. Koeberl & K.G. MacLeod (eds): Catastrophic Events and Mass Extinctions; Impacts and Beyond]: 473-487.- FC&P 32-1, p. 36, ID=7150^Topic(s): extinctions; mass extinctions; Systematics: ; Stratigraphy: Devonian U; Geography: ^Late Devonian history is explained through event stratigraphy comprising a sequence of 18 sea-level changes, catastrophic events and mass extinctions. Generally rising sea level during the initial Frasnian Stage, beginning with the Taghanic onlap and ending with a sea-level fall and major mass extinction, was interrupted by several exceptionally rapid, very high rises of sea level. These rises may be related to a series of comet showers, as suggested by the coincidence of the Alamo Impact in Nevada and the older Amonau Event in Germany with two of the sea-level rises. The sub-critical, off-platform marine Alamo Impact is demonstrated to have produced greatly different effects in deep water from those previously recorded on the carbonate platform. * The series of comet showers, most notably those around the Frasnian-Famennian boundary, evidenced by microtektites in widely separated regions, not only produced the late Frasnian mass extinction, but also induced global cooling. This cooling resulted in Southern Hemisphere glaciation. Generally falling sea level during the later Famennian Stage was interrupted by several warmer, interglacial episodes, evidenced by glacio-eustatic rises. Another, less severe mass extinction occurred during an abrupt sea-level fall near the end of the Famennian. This glacio-eustatic fall is interpreted to have resulted from a severe, terminal glacial episode. * Interpretation of Late Devonian history suggests that impacts and comet showers coincided with sea-level rises, whereas mass extinctions occurred during, not at the start of, sea-level falls. [original abstract]^1";
- 5126 s[5123] = "STOLBOVA V.P., KRAVTSOV A.G. (2003).- Spasskiy, Nikolay Yaroslavovich (1927-1986).- FC&P 32, 2: 41-50.- FC&P 32-2, p. 41, ID=7157^Topic(s): biographical, bibliography; Rugosa; Systematics: ; Stratigraphy: Devonian; Geography: ^working on the generalization of stratigraphical and geographical distributions among Devonian Rugosa, Nikolay Yaroslavovich found the main stages in their development and elaborated the palaeogeographical zoning based on corals. He distinguished the generic index-assemblages for every Devonian age and province as a base for inter-correlation of coeval deposits. He outlined the palaeogeographical connection between 12 provinces. [fragment of a biographical note on N.Ya. Spasskiy; attached is his bibliography, compiled by V.P. Stolbova & D.

- weyer]^1";
- 5127 s[5124] = "XU SHOUYONG, WANG HONGDI, CHEN HACHENG, SHI YAN (1986).- A discussion of the Carboniferous-Permian boundary in light of study on corals.- Bulletin of Yichang Institute of Geology and Mineral Resources, Chinese Academy of Geological Sciences 11: 159-190.- FC&P 19-1.1, p. 44, ID=2643^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5128 s[5125] = "POTY E. (1986).- Late Devonian to early Tournaisian rugose corals.- Annales de la Societe geologique de Belgique 109: 65-74.- FC&P 15-2, p. 32, ID=0690^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian U / Carboniferous L; Geography: ^^1";
- 5129 s[5126] = "POTY E. (1984).- Rugose corals at the Devonian-Carboniferous boundary.- Courier Forschungsinstitut Senckenberg ... 29-31: .- FC&P 14-1, p. 50, ID=1000^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5130 s[5127] = "ONOPRIENKO Yu.I. (1984).- Rates and forms of Rugosa evolution at the Devonian - Carboniferous boundary.- Systematics and Evolution of Invertebrates of the Far East; Akademiya Nauk SSSR, Dalnevostochnyi Nauchnyi Tsent, Biologo-Pochvennyi Institut, Vladivostok: 3-8 [in Russian].- FC&P 18-1, p. 38, ID=2258^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5131 s[5128] = "ONOPRIENKO Yu.I. (1986).- Evolution of tetracorals at the Devonian - Carboniferous boundary.- Phanerozoic reefs and corals of the USSR [Sokolov B. S. (ed.), Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam, Dushanbe 1983]: 71-73 [in Russian].- FC&P 18-1, p. 38, ID=2259^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5132 s[5129] = "VASILYUK N.P. (1988).- Evolyutsiya i biokhronologiya rugoz na rubezhe Devona i Karbona.- In Gorutsov V. K. (ed.): Granitsa Devona i Karbona na territorii SSSR. Mezhdovedomstvennyy Stratigraficheskiy Komitet SSSR, Institut Geokhimii i Geofiziki AN BSSR, Belorusskiy Nauchno-Issledovatel'skiy Geologorazvedochnyy Institut Belorusskaya Regionalnaya Mezhdovedomstvennaya Stratigraficheskaya Komissaya, Minsk: 296-300.- FC&P 20-2, p. 59, ID=2941^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5133 s[5130] = "POTY E., XU S.-Ch. (1997).- Systematic position of some Strunian and Lower Carboniferous Heterocoral-like colonial corals.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 99-106.- FC&P 26-2, p. 11, ID=3676^Topic(s): systematics; Rugosa, Stylostrotion; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian Fam / Carboniferous Tour; Geography: ^Colonial species showing a Heterocorallia-like septal pattern have been considered by Fedorowski (1991) to belong not to the Rugosa, but to the Dividocorallia, a subclass also including the Heterocorallia. Chinese and French colonial species characterized by a Heterocorallia-like pattern of the major septa, such as those assigned to Stylostrotion Chi by Fedorowski (1991), are reassigned to the Rugosa under the name Heterostrotion Poty & xu. The heterocorallian shape of the septa is considered to be the result of a pinnate connection and not of a Heterocorallian septal genesis. The corallites of Heterostrotion sometimes develop an aulos and become identical to those of the genus Solenodendron. The two genera also share increase patterns and septal carinae, suggesting a close relationship, with Solenodendron evolving from Heterostrotion.^1";

- 5134 s[5131] = "FLUGEL H.W. (1974).- Die Entwicklung der rugosen Korallen im Bereich der Devon-Karbon Grenze.- Proceedings of VIIe Congr. Internat. Stratigr. Geol. Carbonifère, Krefeld 1971; vol. 3: 81-87.- FC&P 4-1, p. 31, ID=5101^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5135 s[5132] = "FEDOROWSKI J. (1991).- Dividocorallia a new subclass of Palaeozoic Anthozoa.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 61: 21-105.- FC&P 21-1.1, p. 49, ID=3252^Topic(s): systematics; Rugosa, Dividocorallia; Systematics: Cnidaria; Rugosa; Stratigraphy: Devonian, Carboniferous; Geography: ^The new concept of taxonomy and phylogeny of some extinct Devonian and Carboniferous Anthozoa is supported by an increase in septa distinct from other Anthozoa and common for all members of the Dividocorallia n. subclass. Presence or absence of calices permits to divide the subclass into the orders Calyxcorallia and Heterocorallia respectively. Presence or absence of the dissepimentarium is a family level feature in the Calyxcorallia, whereas the microstructure of an external wall plays that role in the Heterocorallia. Primitive, caliculate Lower Devonian Rugosa were most probably ancestral to the Dividocorallia. This idea is supported by insertion of a single septum at the beginning of septogenesis in both subclasses. Deviation towards the Heterocorallia took place already during the Lower Devonian time, perhaps through neoteny.^1";
- 5136 s[5133] = "BOGOYAVLENSKAYA O.V. (1982).- Stromatoporaty pozdnego devona - rannego karbona [Late Devonian to Early Carboniferous Stromatoporata].- Paleontologicheskii Zhurnal 1982, 1 33-38.- FC&P 14-1, p. 54, ID=1029^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian U / Carboniferous L; Geography: ^Two communities at the Devonian Carboniferous boundary are distinguished, one dominated by labechiids and the other not. The new genera Parastylostroma (type species P. tribularum) and Kyklopora (type species K. kalmiusensis) and the species Stylostroma bonum are described.^1";
- 5137 s[5134] = "BOGOYAVLENSKAYA O.V. (1986).- Stromatoporata pozdnego devona - rannego karbona [Stromatoporoids of the late Devonian - early Carboniferous].- Granitsa Devona i Karbona na territorii SSSR, Minsk.- FC&P 17-1, p. 39, ID=2154^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian U / Carboniferous L; Geography: ^^1";
- 5138 s[5135] = "LAFUSTE J., PLUSQUELLEC Y. (1988).- Revision des Beaumontia decrits par Milne-Edwards & Haime (Tabulata; Devonien, Carbonifère.- Bulletin du Museum national d'histoire naturelle Paris 4, 10, C, 3: 179-197.- FC&P 18-2, p. 37, ID=2486^Topic(s): taxonomy; Tabulata, Beaumontia; Systematics: Cnidaria; Tabulata; Stratigraphy: Devonian, Carboniferous; Geography: ^A microstructural and structural analysis of the four species assigned in 1851 by Milne-Edwards & Haime to the new genus Beaumontia, shows that only the species laxa belongs to this genus. The species venelorum and guerangeri are to be included in the genus Praemichelinia, whereas egertoni is a Michelinia s. str.^1";
- 5139 s[5136] = "VASILYUK N.P. (1978).- Razvitie tselenterat na rubezhe Devona i Karbona [development of coelenterates at the Devonian-Carboniferous boundary].- Paleontologicheskii Zhurnal 1978, 4: 3-12.- FC&P 9-2, p. 42, ID=0334^Topic(s): faunal turnover; Coelenterata; Systematics: Cnidaria; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";
- 5140 s[5137] = "JI QIANG (1987).- The boundary between the Devonian and Carboniferous Systems of shallow-water facies as viewed in the light of conodont studies.- Acta Geologica Sinica 1987, 1: 10-20.- FC&P

18-1, p. 37, ID=2252^Topic(s): stratigraphy; stratigraphy; Systematics: Chordata; Stratigraphy: Devonian / Carboniferous; Geography: ^^1";

5141 s [5138] = "FAGERSTROM J.M. (1994).- The History of Devonian-Carboniferous reef communities: Extinctions, Effects, Recovery.- Facies 30: 177-192.- FC&P 23-1.1, p. 86, ID=4199^Topic(s): history; reefs; Systematics: Stratigraphy: Devonian, Carboniferous; Geography: ^Analysis of the taxonomic composition, diversity and guild structure of five "typical" reef and mud mound communities ranging in age from Late Devonian to Early Carboniferous indicates that each of these aspects of community organization changed dramatically in relation to three extinction events. These events include a major or mass extinction at the end of the Frasnian; reef communities were also effected by less drastic end-Givetian and mid-late Famennian extinctions of reef-building higher taxa. Peak Paleozoic generic diversities for reef-building stromatoporoids and rugose corals occurred in the Eifelian-Givetian; reef-building calcareous algal taxa were long-ranging with peak diversity in the Devonian. These three higher taxa dominated all reef-building guilds (Constructor, Binder, Baffler) in the Frasnian and formed fossil reef communities with balanced guild structures. The extinction of nearly all reef-building stromatoporoids and rugose corals at the end of the Frasnian and the survival of nearly all calcareous algae produced mid-late Famennian reef communities dominated by the Binder Guild. Despite the survival of most calcareous algae and tabulate corals, the mid-late Famennian extinction of all remaining Paleozoic stromatoporoids and nearly all shelf-dwelling Rugosa brought the already diminished Devonian reef-building to a halt. These Devonian extinctions differ from mass extinctions by the absence of a statistically significant drop in taxonomic diversity and by their successional and cumulative effects on reef communities. Tournaisian mud mounds contain communities markedly different from the frame-building communities in Late Devonian and Visean reefs. Mound-building biotas consist of an unusual association dominated by erect, weakly skeletonized members of the Baffler Guild (chiefly fenestrate Bryozoa; Pelmatozoa) and laterally expanded, mud binding algae / stromatolites and reptant Bryozoa. The initial recovery to reefs with skeletal frameworks in the Visean was largely due to the re-appearance of new species of abundant colonial rugose corals (Constructor Guild) and fenestrate Bryozoa. This Frasnian-Visean evolution in the taxonomic composition and structure of the reef-building guilds is also expressed by abrupt changes in biofacies and petrology of the reef limestones they produced. Thus "typical" Frasnian reef limestones with balanced guild structures are framestones-boundstones-bafflestones, Famennian reefs are predominantly boundstones, Tournaisian mud mounds are bafflestones and Visean reefs are bafflestones-framestones.^1";

5142 s [5139] = "FEDOROWSKI J. (2001).- Upper Palaeozoic coral studies: where we are and where we should be.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 001-006.- FC&P 31-1, p. 61, ID=1630^Topic(s): research principles; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleozoic U; Geography: ^The utility of the Upper Palaeozoic rugose coral studies depends on their accuracy. The status and achievement level in various aspects of these studies are critically reviewed from the historical viewpoint. Ontogeny, blastogeny and astogeny, calice morphology, microstructure and diagenesis and applied methods are analysed. Only precise and generally accepted criteria can form the basis for proper taxonomy and only well founded taxonomy is useful for further, more specific or general studies. Thus, standards for description of new species and the revision of existing taxa are proposed. Application of Upper Palaeozoic rugose coral studies to stratigraphy, palaeogeography, palaeoecology,

and investigations of evolutionary relationships and mass extinction are briefly discussed.¹¹;

- 5143 s[5140] = "OEKENTORP K. (1980).- Aragonit and Diagenese bei jungpalaeozoischen Korallen.- Munster. Forsch. Geol. Palaont. 52 [Kl. Oekentorp (ed.): A. von Schoupe jubilee commemorative volume]: 119-239.- FC&P 9-2, p. 14, ID=1790Topic(s):diagenesis, aragonite; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Paleozoic U; Geography:^Microstructures of Permian corals were investigated concerning their primary structure. It could be shown that the microstructures of the skeleton were affected by diagenetic processes causing secondary textures and thickenings by cement precipitation veiling the original septal structure. Signs indicating such structural changes are: irregularity of the microtextural pattern, diversity of so-called primary structures, unusual reduction or growth of grain size, formation of frontal zones ("Stirnzonene") as well as a pseudolamellar and a zigzag-pattern. The diagenetic history of the coral skeletons as well as the primary composition of the skeletal carbonates are discussed: aragonit versus calcite. The nature of present secondary textures, as formation of diagenetic processes and corresponding recrystallizations in Triassic Scleractinia inevitably lead to the conclusion that the primary skeleton in Permian Rugosa was composed by aragonite.¹¹;
- 5144 s[5141] = "BOLL F.-C. (1982).- Die variszische Orogenese schafft neue Biotope fur Korallen.- Neues Jahrbuch fuer Geologie und Palaeontologie 163, 2: 272-275.- FC&P 11-2, p. 28, ID=1836Topic(s):ecology; Anthozoa, geography; Systematics:Cnidaria; Anthozoa; Stratigraphy:Variscan orogeny; Geography:^^1";
- 5145 s[5142] = "MAS J.R., RODRIGUEZ S. (1990).- Cathodoluminescence as a tool in fossil diagenetic analyses of late Palaeozoic corals.- Com. Reunion de Tafonomia y Fosilizacion: 211-219; Madrid. [in English, with summary only in Spanish].- FC&P 20-1.1, p. 57, ID=2828Topic(s):research techniques, cathodoluminescence; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:Paleozoic U; Geography:^La aplicacion de la microscopia de catodoluminiscencia (CL) al estudio de la evolucion de los procesos diageneticos que han afectado a diversos corales fosiles del Palaeozoico superior (Viseense y Kasimoviense) ha puesto de manifiesto su utilidad fundamentalmente en tres aspectos: - Identification de las microestructuras originales de los corales. Microestructuras que son irreconocibles con la microscopia conventional, son visibles con CL. Se han podido reconocer como primarias las tres microestructuras caracteristicas de los corales paleozoicos: fibronormal, trabecular y microlamellar. - Diferenciacion de los procesos diageneticos destructivos que han afectado a sus estructuras esqueleticas. La microscopia CL permite reconocer claramente pel i culas de micritizacion que con luz normal son dificilmente visibles. Asicomo zonas recristalizadas de las estructuras esqueleticas que presentan una luminiscencia caracteristica. - Reconocimiento de las generaciones de cementos relacionadas con los corales. Se han diferenciado dos tipos de secuencias de cementos, una relleno de cavidades internas y la otra localizada en el caliz. Ambas reflejan el progresivo enterramiento de los corales, desde ambientes de cementacion submarina hasta condiciones de enterramiento relativamente profundo.¹¹;
- 5146 s[5143] = "SANDO W.J., SANGREE A.C. (1990).- List of names proposed for genera and subgenera of late Paleozoic corals, 1828-1989.- FC&P 19, 2.2: 1-21.- FC&P 19-2.2, p. 1, ID=6792Topic(s):list of taxa, genera, corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:Paleozoic U; Geography:^The following list presents some basic information on names that have been proposed for Carboniferous and Permian coral genera and subgenera. Taxa represented belong to Subclasses Rugosa and Tabulata as defined by Hill (1981). * Rugosa (R), Tabulata exclusive of chaetetids (T), chaetetids

(C), and taxa of uncertain classification (U) are indicated by letters in parentheses at the end of each citation. * Names that do not appear in Hill (1981) are preceded by asterisks. * Taxa that have ... - Carboniferous type species are indicated by # after the name; some names in this category have been omitted from the list because of insufficient evidence of their applicability to late Paleozoic corals. [excerpt from introduction to the list]^1";

- 5147 s[5144] = "SORAUF J.E., WEBB G. (2003).- The origin and significance of zigzag microstructure in late Paleozoic Lophophyllidium (Anthozoa, Rugosa).- Journal of Paleontology 77, 19: 16-30. [19 ...].- FC&P 32-2, p. 61, ID=1394^Topic(s): zigzag microstructure; Rugosa, microstructures; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic U; Geography: ^In late Paleozoic solitary Rugosa, the zigzag microstructure as defined by Schindewolf (1942) is related to presence of an elevated magnesium content within biogenic calcite (intermediate magnesian calcite, IMC) and its subsequent loss during diagenesis by microdissolution and neomorphism. This particular microstructure has been recognized with certainty only in some Carboniferous and Permian rugose corals (e.g. Lophophyllidium spp.). Septal and other skeletal microstructures in those corals are dominantly (oblique) sloping-lamellar, which is also interpreted as diagenetic in origin. Two directions of oblique lamellae commonly occur in thickened skeletal elements, forming chevrons that make up zigzag microstructure with its orientation determined by presence of microdolomite blebs within skeletal calcite. Geochemical studies of corals from the Mississippian Imo Formation of Arkansas, the Pennsylvanian Buckhorn asphalt of Oklahoma and Pennsylvanian Kendrick Shale of Kentucky all indicate that magnesium content in skeletal calcite of the corals was elevated, with a maximum in the neighbourhood of six to eight percent CaCO₃, thereby forming intermediate magnesium calcite. Corals with this zigzag microstructure apparently only occurred during the late Paleozoic interval of "aragonite seas"; as a result, this diagenetic behaviour of rugose corals can serve as a proxy for secular change in marine chemistry and/or climate.^1";
- 5148 s[5145] = "FEDOROWSKI J. (1974).- The Upper Palaeozoic tetracoral genera Lophophyllidium and Timorphyllum.- Palaeontology 17, 3: 441-473.- FC&P 4-1, p. 31, ID=5100^Topic(s): taxonomy; Rugosa, Lophophyllidium; Systematics: Cnidaria; Rugosa; Stratigraphy: Paleozoic U; Geography: ^The morphology of Lophophyllidium-like genera and their relationships are described and discussed. In early growth stages, Lophophyllidium has a zaphrentoid arrangement of septa with an elongate counter septum; the genus is characterized by a pseudo-columella that is extremely variable in morphology, both ontogenetically and between individuals; septal microstructure is trabecular. The synonymy of Lophophyllidium includes Sinophyllum Grabau, Malonophyllum Okulitch and Albritton, Stereostylus Jeffords, Agarikophyllum Fomitshev, and Khmerophyllum Fontaine; each was originally distinguished on the basis of pseudocolumella morphology. * Timorphyllum differs from Lophophyllidium in ontogeny and microstructure; macrostructural similarities reflect homeomorphy.^1";
- 5149 s[5146] = "TERMIER H., TERMIER G. (1977).- Structure et Evolution des Spongiaires Hypercalcifies du Paleozoique Superieur.- Mem. Inst. geol. Univ. Louvain 29: 57-109.- FC&P 8-2, p. 50, ID=5732^Topic(s): hypercalcified; sponges hypercalcified; Systematics: Porifera; Stratigraphy: Paleozoic U; Geography: ^[with considerable discussion of the systematic composition of the stromatoporoids and their microstructure]^1";
- 5150 s[5147] = "BAMBACH R.K. (1990).- Late Palaeozoic provinciality in the marine realm.- Geological Society, Memoir 12 [McKerrow W.S. & Scotese C.R. (eds): Palaeozoic palaeogeography and biogeography]: 307-323.- FC&P 21-1.1, p. 45, ID=3221^Topic(s): biogeography; Systematics: ; Stratigraphy: Paleozoic

- U; Geography: ^^1";
- 5151 s[5148] = "STANLEY G.D.jr (1994).- Late Paleozoic and early Mesozoic reef-building organisms and paleogeography: the Tethyan-North American connection.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 69-75.- FC&P 23-1.1, p. 14, ID=4064^Topic(s): reef builders, biogeography; reef builders; Systematics: ; Stratigraphy: Paleozoic U - Mesozoic L; Geography: ^Late Paleozoic and early Mesozoic fusulinids, sponges, corals, spongiomorphs, brachiopods, bryozoans and other tropical reef organisms of western North America and the former Tethys region share remarkably close similarities over a vast ocean that once separated the two regions. These relationships were an anomaly to earlier workers, who assessed these faunas within the paleogeographic context of Tethys and Pangaea. The nearly exclusive occurrences of these faunas in exotic and displaced terranes of the North America Cordillera, have fueled even greater discussions about paleogeography. Several ideas explain the North American Tethyan connection: 1) Long-range trans-Pacific dispersal of larvae, 2) stepping stones, 3) beached funeral viking ships, 4) staging posts and Noah's arks, and 5) the Hispanic Corridor. Viable ideas need not be mutually exclusive but must be tested against endemism, diversity trends, and commonality of reef organisms in the former Tethys region and in displaced terranes of western North America. Results must be integrated with data on ecology, climate, sea level change, ocean circulation, terrane movement and global circum-Pacific events in and around the Pacific rim.^1";
- 5152 s[5149] = "VASILYUK N.P. (1978).- Razvitie korallov i granitsa rannego i srednego Karbona [evolution of corals and the boundary between the Lower and Middle Carboniferous].- Mezhdovedomstvennyi Stratigraficheskii Komitet SSSR, Trudy 6 [Voprosy stratigrafii Paleozoya (Devon, Karbon)]: 176-177. [AN SSSR, Ministerstvo Geologii SSSR].- FC&P 9-2, p. 42, ID=335^Topic(s): faunal change; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L/M; Geography: ^^1";
- 5153 s[5150] = "NUDDS J.R., JOHNSON G.A.L. (1985).- Carboniferous coral provinces and the geography of the period.- Tenth International Congress of Carboniferous Stratigraphy and Geology, Compte Rendu 4: 83-88.- FC&P 15-2, p. 31, ID=0684^Topic(s): biogeography, geography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: ^^1";
- 5154 s[5151] = "VASILYUK N.P. (1984).- Korally Pozdnego Karbona. [corals of the Upper Carboniferous; in Russian].- Akademiya Nauk SSSR, Ministerstvo Geologii SSSR, Mezhdovedomstvennyi Stratigraficheskii Komitet, Trudy // Menner, V. D., and Grigoreva, A. D., eds., Verkhniy Karbon SSSR [The Upper Carboniferous of the USSR]. (2): 78-84.- FC&P 15-2, p. 33, ID=0700^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous U; Geography: USSR^^1";
- 5155 s[5152] = "FEDOROWSKI J. (1981).- Carboniferous corals: distribution and sequence.- Acta Palaeontologica Polonica 26, 2: 87-160.- FC&P 11-2, p. 28, ID=1837^Topic(s): biostratigraphy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: ^^1";
- 5156 s[5153] = "SANDO W.J. (1991).- Global Mississippian coral zonation.- Courier Forschungsinstitut Senckenberg 130: 173-187.- FC&P 21-1.1, p. 48, ID=3237^Topic(s): biostratigraphy; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous L; Geography: global^^1";
- 5157 s[5154] = "MITCHELL M. (1992).- A lateral key for identification of the commoner Lower Carboniferous coral genera.- North-west Geologist 2: 10 pp.- FC&P 23-2.1, p. 46, ID=4273^Topic(s): identification key; Anthozoa genera; Systematics: Cnidaria;

- Anthozoa; Stratigraphy: Carboniferous L; Geography: ^^1";
- 5158 s[5155] = "SIME I.F. (1972).- A catalogue of Carboniferous Corals in the Royal Scottish Museum, Edinburgh.- Roy. Scot. Mus., Information Series, Geology 4; 72 pp.- FC&P 2-1, p. 18, ID=4728^Topic(s): collections of fossils; catalogue of corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: ^^A catalogue of the Carboniferous corals held within the Royal Scottish Museum, Edinburgh, is given. This cites verified type and figured specimens and also incorporates the reserve collection material, making a total of 2117 specimens with a distribution of 68% from Scotland, 13% from England, 4% from Wales, 1% from Ireland, 1% from the Isle of Man and 13% from the rest of the world. The numerical distribution of species is shown while systematic and locality lists provide two directions of reference. The provenance and identity of each specimen has been authenticated as far as possible in order to establish a comprehensive record. Full references are given according to the World List of Scientific Periodicals 4th Edition and the work represents the first phase of a complete review of the entire collection.^1";
- 5159 s[5156] = "VASILYUK N.P. (1974).- Evolution des coraux à la limite du Carbonifère inférieur et moyen. [en russe].- Paleontologicheskii Zhurnal 1974, 4: 3-10.- FC&P 4-1, p. 40, ID=5146^Topic(s): faunal change; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise / Bashk; Geography: ^^1";
- 5160 s[5157] = "VASILYUK N.P. (1974).- Evolution of corals between the early and middle Carboniferous.- Paleontologicheskii Zhurnal 8, 4: 441-446.- FC&P 4-2, p. 62, ID=5298^Topic(s): faunal change; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Vise / Bashk; Geography: ^Consideration is given to changes that took place in the various morphological groups of corals during the Late Viséan - Early Bashkirian. It is noted that the Early Carboniferous stage in coral development was replaced by the Late Paleozoic stage between Namurian A and Namurian B.^1";
- 5161 s[5158] = "VASILYUK N.P. (1975).- Korallovaya fauna Bashkirskogo Yarusy. [Bashkirian stage coral fauna].- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 186-195.- FC&P 5-1, p. 31, ID=5373^Topic(s): biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Bashk; Geography: ^[world distribution and paleozoogeography of Bashkirian coral faunas]^1";
- 5162 s[5159] = "FEDOROWSKI J. (1977).- Development and distribution of Carboniferous corals.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et récifs coralliens fossiles; Paris, 1975]: 234-248.- FC&P 6-1, p. 25, ID=5520^Topic(s): phylogeny; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous; Geography: ^[phylogeny distribution]^1";
- 5163 s[5160] = "KOZYREVA T.A. (1980).- Ob evolucii kolonialnykh srednekamennougolnykh korallov. [evolution of Middle Carboniferous colonial corals; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: 130-136.- FC&P 10-2, p. 71, ID=5812^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous M; Geography: ^^1";
- 5164 s[5161] = "VASILYUK N.P., KOZYREVA T.A. (1980).- Korally moskovskogo veka srednego karbona. [Middle Carboniferous corals of Moscovian age; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: 136-141.- FC&P 10-2, p. 72, ID=5831^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous Mos; Geography: ^^1";
- 5165 s[5162] = "SUCHY D.R., WEST R.R. (1989).- A Pennsylvanian cryptic community associated with laminar chaetetid colonies.- Palaios 03: 404-412.- FC&P 23-2.1, p. 62, ID=2311^Topic(s):

reefs; cryptic communities; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: ^Chaetetids, extinct demosponges, were common frame-builders in small reef mounds during the Middle Carboniferous. Chaetetids from the Coal City Limestone Member (Pawnee Limestone, Middle Pennsylvanian) in Appanoose County, Iowa, contain the remains of a cryptic community attached to the undersurfaces of the colonies. Identified coelobites include the attached brachiopods Cooperina sp., Teguliferina sp., Heteralosia sp., and Composita sp.; the encrusting bryozoans Fistulipora sp. and Metelipora sp.; the holdfasts of fenestrate/ramose bryozoans; the worm Spirorbis sp.; the rugose coral Lophophyllidium sp.; the foraminiferid Tetrataxis; and the boring traces Caulostrepsis and Rogerella l Zapfella. Small echinoid plates and spines are associated with some of these cavities suggesting that they may have also lived there. Cross-cutting relationships reveal no clear pattern of encrustation by these cryptic dwellers.^1";

5166 s[5163] = "STANTON R.J.jr, CONNOLLY W.M., LAMBERT L.L. (1994).- Paleoecology of Upper Carboniferous Chaetetetes - morphology, growth style, and spatial distribution.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 365-372.- FC&P 23-1.1, p. 24, ID=4093^Topic(s): ecology; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Carboniferous U; Geography: ^Chaetetetes growth styles correspond to the two most common species. Colonies having a planar growth style and tabular or stacked-tabular columnar morphology correspond to C. milleporaceus. Colonies having an axial growth style and tabular, hemispherical, columnar, or massive to branching compound columnar morphology correspond to C.favosus. Colonies of different growth style do not co-occur; colonies of different morphology do, to a limited extent. Both morphology and growth style are poorly correlated with the major environmental parameters of water depth, water energy, and sedimentation rate. Chaetetetes is infrequent in stratigraphic sections, but is commonly abundant where present, dominating a low-diversity community and forming biostromes. Four spatial distribution patterns can be recognized: scattered small colonies, widely spaced (several m) large compound columnar colonies, patches of colonies in living position, and patches to continuous beds of colonies out of living position except for the last generation. Chaetetetes did not play a binding or encrusting role, nor form reefs. It used a range of other organisms as substrate, but with a generally weak attachment so that concurrent sedimentation was necessary for the colony to remain in living position.^1";

5167 s[5164] = "SUGIYAMA T. (1997).- New observations on some Carboniferous Heterocorallia.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 163-176.- FC&P 26-2, p. 13, ID=3682^Topic(s): septal increase; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: Carboniferous; Geography: ^Fedorowski (1991) proposed the new Subclass Dividocorallia, divided into two orders, the Calyxcorallia and Heterocorallia. Justification for the new subclass is based on a unique method of septogenesis, observed in specimens from the Devonian but not in Heterophyllia and Hexaphyllia, which have simple skeletal elements. New observations on the septogenesis of Carboniferous Heterocorallia by serial transverse sections have revealed that: 1) both the corallite diameter and the number of septa ontogenetically increased stage by stage; 2) all septa had equal potential for bifurcation; 3) septal shifting and detachment frequently occurred during corallite growth; 4) bifurcation began in the external wall. This study casts doubt on the criteria used by some specialists for establishing new taxa in the Heterocorallia.^1";

5168 s[5165] = "SANDO W.J. (1977).- Significance of coiled protocoralla in some Mississippian horn corals.- Palaeontology 20, 1: 47-58.-

- FC&P 6-1, p. 26, ID=0065^Topic(s): coiled protocoralla; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: ^Coiling interpreted as mode of attachment of young coralla to planktonic algae. Describes and illustrates one extant species and reviews genus Cyathaxonia.^1";
- 5169 s[5166] = "SUTHERLAND P.K. (1977).- Analysis of the Middle Carboniferous rugose coral genus Petalaxis and its stratigraphic significance.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 185-189.- FC&P 6-1, p. 27, ID=0069^Topic(s): biostratigraphy; Rugosa, Petalaxis; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: ^Review of type species, taxonomic affinities, and stratigraphic and geographic distribution of Petalaxis^1";
- 5170 s[5167] = "KOZYREVA T.A. (1978).- Novye vidy Srednekamennougol'nykh korallov i filogeniya roda Lonsdaleia (Rugosa) [new species of Middle Carboniferous corals and phylogeny of the genus Lonsdaleia (Rugosa)].- Biulleten Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiiy 53, 4: 73-81.- FC&P 8-2, p. 32, ID=0322^Topic(s): new taxa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous M; Geography: ^[Lonsdaleia, Thysanophyllum, Cystolonsdaleia]^1";
- 5171 s[5168] = "SCRUTTON C.T. (1983).- New offset-associated structures in some Carboniferous rugose corals.- Lethaia 16, 2: 129-144.- FC&P 13-1, p. 35, ID=0450^Topic(s): astogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^Tubular structures termed ducts, which extend from the base of offsets axially and upwards through the dissepimental tissue of the parent corallite, are described from some Carboniferous rugose corals. Two ducts are usually associated with each offset, one from each extremity where the offset wall meets that of the parent. The ducts may merge to form a tangentially elongate slit at higher levels in the dissepimentarium of the parent. The structures served to prolong gastric and nervous communication between parent and daughter polyp following budding. Ducts and slits are well developed in cerioid Lonsdaleia but are absent in fasciculate Lonsdaleia, a distinction lending credence to the recognition of the former group of species as a distinct genus, Actinocaythus, within the Axophyllidae. In addition, less well developed ducts are present in at least some cerioid species of Lithostrotion, whereas they are absent from fasciculate species, supporting separation of the latter from Lithostrotion sensu stricto and their assignment to the genus Siphonodendron. The form and distribution of ducts also confirms polyphyly in Thysanophyllum. The separation of T. pseudovermiculare (as Dorlodotia}, without ducts, from Thysanophyllum sensu stricto, with weak ducts similar to those in some Lithostrotion. spp., is supported. Both are assigned to the Lithostrotionidae. T. praedictum has well developed ducts, however, which reinforce other evidence suggesting its removal from Thysanophyllum and classification in the Axophyllidae in close affinity with Actinocyathus.^1";
- 5172 s[5169] = "HECKER M.R. (1985).- O razvitiy koloniy nekotorykh kamennougol'nykh rugoz.- Paleontologicheskiiy Zhurnal 1985, 4: 12-20.- FC&P 15-1.2, p. 30, ID=0807^Topic(s): astogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: ^Betrachtet wird die Variabilitat und Knospung der unterkarbonischen Rugosa Lonsdaleia McCoy, Corwenia Smith & Rider und Lithostrotion Fleming. Die Beziehungen zwischen diesen Gattungen werden unter dem Aspekt der Entwicklung der Kolonie sowie der taxonomischen Bedeutung speziell der ungeschlechtlichen Vermehrung kolonialer Rugosa

- diskutiert.¹";
- 5173 s[5170] = "WEYER D. (2005).- Über *Tetralasma* Schindewolf 1942 (Anthozoa, Rugosa; Unterkarbon).- Abhandlungen und Berichte für Naturkunde 28: 23-35.- FC&P 34, p. 42, ID=1246Topic(s): nomenclature; Rugosa, *Tetralasma*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: ^The taxon *Tetralasma* Schindewolf 1942 (proposed as a subgenus of *Polycoelia* King 1849) is evaluated as a clear subjective synonym of *Calophyllum* Dana 1846. There exists only the not well preserved holotype of its type species *Calophyllum quadriseptatum* (Schindewolf 1942) from the late Upper Tournaisian Erdbach Limestone of the Rhenish Mountains. Two further records from the same formation in the Harz Mountains (Germany) and from the upper Moscovian of the Buekk Mountains (Hungary) are misidentifications. The original subgeneric diagnosis violated the principles of homology when comparing an unfinished phase of the primary calyx ontogenesis in *Tetralasma* with final phases of the secondary postcalyx ontogenesis in *Calophyllum*. Both structures are nothing but successive growth stages within one coral specimen.¹";
- 5174 s[5171] = "POTY E. (1981).- Some morphological variations in *Siphonodendron* and *Diphyphyllum* as a response to ecological stimuli.- *Acta Palaeontologica Polonica* 25, 3-4: 467-471.- FC&P 11-1, p. 46, ID=1760Topic(s): variability; Rugosa, *Siphonodendron*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^In some species of the fasciculate rugosan, *Siphonodendron*, the morphology of the fossula, columnella and connecting processes is controlled by ecological conditions. A colony in a turbulent environment would have numerous connecting processes, a strong columnella and a well-marked fossula, with a preferential orientation of the corallites if the water movement was in the form of a persistent current. In a quiet environment, the connecting processes are generally absent, the cardinal fossula is indistinct and the columnella is weak or absent. In some species of *Diphyphyllum*, the morphology of the fossula and the disposition of the corallites are also controlled by ecological conditions.¹";
- 5175 s[5172] = "WANG ZHIGEN (1989).- On lithostrotionelloid corals.- *Acta Palaeontologica Sinica* 28, 4: 522-545.- FC&P 19-1.1, p. 49, ID=2659Topic(s): ; Rugosa, lithostrotionelloid; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^The lithostrotionelloid colonial corals were put forward representing *Stelechophyllum*, *Aulostylus*, *Acrocyathus*, *Petalaxis*, *Huanglongophyllum*, *Thysanophyllum*, *Actinocyathus*, *Lonsdaleia* and *Kleopatrina* (*Porfirievella*), which had very similar internal features in corallites and flourished in the Carboniferous, mainly based on Sando's studies (Sando 1982, 1983). Their coloniality has been discussed, with the conclusion that the fasciculate corals basically acted on lateral increase and the cerioid on peripheral increase, and that although both of the polyps were similar to solitary corals and with no common tissue between each other in adults, the latter was obviously superior in connection between corallites, intensity of skeleton structure, utilization of all the available space and reduction in the surface area of the exposed skeleton. Also discussed are their axial features, by which most of the lithostrotionelloid genera are distinguished, such as the developed or undeveloped axial tabellae, the axial aulos, septal lamellae or radial carinae, the concentric trace of tabulae, the continuous or discontinuous axial structure, etc. The lithostrotionelloid corals described in the present paper were collected from the Lower Profusionella zone in Nandan, Northern Guangxi, containing 24 species and subspecies (including 7 new species and subspecies) within 5 genera, namely: *Acrocyathus*: *A. pennsylvanicus* (Shimer), *A. hsujiulingi* (Yoh), *A. tingi* (Chi), *A. tingi proliferus* subsp.nov., *A. grechovkae* (Degtyarev), *A. yohi* sp.nov.; *Actinocyathus*: *A. lutugini* (Fomichev), *A. densiconus* (de Groot); *Lonsdaleia*: *L. cf. chutsingensis* (Chi), *L. huangi* Chi; *Petalaxis*: *P.*

nandanensis sp.nov., *P. simplex* (Hayasaka), *P. monocyclicus* (de Groot), *P. rosicum* Zjeng, *P. confertus* Kozyreva, *P. sexangulus* (de Groot), *P. major* (de Groot), *P. grootae brevisseptatus* subsp.nov., *P. sinensis* sp.nov.; *Huanglongophyllum*: *H. longhuoense* (X. Yu), *H. elegantum* sp.nov., *H. cf. parasimplex* X. Yu., *H. distans* sp.nov., *H. minor* (Wu et Zhao).¹";

5176 s[5173] = "GUILLAUME M., SEMENOFF-TIAN-CHANSKY P. (1991).- Stries semi-journalieres chez un Tetracoralliaire (*Bothrophyllum proteum*) du Carbonifere superieur. Implication dans la determination des rythmes de croissance.- C. R. Acad. Sci. Paris, ser. II, 312: 1401-1407.- FC&P 20-1.1, p. 21, ID=2802^Topic(s): growth bands; Rugosa, *Bothrophyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: ^^1";

5177 s[5174] = "NUDDS J.R. (1993).- Siphonodendron and *Dorlodotia*: paedomorphic evolution in Carboniferous rugose corals? - Courier Forschungsinstitut Senckenberg 164: 127-130. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 14, ID=3446^Topic(s): paedomorphosis?; Rugosa, *Siphonodendron*; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^The relationship of early species of *Siphonodendron* and the recently discovered *Dorlodotia* in Arundian (Lower Visean) limestones of northern England is examined. The discovery of coralla which possess the morphological characteristics of both genera suggests a closer relationship than has sometimes been supposed. The early ontogenetic stages of *Dorlodotia* are morphologically similar to adult *Siphonodendron* which suggests a possible phylogenetic relationship between these genera based on the theory of recapitulation. The stratigraphic distribution of *Dorlodotia* through the Chadian with *Siphonodendron* ranging from Arundian to Brigantian, suggests that reverse recapitulation has occurred as a result of the evolutionary process of paedomorphosis. Only a small change in the ontogeny of *Dorlodotia* is necessary to produce all of the morphological differences between it and *Siphonodendron*. A complete phylogeny of lithostrotionids from Chadian through to Brigantian can now be proposed.¹";

5178 s[5175] = "POTY E. (1993).- Heterochronic processes in some Lower Carboniferous rugose corals.- Courier Forschungsinstitut Senckenberg 164: 141-152. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 14, ID=3448^Topic(s): heterochrony; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: ^Some evolutionary trends in Lower Carboniferous rugose corals, such as changes in corallite diameter or number of septa, and loss or change of colonial increase, correspond to heterochronic processes. This is particularly suggested by lineages in four Visean genera: *Siphonodendron*, *Lithostrotion*, *Diphyphyllum* and *Dorlodotia*. The evolution giving rise to the genus *Lithostrotion* is the result of a neotenic process affecting fasciculate colonies of a species of *Siphonodendron*, probably for better adaptation to turbulent environments. The trends characterized by a decrease in corallite diameter and number of septa and dissepiments in *Siphonodendron*, *Lithostrotion* and *Diphyphyllum* correspond to progenetic processes. The trend characterized by an increase of these characters in *Diphyphyllum* is due to a hypermorphosis. The rise of *Corphalia mosae* from *Dorlodotia briarti*, mainly characterized by a decrease in size and number of septa and the loss of coloniality, corresponds to a progenetic process during a change in the environment.¹";

5179 s[5176] = "NIIKAWA I. (1994).- The palaeobiogeography of *Kueichouphyllum*.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 43-50.- FC&P 23-1.1, p. 14, ID=4062^Topic(s): biogeography; Rugosa, *Kueichouphyllum*; Systematics: Cnidaria; Rugosa;

Stratigraphy: Carboniferous L; Geography: ^Kueichouphyllum, a large and distinctive rugose coral, has generally been treated as late Visean in age, but is now known to range from Late Tournaisian to Early Namurian. In the Tethyan Realm, Kueichouphyllum characterised a distinct palaeobiogeographic province in each of the Late Tournaisian, Early and Late Visean, and Early Namurian. The Late Visean province is also known as the Kueichouphyllum Sea.^1";

- 5180 s[5177] = "SEMENOFF-TIAN-CHANSKY P., GUILLAUME M. (1994).- Semi-daily growth bands in Bothrophyllum (?) proteum (Rugosa, Upper Carboniferous).- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 215-222.- FC&P 23-1.1, p. 19, ID=4077^Topic(s): growth bands, semi-daily?; Rugosa, growth bands; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U; Geography: ^An elementary banding is described along the fibrous wall of Bothrophyllum (?) proteum, a rugose coral from the Upper Carboniferous of the Bechar Basin (Algeria). Observations in polarizing microscopy and with SEM show a succession of alternate zones composed of fibre bundles, the direction of which is perpendicular to the wall (the narrower F.P. stria) and oblique (the wider P.O. stria). A couple of striae is about 60 µm wide and corresponds to one external minor banding. In analogy with fine ridges described in living and fossil corals, minor bands are supposed to be daily and elementary bands to be semi-daily (P.O. diurnal and P.P. nocturnal). The mean annual growth rate is estimated to be 23 mm.y-1. This rhythm is macroscopically found in a well marked major banding. Elementary striae show a regular and sharp alternation through the coral length. These growth increments represent the lowest time units defined up to now in fossil corals. They will provide, in relation with other growth markings in the same corals, a finer definition of palaeoastronomical cycles and thereby new data on their palaeogeophysical implications.^1";
- 5181 s[5178] = "BAMBER E.W., SANDO W.J. (1993).- New information on the skeletal structure and systematics of the Visean rugose coral Ankelasma.- Contributions to Canadian Paleontology, Geological Survey of Canada Bulletin 444: 37-49.- FC&P 23-2.1, p. 44, ID=4244^Topic(s): structures; Rugosa, Ankelasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: ^^1";
- 5182 s[5179] = "EASTON W.H. (1973).- On the Tetracorals Acrocyathus and Lithostrotionella and their septal morphology.- Journal of Paleontology 47, 1: 121-135.- FC&P 2-2, p. 15, ID=4791^Topic(s): structures septa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^The name Acrocyathus d'Orbigny 1849 is a senior synonym of Lithostrotionella Yabe and Hayasaka 1915. The name A. floriformis d'Orbigny 1849 is a senior synonym of L. castelnaui Hayasaka 1936. The genotype of Acrocyathus is redescribed. Omaliusoid retreat is defined as progressive shortening of absolute lengths of septa. It is suggested that amplexoid retreat be restricted to its original meaning of describing apparent shortening of septa lying only on upper portions of tabulae. The new septal terms, inner region and outer region, are defined to differentiate these amplexoid portions from the persistent medial region. Functional septal morphology of lonsdaleioid and lithostrotionoid corals is discussed.^1";
- 5183 s[5180] = "WEYER D. (1973).- Ueber Rhopalolasma Hudson, 1936 (Anthozoa, Rugosa, Karbon).- Palaeontol. Abh. A, 4, 4: 675-681.- FC&P 4-1, p. 40, ID=5149^Topic(s): ; Rugosa, Rhopalolasma; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^^1";
- 5184 s[5181] = "ONOPRIENKO Yu.I. (1974).- Nouveau genre Kolymophyllum du Tournaisien. [en ukrainien] .- Dop. Akad. Nauk. URSS 1974, 5: 412-415.-

- FC&P 4-2, p. 60, ID=5286^Topic(s): new taxa; Rugosa, Kolymophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Tour; Geography: ^[description de Kolymophyllum columen sp.nov.]^1";
- 5185 s[5182] = "JOHNSON G.A.L., NUDDS J.R. (1974).- Carboniferous coral geochronometers.- In G.D. Rosenberg & S.K. Runcorn (eds): Growth rhythms and the history of the Earth's rotation: 27-41.- FC&P 5-2, p. 9, ID=5428^Topic(s): sclerochronology; sclerochronology; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^Derives growth rate, number of days in month, and number of days in year from monthly growth bands in British specimens of Lithostrotion martini. Suggests use of tabulae to measure growth rate.^1";
- 5186 s[5183] = "SANDO W.J. (1976).- Revision of the Carboniferous genus Aulina Smith (Coelenterata, Anthozoa).- US Geol. Survey Jour. Research 4, 4: 421-435.- FC&P 5-2, p. 9, ID=5433^Topic(s): revision; Rugosa, Aulina; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^Recognizes 6 different lineages in corals previously assigned to Aulina. Proposes 4 new genera and 3 new species, of which one is described and illustrated.^1";
- 5187 s[5184] = "ONOPRIENKO Yu.I. (1976).- Novyi Vizeyskiy rod korallov Neokolymophyllum (Rugosa). [new Visean genus Neokolymophyllum (Rugosa); in Russian].- Trudy Dalnevost. Nauch. centra, Biol.-pochv. inst. 42, 145 [V. Petrashevskaya (ed.): Morfologiya i sistematika iskopaemykh bespozvonochnykh Dalnego Vostoka]: 35-38.- FC&P 7-2, p. 23, ID=5648^Topic(s): new taxa; Rugosa, Neokolymophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise; Geography: ^^1";
- 5188 s[5185] = "SHCHUKINA V.Ya. (1980?).- Znachenye rugoz dlya korrelyatsyi nizhnnekamennougolnykh otlozheniy. [significance of the Rugosa for the correlation of Lower Carboniferous deposits; in Russian].- Sovetskaya Geologiya 8: 101-110.- FC&P 10-2, p. 72, ID=6093^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous L; Geography: ^^1";
- 5189 s[5186] = "FEDOROWSKI J. (2009).- Revision of Pentaphyllum De Koninck, 1872 (Anthozoa, Rugosa).- Palaeontology 52, 3: 569-591.- FC&P 36, p. 57, ID=6443^Topic(s): revision; Rugosa Pentaphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^Lectotypes of Pentaphyllum armatum and P. caryophyllum, both of De Koninck (1872) have been sectioned for the first time and are completely illustrated; both are preserved as silicified outer shells with inner structures dissolved. The morphology of the calices strongly suggests that they have different taxonomic positions. Thus, their synonymy, suggested by Schindewolf (1942), is rejected. P. armatum, selected as type species for the genus by Hinde (1890) possesses six, not five leading major septa. Consequently, all taxa except Hexalasma Soshkina, 1928, and perhaps Pseudocryptophyllum Easton, 1944, are unrelated to Pentaphyllum. It is proposed to restrict the name Pentaphyllum to the lectotype. The well established Cryptophyllum Carruthers, 1919, which includes P. caryophyllum is considered valid. In addition to a brief analysis of Lower Carboniferous corals included here in Cryptophyllum, a few specimens from the British Tournaisian are described and illustrated to show morphological variability of specimens from the same bed. Review of earlier studies on these types of corals, discussion on the difference between zaphrentoid and cryptophylloid early ontogeny and its bearing on taxonomy, and description of taxa, are also included.^1";
- 5190 s[5187] = "RODRIGUEZ S., SOMERVILLE I.D. (2010).- Appearance of fasciculate rugose corals in the Visean and Serpukhovian: A review.- Palaeoworld 19, 3-4: 306-315.- FC&P 36, p. 64,

ID=6457^Topic(s): colonial, ecology, phylogeny; Rugosa, colonial; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Vise - Serp; Geography: ^Appearances of new fasciculate rugose corals are especially abundant in the Visean-Serpukhovian interval. Fasciculate corals may have two different origins. (1) Development of colonialism from solitary corals (e.g., *Corwenia* from *Dibunophyllum*); (2) morphological changes of the established fasciculate taxa that produce new species or genera. Most new fasciculates occur in shallow-water carbonate shelf environments, but the first occurrence is not always easy to identify from published data. One of the typical environments for their first occurrence during the Visean was the top of microbial mud-mounds. The microbial mounds perhaps have provided isolated areas of shallower water above the sea bottom. These isolated elevated areas could have provided more favourable environments where pioneer coral colonies may have evolved. All Visean and Serpukhovian coral assemblages with new colonial corals are dominated by phaceloid species. Consequently, the explanation should be rejected that new colonial corals occur only in empty ecological "niches". Most of these assemblages also contain solitary corals, including the ancestral "parent species". * All these observations pose new questions concerning the origin of the fasciculate colonial forms in rugosans. There are evidences that single specimens develop colonial forms as a response to environmental factors. Development of colonialism is possible for single specimens of some solitary genera. However, the capacity for developing persistent colonial growth forms depends on multiple factors, including genetic and environmental ones. [original abstract]^1";

- 5191 s[5188] = "WEYER D. (1975).- Zur Taxonomie der Antiphyllinae Iljina, 1970.- Zeitschrift der geologischen Wissenschaften 3 (1975): 755-775.- FC&P 9-1, p. 37, ID=0270^Topic(s): new taxa; Rugosa, Antiphyllinae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^The Carboniferous genera *Sotiphyllum* Hudson 1942, *Claviphyllum* Hudson 1942, *Drewerelasma* Weyer 1973, *Saleelasma* Weyer 1970, and *Bradyphyllum* Grabau 1928, are classified as subfamily Antiphyllinae Ilyina 1970, within the family Hapsiphyllidae Grabau 1928. Discussion on junior and possible senior synonyms includes *Fasciculophyllum* Thomson 1883, and *Zaphrentoides* Stuckenbergl 1895. A new genus *Clavilasma* is proposed with type species *Clavilasma carinatum* nov. sp. from the top Visean of Scotland.^1";
- 5192 s[5189] = "RODRIGUEZ S. (1985).- The taxonomic status of the geyerophyllid corals.- Acta Geologica Polonica 35, 3-4: 277-288.- FC&P 15-1.2, p. 31, ID=0812^Topic(s): systematics; Rugosa, Geyerophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^The geyerophyllid rugose corals comprise several genera broadly distributed during the Middle and Upper Carboniferous. Their specific and generic variability is so great that some authors have recently considered most of the geyerophyllids as synonyms of the genera *Geyerophyllum* and *Kionophyllum*. The present paper analyses the relationships between the solitary geyerophyllid genera in order to prove whether they constitute a simple genus or a true family. In the author's opinion, fully justified is their family status, viz. the Geyerophyllidae Minato 1955.^1";
- 5193 s[5190] = "ONOPRIENKO Yu.I. (1976).- Nekotorye voprosy morfologii, sistematiki i evolutsyi uralinid. [some aspects of morphology, systematics and evolution of Uraliniidae; in Russian].- Paleozoologicheskii sbornik NS 38, 141: 5-10.- FC&P 7-2, p. 22, ID=5646^Topic(s): systematics; Rugosa, Uraliniidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous; Geography: ^^1";
- 5194 s[5191] = "WOOD R.A., REITNER J., WEST R.R. (1989).- Systematics and phylogenetic implications of the haplosclerid stromatoporoid *Newellia mira*.- Lethaia 22: 85-93.- FC&P 18-1, p. 53,

- ID=2312^Topic(s): revision; stroms, Newellia; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Carboniferous; Geography: ^The Carboniferous sponge originally ascribed to the genus Parallelopora by Newell is redescribed. It is thought to have had an original aragonite skeletal mineralogy. The development of a calcareous skeleton in various sponge lineages is described. It is proposed that Newellia is a member of a clade crossing the gap between Paleozoic and Mesozoic stromatoporoids.^1";
- 5195 s[5192] = "OLIVER W.A.jr, SANDO W.J. (1977).- *Tabellaephyllum* Stumm is a *Michelinia* (Carboniferous, Tabulata).- *Journal of Paleontology* 51, 2: 422-423.- FC&P 7-1, p. 24, ID=0185^Topic(s): ; Tabulata, *Michelinia*; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: ^Detailed studies on the type of *Tabellaephyllum*, *T. peculiaris* Stumm 1948, and comparison of thin sections and hand specimens of *Michelinia expansa* White showed that in all respects of morphology and preservation the bolotype of *Tabellaephyllum* is essentially identical with silicified specimens of *Michelinia*. The age of the *T. peculiaris* holotype is not Devonian as mentioned by Stumm by mistake but Mississippian. This corresponds with the occurrence of *Michelinia expansa*.^1";
- 5196 s[5193] = "LAFUSTE J., PLUSQUELLEC Y. (1985).- Attribution de "*Michelinia*" compressa au genre *Yavorskia* Fomitchev (Tabule, Tournaisien).- *Geobios* 18, 3: 381-384.- FC&P 14-2, p. 39, ID=0922^Topic(s): nomenclature; Tabulata, *Yavorskia*; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous Tour; Geography: ^A longitudinal section cut in the holotype of *Michelinia compressa* Michelin shows that this species belongs to the genus *Yavorskia* Fomitchev.^1";
- 5197 s[5194] = "LAFUSTE J., SEMENOFF-TIAN-CHANSKY P., TOURNEUR F. (1992).- Succession microlamelles-lamelles dans le sclerenchyme parietal de *Syringopora* Goldfuss 1826 (Tabulata, Carbonifere).- *Bulletin du Museum national d'histoire naturelle* 14: 249-265.- FC&P 23-1.1, p. 70, ID=4148^Topic(s): microstructures; Tabulata, *Syringopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: Carboniferous; Geography: ^The wall microstructural composition of the genus *Syringopora* Goldfuss 1826 has been investigated by polished ultra-thin sections from Lower Carboniferous specimens from France and Belgium. The following succession has been recognized from the outer part to the inner part of the wall: a thin cortical layer of fibres and fibroids followed by a slightly thicker layer composed of cupular microlamellae and, finally, by a well-developed perilluminal layer of undulating lamellae. The tabulae are lamellar and the septal spines fibrous. These microstructural data should be incorporated in the generic diagnosis of *Syringopora*.^1";
- 5198 s[5195] = "VASILYUK N.P. (1982).- Etapy razvitiya tselenterat i stratigrafiya karbona. [evolutionary stages of the coelenterates and stratigraphy of the Carboniferous; in Russian].- *Novye dannye po stratigrafii i faune fanerozoia Ukrainy*: 31-34; Kiev.- FC&P 12-2, p. 35, ID=6217^Topic(s): stratigraphy; Coelenterata, phylogeny; Systematics: Cnidaria; Stratigraphy: Carboniferous; Geography: ^^1";
- 5199 s[5196] = "WARNKE, K. (1996).- Sponge Diagenesis and Micrite Formation in Lower Carboniferous Carbonates.- *Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2* [Reitner J., Neuwiller F. & Gunkel F. (eds): *Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution*]: pp- FC&P 26-1, p. 44, ID=3613^Topic(s): diagenesis, micrite formation; Porifera; Systematics: Porifera; Stratigraphy: Carboniferous L; Geography: ^The mechanisms of carbonate formation and the possible significance of the decomposition of soft sponge tissue have been investigated in pleoidal and micritic Lower Carboniferous sediments of different depositional environments. Evidence can be found in the calcareous nodules formed around siliceous sponges in the

Glencar Formation of northwestern Ireland comprising peloidal and micritic fabrics. Sponge relics found within minipeloidal and micritic fabrics in the basinal crenistria-Limestone of the eastern Rheinische Schiefergebirge suggest their important contribution to the formation of these beds. Sponges are virtually absent from the shallow subtidal and peritidal sediments of England and South Wales. Peloidal and micritic carbonate forming stromatolitic bioherms and biostromes and microbial spars was derived from microbial calcite precipitation consuming organic matter located between the filaments of cyanobacteria.¹";

- 5200 s[5197] = "BRAND U. (1989).- Aragonite-calcite transformation based on Pennsylvanian molluscs.- Bulletin Geological Society of America 101: 377-390.- FC&P 18-1, p. 47, ID=2288^Topic(s): aragonite - calcite transition; fossils mineralogy; Systematics: ; Stratigraphy: Carboniferous U; Geography: ^Geochemical data of the most-altered samples suggest that the diagenetic fluids which affected Boggy sediments and fossils were similar in composition to meteoric water. Moreover, the dissolving aragonite, through diffusion-controlled dissolution, determined the elemental as well as isotopic chemistry of the diagenetic calcite in the altered shells. It is postulated that similar diagenetic waters and processes affected sedimentary units of the Breathitt (Pennsylvanian, Kentucky), Brush Creek (Pennsylvanian, Pennsylvania-Ohio), Lukow (Jurassic, Poland), Bear Paw-Lea Park (Cretaceous, western Canada), and Nugssuaq (Cretaceous, Greenland) Formations which contain well-preserved aragonitic molluscan faunas. [abridged summary]¹";
- 5201 s[5198] = "WEST R.R. (1988).- Temporal Changes in Carboniferous Reef Mound Communities.- Palaios 1988, 3 [reefs issue]: 152-169.- FC&P 18-1, p. 50, ID=2300^Topic(s): mound communities; reefs; Systematics: ; Stratigraphy: Carboniferous; Geography: ^1";
- 5202 s[5199] = "IVANOVSKIY A.B., YUFEREV O.V. (1974).- Zonation biogéographique de la Terre au Carbonifère supérieur et la dérive des continents.- Etjudy po stratigrafii ; Nauka, Moskva: 205-207.- FC&P 4-1, p. 33, ID=5110^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: Carboniferous; Geography: ^1";
- 5203 s[5200] = "WEST R.R., FELDMANN H.R., MAPLES C.G. (1997).- Some Upper Carboniferous (Pennsylvanian) event beds (epiboles).- Paleontological Events: Stratigraphic, Ecological and Evolutionary Implications [C. Brett & G.C. Baird (eds)]: 425-450; Columbia University Press.- FC&P 29-1, p. 46, ID=7038^Topic(s): biostratigraphy, ecology; Systematics: ; Stratigraphy: Carboniferous U; Geography: ^1";
- 5204 s[5201] = "AMLER M.R.W., GEREKE M. (eds) (2003).- Karbon-Korrelationstabelle (KKT).- Senckenbergiana lethaea 83, 1-2: 235-247.- FC&P 32-1, p. 16, ID=7136^Topic(s): stratigraphy, correlation table; stratigraphy; Systematics: ; Stratigraphy: Carboniferous; Geography: ^[Carboniferous Correlation Table (CCT)]¹";
- 5205 s[5202] = "YU Jian-Zhang, LIN Ying-Dang, SHI Yen, HUANG Zhu-Xi, YU Xue-Guang (1983).- Carboniferous and Permian corals.- Jilin People's Publishing House, Jilin, 357 pp. (in Chinese).- FC&P 13-1, p. 41, ID=0489^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: ^1";
- 5206 s[5203] = "SANDO W.J. (1993).- Late Paleozoic coral research: past, present, and future.- Courier Forschungsinstitut Senckenberg 164: 021-036. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 1].- FC&P 22-2, p. 10, ID=3434^Topic(s): research history; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: ^The

history of research on Carboniferous and Permian corals, which began with the first published record in 1683, may be divided arbitrarily into three periods: 1) discovery in the 17th and 18th centuries, 2) organization and definition in the 19th c., and 3) development and application in the 20th c. Statistics on the volume of published research, analyzed by decades since 1680, record a progressive increase from decade 23 (1900-09) to decade 30 (1970-79), interrupted by two major declines related to the two world wars. Research production declined in the last two decades (1970-89) and will continue to decline into the 21st c. Data on the geologic age, geography, and demography of the research, and on the development of the main topics of research are also presented.^1";

5207 s[5204] = "SANDO W.J. (1997).- Late Paleozoic coral genera and subgenera. State of the art, 1814-1994.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 061-071.- FC&P 26-2, p. 9, ID=3672^Topic(s): taxonomy genera; corals genera; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: ^The production history of 803 valid generic (including subgeneric) names for Carboniferous and Permian corals published from 1814 to the end of 1994 is analyzed by means of a computerized data base (GLIST) that includes 1.021 generic names. Production of valid generic names was concentrated in western Europe in the 19th century but shifted mainly to China, USSR/CIS, and USA in the 20th century, where it increased significantly as a result of government-funded paleontologic research in support of expanded exploration for mineral and energy resources after world war II. More than a fifth of the names were produced in China during the decade that began in 1980. Production declined dramatically worldwide after 1989 during downsizing of the paleontologic workforce and a decline in funding for coral research. Assessment of the number of currently acceptable genera is practically impossible because of the subjective nature of genera. Application of quality tests, based on knowledge of the type material of type species and on opinions of generic synonymy, reduces the number of valid names to approximately 300 to 450 that are currently acceptable. More attention must be given to upgrading knowledge of type material in order to provide a firmer foundation for concepts of late Paleozoic biostratigraphy, phylogeny, and biogeography. Chinese generic names pose a serious problem because they constitute such a large proportion of the total valid names and because many Chinese names are of poor quality. The best solution to this problem is upgrading of these names by the next generation of Chinese specialists.^1";

5208 s[5205] = "SANDO W.J., CHAPMAN R.E., EDWARDS L.E. (1992).- A computerized reference file on late Paleozoic coral research, 1683-1989.- FC&P 20, 2: 44-46.- FC&P 23-2.1, p. 47, ID=4275^Topic(s): coral research, database; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: ^The senior author has been accumulating references on Carboniferous and Permian corals in a card file since the early 1960s. This card file was updated by searching various bibliographic sources in 1989-1991 to provide data for a paper on the history of late Paleozoic coral research (Sando, in preparation). As the work proceeded, it became necessary to identify various aspects of research in the published papers examined and to devise a system for collating data used to analyze historical trends. This paper describes the computer programs developed by the junior authors and used by the senior author to compile and access the reference file. [introductory part of a short note]^1";

5209 s[5206] = "SANDO W.J. (1994).- Revision of "List of names proposed for genera and subgenera of Late Paleozoic corals, 1828-1989" by Sando & Sangree (1990).- FC&P 23, 1.1: 53-57.- FC&P 23-1.1, p. 53, ID=6838^Topic(s): list of taxa, genera; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy:

- Carboniferous Permian; Geography: ^[contains additions, deletions and corrections to list of genera and subgenera by Sando & Sangree (1990)]^1";
- 5210 s[5207] = "SANDO W.J. (1994).- Corrections and additions to &List of names proposed for genera and subgenera of Late Paleozoic corals, 1828-1989&.- FC&P 23, 2.1: 30.- FC&P 23-2.1, p. 30, ID=6855^Topic(s): list of taxa, genera; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Carboniferous, Permian; Geography: ^This brief communication is an update of Sando and Sangree (1990) and follows the format of that paper. The update includes correction of the author of one name and ten names [of genera of corals] not found during compilation of Sando and Sangree (1990).^1";
- 5211 s[5208] = "WU WANGSHI, ZHAO JIAMING (1984).- On the biological characteristics and the stratigraphical significance of the Family Kepingophyllidae.- Acta Palaeontologica Sinica 23, 4: 411-419.- FC&P 14-1, p. 51, ID=1019^Topic(s): biology, stratigraphy; Rugosa, Kepingophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: ^^1";
- 5212 s[5209] = "FEDOROWSKI J. (1987).- The rugose coral faunas of the Carboniferous / Permian boundary interval.- Acta Palaeontologica Polonica 31, 3-4: 253-275. [imprint 1985].- FC&P 16-2, p. 17, ID=1936^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous / Permian; Geography: ^Analysis of the rugose coral fauna of the Carboniferous / Permian transition strata is discussed, with special emphasis on corals from the Pseudoschwagerina Zone. Two distinct realms: the Tethys Realm and the Cordillera-Arctic-Uralian Realm were developed in the Carboniferous-Permian time. Recently Introduced taxonomic, biostratigraphic and paleogeographic data and interpretations are evaluated in terms of their global and regional value. It is postulated that corals have some importance as a supplementary group for establishing the lower limit of the Permian System.^1";
- 5213 s[5210] = "FEDOROWSKI J. (1989).- Intraspecific variation in Carboniferous and Permian Rugosa.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 7-12.- FC&P 19-1.1, p. 12, ID=2517^Topic(s): variability; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: ^^1";
- 5214 s[5211] = "KOSSOVAYA O.L. (1989).- New data on the morphogenesis and phylogeny of some Late Carboniferous and Early Permian rugose corals.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 109-113.- FC&P 19-1.1, p. 13, ID=2528^Topic(s): morphogenesis, phylogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U / Permian L; Geography: ^^1";
- 5215 s[5212] = "ZHANG XIONGHUA (1992).- Microskeletal structures of some compound rugose corals and their systematic significance in the Late Carboniferous and Early Permian.- J. China Univ. Geosci., Earth Sci. 17, 1: 1-6.- FC&P 21-1.1, p. 44, ID=3217^Topic(s): microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U - Permian L; Geography: ^By using SEM and optical microscope, the microskeletal structures of some compound rugose corals in the Late Carboniferous and Early Permian (including Protoivanovia, Antheria, Nephelophyllum, Szechuanophyllum, Wentzellophyllum, Parawentzellela) from South Guizhou and Central Hunan are studied, and four types of septa are divided: non-trabeculae septa, trabeculate septa (including typical trabeculae and unclear trabeculae), the septa with a trabecula in its axis, and normal fibrous

- septa. Then the stratigraphic distribution and systematic significance of the microskeletal structures are discussed on the basis of the SEM and optical microscope analysis.¹¹";
- 5216 s[5213] = "ZHU ZHENGANG (1992).- Late Late Carboniferous and Earliest Permian rugose corals from Jiangxi.- Acta Palaeontologica Sinica 31, 6: 657-677.- FC&P 22-2, p. 83, ID=3514^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U / Permian L; Geography: ^This paper deals with the rugose corals obtained from Upper Carboniferous Chuanshan Formation and the Lower Permian Chihsia Formation (Member I) in Pengze of Leping County, Yudou of Shanggao County, Yushan and Chongyi counties, Jiangxi Province, which contain 14 genera and 16 species (including 11 new species). I. Protoivanovia-Fomichevella-Arctophyllum-Pseudocarniaphyllum Assemblage, including Protoivanovia penzeensis Zhu, P. dupliformis X. Yu, Fomichevella hoeli (Holtedah1), F. longiseptata sp.nov., Arctophyllum jiangxiense sp.nov., Pseudocarniaphyllum jiangxiense sp.nov., Amygdalophylloides multiseptatus X. Yu, Carniaphyllum gortanii Heritsch, Timania sp. and Chuanshanophyllum sp. II. Parawentzellophyllum-Lytvophyllum-Koninckophyllum-Stereostylus Assemblage, including Parawentzellophyllum lepingense sp.nov., Eoepingophyllum acolumellum sp.nov., Nephelophyllum mixocolumellum sp.nov., Peiraphyllum anguipore sp.nov., Lytvophyllum flexuosum sp.nov., L. sp., Koninckophyllum caninophylloidea X Yu, Koninckocarina wenhuashanensis X. Yu and Stereostylus annae Jeffords.¹¹";
- 5217 s[5214] = "WILSON E.C. (1998).- Not Heritschioides in Europe Yet.- Permophiles 31: 15.- FC&P 27-1, p. 78, ID=3816^Topic(s): dubious records; Rugosa, Heritschioides; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U - Permian L; Geography: Europe?^The colonial rugose coral Heritschioides Yabe 1950 is an index fossil for uppermost Pennsylvanian and Lower Permian marine rocks of western USA plus western and Arctic Canada (Wilson 1980 and later reports by several authors). Kossovaya (1996, 1997) referred to a Late Carboniferous coral from North Timan (NE European Arctic Russia) as Heritschioides aff. H. carneyi Wilson 1982, but did not describe or figure it. H. carneyi originally was described from the Upper Pennsylvanian-Lower Permian McCloud Limestone of northern California. This apparent intercontinental geographic range extension of the genus may not be justified. I have corresponded with Kossovaya (1995) and reviewed photographs of her thin sections of the North Timan coral. The corallites are poorly preserved and somewhat crushed and the short cardinal septum, an obligatory character for the Family Heritschioidae Sando 1985, is not observable. The coral, therefore, cannot be firmly referred to Heritschioides. Furthermore, Kossovaya's coral is so unlike H. carneyi in numbers of septa and lengths of minor septa that it cannot be placed in the same species group (Wilson 1982: fig. 17) even if it did belong to the genus. Firm identification of the North Timan coral awaits examination of better preserved specimens. Until then, this range extension of such an important index coral genus should be regarded with caution.¹¹";
- 5218 s[5215] = "KOSSOVAYA O.L. (1992).- Rugozy Verkhnego Karbona i Nizhney Permi khr. Karachatyr.- Voprosy Paleontologii 10: 13-27. [in Russian].- FC&P 23-2.1, p. 46, ID=4269^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous U / Permian L; Geography: Russia, Karachatyr Range¹¹";
- 5219 s[5216] = "MINATO M., KATO M. (1970).- The distribution of waagenophyllidae and Durhaminiidae in the Upper Paleozoic.- Jap. Journ. Geol. and Geog. 41, 1: 1-14.- FC&P 1-2, p. 16, ID=4653^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: ^In terms of coral distribution in the Upper Paleozoic, two major biogeographic provinces may be recognized:

waagenophyllidae and Durhaminidae Provinces. The waagenophyllidae Province corresponds to the so-called Tethys, and is conceivable to have been a tropical sea region stretching from east to west. On the other hand, the Durhaminidae Province was situated further north, and may have been probably subtropical. In contrast there was an Eurydesma Province in the southern hemisphere, which was characterized by a colder fauna almost lacking corals. Synopsis of the classification of waagenophyllidae and Durhaminidae, together with their phylogenetic relations, are briefly presented.¹;

5220 s[5217] = "SANDO W.J. (1983).- Revision of Lithostrotionella (Coelenterata, Rugosa) from the Carboniferous and Permian.- US Geol. Survey Prof. Pap. 1247: 1-52.- FC&P 12-2, p. 29, ID=6209Topic(s): revision; Rugosa, Lithostrotionella; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous Permian; Geography: ^Species of predominantly massive colonial rugose corals from the Carboniferous and Permian that were referred previously to Lithostrotionella Yabe & Hayasaka are reassigned to the following genera: Acrocyathus d'Orbigny (including probable junior synonym Lithostrotionella Yabe & Hayasaka), Stelechophyllum Tolmachev (including junior synonym Eolithostrotionella Zhizhina), Petalaxis Milne-Edwards & Haime (including junior synonym Hillia de Groot and Eastonoides Wilson & Langenheim), Aulostylus Sando, Kleopatrina McCutcheon & Wilson, Lonsdaleia McCoy (subgenus Actinocyathus d'Orbigny), and Thysanophyllum Nicholson & Thomson. One of the species referred to Cystolonsdaleia Fomichev is reassigned to Petalaxis. * Stelechophyllum and Aulostylus are referred to the Family Lithostrotionidae d'Orbigny. A new Family, the Acrocyathidae, is created for the genus Acrocyathus. Petalaxis is placed in the Family Petalaxidae Fomichev, Thysanophyllum and Lonsdaleia are referred to the Family Lonsdaleiidae Chapman, and Kleopatrina is assigned to the Family Durhaminidae Minato & Kato. * The principal lithostrotionelloid genera are Stelechophyllum, Aulostylus, Acrocyathus, and Petalaxis. Stelechophyllum ranges in age from Late Devonian(?) into the late Visean and is represented in the Carboniferous by 15 nominal species allocated to five species groups; the genus occurs in the USSR, USA, Canada and Mexico. Aulostylus is represented by two middle Tournaisian species in the USA and Canada and a possible species from the Visean of China. Acrocyathus is represented by 14 nominal species (one new) from the lower to upper Visean of the USSR, USA, Canada and China. Petalaxis is represented by 41 nominal species (six new) allocated to five species groups that range from the upper Visean into the Permian; the genus occurs in the USSR, USA, Canada, Spain, Japan, and possibly China and Spitzbergen. * Stelechophyllum may have been derived from Endophyllum in the Devonian. Aulostylus, Acrocyathus and Petalaxis are regarded as offshoots from the Stelechophyllum stock in the Carboniferous. Lonsdaleia, Thysanophyllum and Kleopatrina do not seem to be closely related to Stelechophyllum and its derivatives. Hayasaka's type specimen of Lithostrotionella species from North America are reassigned to Acrocyathus, Stelechophyllum, Petalaxis and Aulostylus and are revised specifically. Three new species and two new subspecies are based on specimens studied by Hayasaka. [original summary]^1";

5221 s[5218] = "FEDOROWSKI J. (2009).- On Pentamplexus Schindewolf, 1940 (Anthozoa, Rugosa) and its possible relatives and analogues.- Palaeontology 52, 2: 297-322.- FC&P 36, p. 56, ID=6442Topic(s): systematics; Rugosa Pentamplexus; Systematics: Cnidaria; Rugosa; Stratigraphy: Carboniferous, Permian; Geography: ^Three ampleximorphic taxa are revised and their most important characters are discussed in terms of possible or apparent relationships. Re-interpretation of its early ontogeny allows the assignment of Pentamplexus Schindewolf, 1940 to the family Polycoeliidae de Fromentel, 1861. Stereolasma variabilis

Vojnovsky-Krieger, 1934 is established as the type species of Vojnovskytes gen. nov. It resembles the family Polycoeliidae in some characters and the Antiphyllidae Ilina, 1970 or the Laccophyllidae Grabau, 1928 in others. Thus, its family status is not established. Revision of the type material of Fasciculophyllum tripus Schindewolf, 1952 allows its inclusion within the new genus Silesamplus, probably related to the family Laccophyllidae Grabau, 1928. Amplexoid morphology is further shown to be inadequate for the establishment of relationships on the family or subfamily level. Early ontogeny is most important in that respect, but biform vs normal morphology in the tabularium and free vs contratingent development of minor septa must also be considered, where appropriate.^1";

5222 s[5219] = "FORSYTHE G.T.W. (2003).- A new synthesis of Permo-Carboniferous phylloid algal reef ecology.- SEPM Special Publications 78 / AAPG Memoir 83 (Permo-Carboniferous carbonate platforms and reefs): 171 -188.- FC&P 33-1, p. 85, ID=7232^Topic(s): reefs ecology; algae phylloid; Systematics: algae; Stratigraphy: Carboniferous Permian; Geography: ^The phylloid algal genera Eugonophyllum and Archaeolithophyllum are common constituents of Virgilian and Wolfcampian reef limestones in the Hueco Mountains of Texas. These algae form bioherms and biostromes and are volumetrically important contributors to both the reef and offreef sediment budget. Reefs constructed by phylloid algae have long been considered as ecologically simple communities that lack dominant framebuilding organisms. The previously accepted constructional mechanism for reef formation has been inferred to be sediment baffling and trapping, mainly by erect phylloid algae. This new, detailed analysis of phylloid algal growth framework, however, clearly shows that these algae were in fact capable of forming a rigid framework. Phylloid algae, mostly Eugonophyllum, together with the problematicum Tubiphytes and the red alga (?) Archaeolithoporella, formed complex, multiple encrustations (both in vivo and post mortem) and were a fundamental element of reef construction. Much of the micrite in these reefs, often regarded as a sediment, has been identified as microbialite; this microbialite is important in binding and stabilizing the initial reef framework created by the phylloid algae. A dominant ecological succession was identified from the EUGONOPHYLLUM communities: (1) a pioneer community of phylloid algae would initially stabilize the substrate; (2) this would enable an encrusting community of mostly Tubiphytes, Archaeolithoporella, and microbialite to develop, followed by (3) a climax community of larger calcisponges. In the Archaeolithophyllum communities, the thalli were largely constratal (organisms not substantially elevated above the substrate) and lacked any obvious microbialite association. The resultant Archaeolithophyllum communities therefore did not develop any significant depositional relief and thus formed biostromes. [original abstract]^1";

5223 s[5220] = "ROSS C.A., ROSS J.R.P. (1985).- Carboniferous and Early Permian biogeography.- Geology 13: 27-30.- FC&P 15-1.2, p. 40, ID=0761^Topic(s): benthos, biogeography; benthic invertebrates; Systematics: ; Stratigraphy: Carboniferous, Permian; Geography: ^During the Carboniferous, changes in the biogeographical distribution of shelf-dwelling, benthic marine invertebrates were made in response to changes in physical paleogeography and climatic variations. Calcareous foraminifers and bryozoans are principal examples of the general trends during the Early Carboniferous, which show that Tournaisian and early and middle Visean faunas were broadly cosmopolitan in a circum-equatorial belt and that latitudinal diversity gradients were relatively minor. During the later part of the Visean and early part of the Namurian, the Hercynian orogeny, caused by the collision of Euramerica with Gondwana, disrupted these cosmopolitan equatorial faunal patterns. This was also a time of progressively cooler temperatures throughout the world, of dramatic reduction in faunal

- diversity, and of high rates of extinction of both species and genera.^1";
- 5224 s[5221] = "STEARNS C.W., STOCK C.W. (2010).- A list of upper Paleozoic-Mesozoic stromatoporoid-like genera; and excluded taxa.- Treatise Online 02, Part E, Revised, Vol. 4, Chap. 5: 8 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 44, ID=6419^Topic(s): dubious genera; dubious stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Carboniferous - Cretaceous; Geography: ^[Sixty-four genera of stromatoporoid-like forms ranging in age from Early Carboniferous to Late Cretaceous are listed. An additional 16 genera that have been excluded are also listed.]^1";
- 5225 s[5222] = "STOCK C.W., St JEAN J., WOOD R.A., OTTE L.J. (1992).- Annotated checklist of post-Devonian "stromatoporoid" genera and their type species.- FC&P 21, 1.2: 1-22. [checklist] - FC&P 21-1.2, p. 1, ID=6821^Topic(s): parastromatoporoids; stroms ?; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Devonian-post; Geography: ^We do not regard the post-Devonian "stromatoporoids" covered in the present paper as monophyletic. Indeed, spicule findings clearly indicate that even calcified demosponges are a polyphyletic group (eg. wood, Reitner & west 1989). The following checklist includes all calcareous fossils from Carboniferous through Cretaceous-age rocks that have been referred to as stromatoporoids, sphaeractinoids, hydrozoans, spongiomorphids, or hydractinids, and Tertiary-age fossils referred to specifically as stromatoporoids. Chaetetids, certain tabulatomorph hydrozoans, and genera designated as sclerosponges are not included in the checklist. [fragment of introductory part; the checklist is accompanied by 73 annotations and by 152 literature references]^1";
- 5226 s[5223] = "OEKENTORP K. (1984).- Aragonite and diagenesis in Permian corals.- Palaeontographica Americana 54: 282-293 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 50, ID=0999^Topic(s): diagenesis, aragonite; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: ^^1";
- 5227 s[5224] = "FEDOROWSKI J. (1979).- On some aspects of coloniality in Permian corals. [in Larwood G. and Rosen B. R. (eds): Biology and systematics of colonial organisms] .- Systematics Association Special Volume 11: 155-171.- FC&P 11-1, p. 53, ID=1784^Topic(s): coloniality; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: ^^1";
- 5228 s[5225] = "EZAKI Y., KATO M. (1989).- Growth bands in a Permian coral.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 83-90.- FC&P 19-1.1, p. 13, ID=2525^Topic(s): sclerochronology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: ^^1";
- 5229 s[5226] = "TOURNEUR F., LAFUSTE J., PLUSQUELLEC Y. (1993).- Trachypsammia Gerth 1921 (Cnidaria, Permian): new data on the structure and microstructure.- Courier Forschungsinstitut Senckenberg 164: 347-358. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 22, ID=3470^Topic(s): microstructures, systematic position; Octocorallia (?), Trachypsammia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: ^The four Permian species hitherto assigned to the genus Trachypsammia Gerth 1921 have been revised; they are from Timor, Xizang (Tibet), and Sicily. They share the same morphological and microstructural characters. Trachypsammia shows, from the center towards the periphery, the following zones: 1) the lumen of the central

corallite; 2) a medullar zone, composed of radial fibres, with trabeculae and centripetal growth; 3) an annular zone, composed of trabeculae showing distal growth direction; 4) a canalicular zone, with a network of vertical canals connected by horizontal tubules; 5) a large cortical zone of numerous trabeculae with a serrate longitudinal outline and a square cross-section, showing centrifugal growth, arranged in vertical plates and surrounded by a fibrous stereoplasm disposed into two layers. These trabeculae correspond to the longitudinal flexuous files of granulae observed between the scattered calices on the surface of the branches. These peculiarities emphasize the affinities of *Trachypsammia* to the genus *Palaeacis* Haime in Milne-Edwards 1857 and assignment to the family *Palaeacidae* Roemer 1883, in a somewhat indefinite position within the evolution of the Cnidaria. The previously supposed affinities with *Hexacorallia* can be rejected, those with *Octocorallia* are worked out.¹¹;

5230 s[5227] = "PLUSQUELLEC Y., TOURNEUR F. (1994).- Le bourgeonnement chez *Trachypsammia dendroides*, Cnidaria du Permien [Increase in *Trachypsammia dendroides*, Permian Cnidaria].- *Geobios* 27, 4: 421-432.- FC&P 23-2.1, p. 16, ID=4216Topic(s): budding; Tabulata, *Trachypsammia*; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian; Geography: ^The increase in *Trachypsammia dendroides* Gerth 1921 from the Permian of Timor is studied by serial acetate peels. Its main features are as follow: the lumen of the bud originates from one or two units of the canalicular zone of the parent-corallite, the canal system of the bud proceeds from those of the parent-corallite, during the early stage of increase the new corallite is connected with the parent-corallite, the bud is always located on the back of the parent-corallite. The increase is described as "intracanalicular";, it is quite different from the lateral increase dominant in the *Tabulata sensu stricto* but it looks like that of the *Octocorallia*.¹¹;

5231 s[5228] = "BOGOYAVLENSKAYA O.V. (1984).- O problematichnom rode tselenterat [problematical coelenterate genus].- *Paleontologicheskii Zhurnal* 1984, 4: 48-52 .- FC&P 17-1, p. 39, ID=0652Topic(s): ; Hydrozoa, *Permolioclema*; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Permian; Geography: ^[Permian genus *Permolioclema* is assigned to the hydrozoa and its similarity to stromatoporoids is noted]¹¹;

5232 s[5229] = "WEYER D., ILYINA T.G. (1979).- Die permischen Rugosa-Genera *Pleramplexus* und *Pentamplexus*.- *Zeitschrift der geologischen Wissenschaften* 7, 11: 1315-1341.- FC&P 9-2, p. 45, ID=0351Topic(s): ; Rugosa, *Pleramplexus*; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: ^Ampleximorphous *Plerophyllidae* are revised both morphologically and taxonomically. Using the length of the cardinal septum as diagnostic feature, two separate genera may be accepted: *Paracaninia* Chi 1973 (Kasimovian - Dzhulfian), and *Pentamplexus* Schindewolf 1940 (Leonardian - Dorashamian). The former includes the subjective junior synonyms *Pleramplexus* Schindewolf 1940, and *Pseudobradyphyllum* Dobrolyubova 1940; its ancestor is *Ufimia* Stuckenberg 1895 (with synonym *Tachylasma* Grabau 1922). The latter descends from *Pentaphyllum* de Koninck 1872 (with synonyms *Plerophyllum* Hinde 1890, and *Cryptophyllum* Carruthers 1919). The much enlarged record of assigned species (24 valid names, nine species named in open nomenclature) is an uncritical compilation without attempts to improve the present unsatisfactory state of taxonomy at the specific level. The holotype of *Pentamplexus simulator* Schindewolf 1940 (Leonardian of Timor Island) is described. New topotypes of *Paracaninia nikitini* (Stuckenberg 1888), *Paracaninia variabilis* (Soshkina 1941), and *Pentamplexus leptoconicus* (Abich 1878) are figured (Gzhelian and Kazanian of Russian platform, Baisalian of Armenia). Holotype illustrations of three probably middle Permian Chinese species of *Paracaninia* (*sinensis*, *kaoi*, *grabaui*) are reproduced from the generally inaccessible paper of Chi (1937), using

emendated identifications of protosepta. Paracania and Pentamplexus are common members of Permian Rugosa communities of Cyathaxonia facies type, with a wide regional distribution throughout the palaeotethys and the boreal realm of Eurasia. These corals are typical Rugosa (four points of septal insertion according to the law of Kunth, origin of new septa from bipartition of old major septa). Orientation of septal apparatus is indicated by bifurcated tabulae. Though originating each in but one genus, both Paracania and Pentamplexus are polyphyletic taxa. (original summary)^1";

5233 s[5230] = "STEVENS C.H. (1982).- The Early Permian Thysanophyllum coral belt: Another clue to Permian plate-tectonic reconstructions.- Geological Society of America Bulletin 93: 798-803.- FC&P 11-2, p. 28, ID=1840^Topic(s): biogeography; Rugosa, Thysanophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: ^^1";

5234 s[5231] = "WENDT J. (1990).- The First Aragonitic Rugose Coral.- Journal of Paleontology 64, 3: 335-340.- FC&P 19-2.1, p. 25, ID=2739^Topic(s): mineralogy, aragonite; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: ^Microstructural and compositional data support the view that the skeletons of rugose corals consisted of (probably high-Mg) calcite, unlike the skeletons of scleractinian corals which are predominantly aragonitic. Total transformation of a late Permian rugose coral skeleton into neomorphic calcite and a significant trace element composition, however, show that aragonite was present in some Rugosa shortly prior to the extinction of this order. This finding sheds new light on the possible phylogenetic relationship between Rugosa and Scleractinia, which still possess a different mode of septal insertion and remain separated by an as yet coralfree interval in the Lower Triassic.^1";

5235 s[5232] = "FEDOROWSKI J. (1997).- Diachronism in the development and extinction of Permian Rugosa.- Geologos 2: 59-164.- FC&P 27-2, p. 13, ID=3891^Topic(s): extinctions P/T; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian; Geography: ^The formation of Pangea resulted in an unique global geography which in turn influenced the distribution, development and extinction pattern of the Rugosa. Free connection between the main oceans existing up to the Gselian allowed common roots to develop for several Permian rugosa coral lineages. Two of those lineages, represented by four large families (Kepingophyllidae - waagenophyllidae in the East and Durhaminidae - Hetitschioididae in the west) appeared as early as the Bashkirian-Moskavian but were permanently restricted geographically to become characteristic of two distinct faunal realms which appeared near the end of the Carboniferous as a result of the formation of Pangea. These realms were: (1)The Cordilleran-Arctic-Uralian Realm, extending from the Ural Mountains along the northern and western shelves of Pangea and including carbonate oceanic platforms (future American accreted terranes), located not far off shore in the Palaeopacific Ocean, (2) The Thetys Realm, extending westward from China and Indochina to Tunisia. The history of development and extinction of rugosa coral faunas in the two realms was almost totally different in timing and faunal content. [first part of extensive summary].^1";

5236 s[5233] = "EZAKI Y. (1999).- The Permian rugosan Huayunophyllum: its phylogenetic relationship and implications for extinction patterns of Rugosa.- Biotic and Geol. Develop. Paleo-Tethys in China 63-71.- FC&P 28-2, p. 21, ID=4018^Topic(s): extinction patterns, extinctions P/T; Rugosa, Huayunophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: ^The Late Permian Rugosa were characterized by the presence of Middle Permian holdovers, and some of them survived into the latest Permian. The colonial waagenophyllid waagenophyllum (Huayunophyllum, with its simple axial structure and wide transverse tabulae, occurs as

high as the uppermost Permian. Huayunophyllum is treated as a cohesive group at the supraspecific level, and its ancestor should be Waagenophyllum (Liangshanophyllum). The morphological simplicity, stress-resistant forms, would have enabled that group to survive the end-Maokouan crisis into the latest Permian. Provisional strategies might have been adopted by each Late Permian representative but only within restricted phylogenetic constraints characteristic of the Rugosa. However, the Rugosa became extinct just prior to the end of the Permian, since extremely large-scale environmental deterioration far exceeded their adaptive abilities. A new species of Huayunophyllum from the upper part of the Middle Permian of Guangxi, China, is described herein as waagenophyllum (Huayunophyllum) taipingense.¹¹;

5237 s[5234] = "FLUGEL H.W. (1970).- Die Entwicklung der rugosen Korallen im hohen Perm.- Verh. Geol. B.-A. 1: 146-161.- FC&P 1-2, p. 13, ID=4637^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian U; Geography: ^During the Upper Permian the evolution of the Rugosa shows a gradually disappearance of the genera (tab 2) after a kind of evolution characterized by the survival of the primitive forms. Firstly the genera with the most complicate morphology die out, as for instance the cerioid form with dissepiments (Wentzelella, Maoriphyllum e.g.) or with dissepiments and presepiments (Polythecalis). The next step is the extinction of the fasciculoid genera with dissepiments (waagenophyllum, Liangshanophyllum e.g.) and the forms with a septal columella (Lophophyllum). Therefore the highest faunas of the Permian (Plerophyllum-fauna) comprise only solitary corals with a primitive skeletal morphology (Ufimia, Plerophyllum, Pleramplexus, Cryptophyllum e.g.) (tab 3). It is interesting that elements of this primitive Plerophyllum-fauna occur firstly in the Lower- and Middle Devonian. But in this time and also in the Carboniferous we find these genera only locally in ecologic niches, especially in sediments of deeper water. Firstly in the Lower and Middle Permian forms of the Plerophyllum-fauna appear worldwide besides the other rugose corals. The last named corals disappear during the Upper Permian: In the Yabeina-zone we still know some Rugosa from Greenland, China, Japan, Cambodia, New Zealand, Near East and other localities however in the following Codonofusiella-zone they appear only in Hungaria, Jugoslavia, Near East, China and NE-Siberia. In the uppermost Permian time, the Palaeofusulina-zone, we find only genera of the Plerophyllum-fauna and these forms only in the central region of the Tethys between Iran and Nepal. The last 2 species of Plerophyllum and Pleramplexus, die out in the lower part of Triassic of Djulf.¹¹;

5238 s[5235] = "ROWETT C.L. (1975).- Palaeogeography of Early Permian waagenophyllum and durhaminid corals.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 205-211.- FC&P 5-1, p. 30, ID=5363^Topic(s): biogeography; Rugosa, Waagenophyllumidae; Systematics: Cnidaria; Rugosa; Stratigraphy: Permian L; Geography: ^^1";

5239 s[5236] = "EZAKI Y. (2004).- Paleocological and phylogenetic implications of asexual reproduction in the Permian scleractiniamorph Numidiaphyllum.- Journal of Paleontology 78, 1: 84-97.- FC&P 34, p. 56, ID=1277^Topic(s): ecology, phylogeny; Scleractiniamorpha; Systematics: Cnidaria; Scleractinia; Stratigraphy: Permian; Geography: ^Numidiaphyllum is one of the Paleozoic scleractiniamorphs. The genus is characterized by a poorly integrated, uniserial fasciculate form with an epithecal wall and simple morphological traits. Parent corallites are divided into several daughter corallites using one mode of division among several theoretically possible alternatives. Bipartite increase is most common, followed by hexapartite and then tripartite increase. Daughter corallites possess relatively large diameters from the beginning, along with a robust colonial pattern. This parricidal increase caused the morphologies of both parent and daughter corallites to be greatly

altered and to show high morphological variability. Forecological and structural reasons, co-occurring daughter corallites generally are equal or subequal in size. Daughter corallites initially show a bilateral symmetry in both outline and septal arrangement during the course of hystero-ontogeny. However, this symmetry results only from structural necessity and is transitory. It is not homologous with the bilaterality of body plans characteristic of anthozoan groups. The morphological simplicity, related parricidal reproduction, and resulting poorly integrated growth form as seen in *Numidiaphyllum*, all suggest conservative features that could have resulted from phylogenetic antiquity within the scleractiniamorph body plan. Those generalized features are not themselves related to immediate phylogenetic relationships with any simply constructed rugosan group, nor would they have been due to surrounding, stressful ecologic conditions. They may have been phylogenetic-specific.¹;

- 5240 s[5237] = "CHUDINOVA I.I. (2000).- Novye dannye o nizhnepermiskikh Tabulyatakh. [new data on Lower Permian corals; in Russian, with English summary].- *Paleontologicheskii Zhurnal* 2000, 3: 36-30.- FC&P 29-1, p. 61, ID=1467Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian L; Geography: ^This paper deals with results of monographical studies on Lower Permian Tabulate corals of the order Favositida and Mirandellida coming from different regions in Russia, Tadzhikistan and Mongolia. The following new taxa are described: *Thamnoporella armata*, *T. rara*, *Mirandella formosa*, and *M. bona*. [original summary]¹;
- 5241 s[5238] = "CHUDINOVA I.I. (1986).- On the systematic position of new Permian tabulates.- *Phanerozoic reefs and corals of the USSR* [Sokolov B. S. (ed.), *Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam*, Dushanbe 1983]: 36-38 [in Russian].- FC&P 18-1, p. 36, ID=2239Topic(s): new taxa; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: Permian; Geography: ^^1";
- 5242 s[5239] = "LAUB R.S. (1987).- Observations [of worm-tube colonies from the Permian of Texas].- *FC&P* 16, 1: 48. [short note] - FC&P 16-1, p. 48, ID=6763Topic(s): ; Annelida vs Tabulata; Systematics: Annelida; Stratigraphy: Permian; Geography: ^while this specimen [stdied by the author] represents only a single "sample", nevertheless, we can say that tabulae do not confirm cnidarian affinity, and that lack of fusion of the walls despite extensive lateral contact are cause to question that a specimen is a coral. The wrapping of tubes around other tubes also appears to be a feature found among worm-tubes, but not generally expected among cnidarians. [concludes Laub his short note on dubious colonial annelids or tabulate corals]¹;
- 5243 s[5240] = "RIGBY J.K., SENOWBARI-DARYAN B. (1995).- Permian sponge biogeography and biostratigraphy.- In: Scholle P.A. (ed.): *The Permian of the Northern Continents: Facies, Faunas, and Paleogeography.*; Vol. 1: 153-166; Springer-Verlag, Berlin.- FC&P 25-1, p. 45, ID=3044Topic(s): biogeography, biostratigraphy; Porifera; Systematics: Porifera; Stratigraphy: Permian; Geography: ^^1";
- 5244 s[5241] = "WEIDLICH O. (2002).- Middle and Late Permian Reefs - Distributional patterns and reservoir potential.- *SEPM Special Publications* 72: 339-390.- FC&P 32-2, p. 72, ID=1434Topic(s): distribution, reservoir potential; reefs; Systematics: ; Stratigraphy: Permian M U; Geography: ^Important Permian reefbuilders are microbes, Archaeolithoporella, Shamovella (formerly Tubiphytes), coralline sponges, rugose corals, calcareous algae, bryozoans, and brachiopods Algal-cement reefs with various percentages of microbial precipitates are a common reef type, lacking only in the high latitudes, and have a cosmopolitan character; Shamovella, Archaeolithoporella, and sponges are common and widespread reefbuilders. * Permian reef evolution is discontinuous and

- characterized by pulses of growth as well as the final demise of late Paleozoic communities followed by the severe gap without true metazoan reefs during the Scythian. The end-Permian mass extinction is twofold, comprising a pre-Lopingian and a Changhsingian event. The latest Permian reefs are restricted to the equator and are characterized by high diversities Intercalated sediments enriched in calcareous algae indicate global warming. [fragments of extensive summary]^1";
- 5245 s[5242] = "FLUGEL E. (1984).- Permian reefs: evolution, structure and palaeoecology.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 10.1-10.20.- FC&P 13-1, p. 11, ID=6323^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Permian; Geography: ^Based on the biotic composition, seven major types of organic buildups can be differentiated in the Permian, according to the most important framebuilding, binding or baffling organisms involved in the formation of the reefs: (1) calcisponge/algal reefs; (2) Tubiphytes/algal crust reefs; (3) stromatolite reefs; (4) bryozoan/algal reefs; (5) Palaeoaplysina reefs; (6) phylloid algal reefs; (7) rugose coral reefs? * Calcisponge/algal reefs and Tubiphytes/algal crust reefs are characterized by spectacular amounts of syndimentary carbonate cements occurring together with low-lying calcisponges and various algal crusts. These reefs, therefore, may also be called "Algal/cement reefs". [introductory chapter]^1";
- 5246 s[5243] = "FEDOROWSKI J. (1989).- Extinction of Rugosa and Tabulata near the Permian Triassic boundary.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 346.- FC&P 19-1.1, p. 14, ID=2553^Topic(s): extinctions; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian / Triassic; Geography: ^^1";
- 5247 s[5244] = "FEDOROWSKI J. (1989).- Extinction of Rugosa and Tabulata near the Permian / Triassic boundary.- Acta Palaeontologica Polonica 34, 1: 47-70.- FC&P 20-1.1, p. 52, ID=2605^Topic(s): extinctions; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian / Triassic; Geography: ^The Permian stage of evolution within Rugosa and Tabulata took place in two distinct realms, isolated by the Palaeo-Pacific Ocean and the Pangea: the Palaeo-Tethys Realm and the Cordillera-Arctic-Uralian Realm. The corals discussed disappeared from the first Realm in the upper part of the Changxingian Palaeofusulina sinensis Subzone and from the second one in lower Djulfian. The fairly long time span between these events excluded acting of any rapid and common factor. The combined effect of global factors such as lowering of sea level and warming of climate and local factors such as tectonics, currents, absence of carbonate banks, etc. led to the successive disappearance of corals from individual areas of realms. The Chinese microcontinent was the last area colonized by corals.^1";
- 5248 s[5245] = "SORAUF J.E. (1978).- Original structure and composition of Permian rugose and Triassic scleractinian corals.- Palaeontology 19, 2: 321-329.- FC&P 8-1, p. 53, ID=0229^Topic(s): swstructures, mineralogy; Rugosa, Scleractinia; Systematics: Cnidaria; Rugosa Scleractinia; Stratigraphy: Permian Triassic; Geography: ^^1";
- 5249 s[5246] = "STEARNS C.W. (2010).- Systematic descriptions of the class and order uncertain: Family Disjectoporidae.- Treatise Online 03, Part E, Revised, Vol. 4, Chap. 6, 11 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 41, ID=6410^Topic(s): taxonomy; Disjectoporidae; Systematics: Porifera; Stratigraphy: Permian Triassic; Geography: ^[eleven genera in the Permian-Triassic family Disjectoporidae are described]^1";
- 5250 s[5247] = "EZAKI Y. (1995).- The development of reefs across the end-Permian extinction.- Jour. Geol. Japan 101, 11: 857-865.-

FC&P 25-1, p. 51, ID=3062^Topic(s): extinction, recovery; reefs; Systematics: ; Stratigraphy: Permian U / Triassic L; Geography: ^Late Permian stratigraphic reefs, constructed by calcisponges and algae, survived into the latest Permian in a few tropical refuges, indicating the continuation of favourable conditions for reef formation. However, all kinds of reefs collapsed prior to the large-scale biotic crisis of reef-dwelling and level-bottom communities at the Permian-Triassic boundary. This affected even the tropical refuges. Different elements of the reef-forming biota showed distinct patterns of extinction. Whatever the main causes of biotic decline, the reefs did not disappear at the very end of the Permian catastrophically, but had already been strongly affected by the extinction in the Midian (late Guadalupian). Reefs were not developed until Anisian (Middle Triassic), and at that time radiolarian bedded chert also began to be formed commonly in pelagic environments, indicating global removal of the protracted inhibiting conditions in the ocean. The main reef-builders and their role in reef communities are similar in both Late Permian and Middle Triassic reefs. However, the community structure was later modified by a change in domination among components, such as Scleractinia which acquired algal symbiosis and more efficient skeletal growth. Long-lasting unfavourable marine environment on a global scale, rather than the severity of the end-Permian extinction itself, hindered biotic recovery everywhere during Early Triassic time despite the presence of Permian holdover groups as potential organisms for reef-building. Both external environmental and biological factors acted together in delaying Triassic reef development. The end-Permian extinction resulted in the restructuring of reef-forming biota in the Middle Triassic from Permian survivors rather than the introduction of a new community.^1";

- 5251 s [5248] = "WEIDLICH O., KIESSLING W., FLUGEL E. (2003).- Permian-Triassic boundary interval as a model for forcing marine ecosystem collapse by long-term atmospheric oxygen drop.- *Geology* 31, 11: 961-964.- FC&P 33-1, p. 100, ID=7243^Topic(s): extinctions; Systematics: ; Stratigraphy: Permian / Triassic; Geography: ^Ecological traits of reefs across the Permian-Triassic boundary interval coincide with a modeled decline of atmospheric oxygen throughout the Permian Period. Selective extinction and recovery patterns within the reef system are observed both at the end of the middle Permian (end-Guadalupian) and at the Permian-Triassic boundary. The end-Guadalupian event selectively affected corals and broke down the cool-water carbonate factory. Sponges, however, were largely unaffected and bloomed in reefs toward the end of the Permian. The end-Permian total destruction of the metazoan reef system only left behind poorly diverse microbial communities. The temporal reef patterns are thus similar to spatial patterns of modern benthic communities approaching oxygen minimum zones. This observation suggests that a decline in oxygen concentrations was at least partly involved in the destruction of reefs, even where there is no direct evidence of oceanic anoxia. [original abstract]^1";
- 5252 s [5249] = "CUIF J.-P., GAUTRET P. (1991).- Etude de la repartition des principaux types de demosponges calcifiees depuis le Permien. Hypothese d'une incidence des conditions oceanologiques sur la biomineralisation carbonatee des spongiaires.- *Bulletin de la Societe geologique de France* 162, 5: 875-886.- FC&P 21-2, p. 10, ID=3295^Topic(s): biomineralization history; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Permian - Recent; Geography: ^^1";
- 5253 s [5250] = "MELNIKOVA G.K. (1994).- Triassic corals, their stratigraphic significance and geographic distribution.- *Courier Forschungsinstitut Senckenberg* 172 [Oekentorp-Kuester P. (ed.) *Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera*, Vol. 2]: 35-41.- FC&P 23-1.1, p. 13, ID=4061^Topic(s):

- phylogeny, biostratigraphy; Anthozoa Scleractinia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: ^All worldwide known Triassic coral localities are first summarized and their biostratigraphic relation to the world scale is specified. Two family complexes of Triassic corals distributed worldwide are established, reflecting the great stages in Triassic history of their development and corresponding to certain intervals in the stratigraphic section; as well as five specific associations having a regional or world distribution and corresponding to coral levels in the section. Intervals - Middle Anisian-Lower Carnian and Upper Carnian-Upper Norian (= Rhaetian). Coral levels -Middle Anisian-Lower Ladinian, Upper Ladinian-Lower Carnian, Upper Carnian-Lower Norian, Middle Norian and Upper Norian (Rhaetian).^1";
- 5254 s[5251] = "MELNIKOVA G.K. (1991).- Stages in the development of Early Mesozoic corals.- New material and geology of Tajikistan: 27-30; Donish, Dushanbe.- FC&P 23-1.1, p. 41, ID=4116^Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: ^^1";
- 5255 s[5252] = "MONTANARO-GALLITELLI E., MORANDI N., PIRANI R. (1973).- Corallofauna triassica aragonitica ad alto contenuto in stronzio: studio analitico e considerazioni.- Bolletino della Societa Paleontologica Italiana 12, 2: 130-144.- FC&P 3-2, p. 45, ID=4977^Topic(s): aragonite high-Sr; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: ^A series of samples, mostly of compound and solitary coral skeletons from Middle-Upper Triassic strata (San Cassiano strata) near Cortina d'Ampezzo (Dolomites, Italy) have been analyzed by X-ray diffractometric and spectrophotometric method. * All the Triassic samples appear entirely composed of aragonite, with a high strontium content (7000-8000ppm) and absence of magnesium. The matrix is a compact pelmicrite, entirely calcitic, with 2.04% of magnesium. * The amount of strontium is roughly correspondent to the strontium concentration in living corals. * Strontium concentration of 7000-8000ppm cannot be responsible for aragonite preservation under subaerial conditions, at normal temperature and pressure, for more than 200 million years. The pelmicritic matrix cannot be interpreted as a cause of inhibition of aragonite inversion to calcite. * Only the highly developed fabric and texture of the skeleton and probable occurrence of organic material can explain the long preservation of both original skeletal tissue and mineralogical and chemical composition. * A paleoclimatologic inference on the base of aragonite/strontium ratio correspondent to warm water corals cannot be attempted since cold and/or deep water corals analyzed in the present study appear to have the same strontium content. Only the bahamitic character of the matrix and the luxuriant fossil community of the outcrops near Cortina may justify the supposition of a tropical environment and certainly a warm and shallow water deposit.^1";
- 5256 s[5253] = "MONTANARO-GALLITELLI E., MORANDI N., PIRANI R. (1974).- Some geochemical data on a Triassic coral fauna.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 457-459.- FC&P 4-1, p. 19, ID=5039^Topic(s): geochemistry; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic; Geography: ^^1";
- 5257 s[5254] = "STANLEY G.D.jr, HELMLE K.B. (2010).- Middle Triassic coral growth bands and their implication for photosymbiosis.- Palaios 25, 12: 754-763.- FC&P 36, p. 133, ID=6594^Topic(s): photosymbiosis; corals, photosymbiosis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic M; Geography: ^In living zooxanthellate corals, photosymbiosis explains increased metabolism and accelerated skeletal growth, accounting for the success of these corals in shallow-water tropical reefs. Mesozoic corals of the order Scleractinia appeared in the geologic record during the Middle

Triassic, but it was not until the Late Triassic that these corals became prominent reef builders - a change hypothesized to coincide with the advent of photosymbiosis. There is considerable discussion, however, concerning algal symbiosis and the timing of their co-evolution with corals. Thus, the beginning of photosymbiosis in the earliest corals of the Middle Triassic has not been established, nor whether their paleoecology was similar to that of modern corals. Many massive colonial reef-building corals lay down thick, discrete bands in their skeletons that record annual growth. We discovered and illustrate here growth bands in Middle Triassic corals from central Nevada, in particular *Cerriostella variabilis*, whose skeletal structure and bands are well-preserved in Middle Triassic biostromes of central Nevada. To test the photosymbiosis hypothesis we studied colony growth forms in these fossil corals and performed a quantitative analysis of the bands, both in *C. variabilis* and in a morphologically similar living zooxanthellate reef coral, *Montastraea faveolata*. Results of these analyses revealed growth bands and colony shapes almost identical in both living and fossil corals. These findings suggest that photosymbiosis was present in Middle Triassic corals at a very early stage in their Mesozoic history. Scleractinians were also likely zooxanthellate from the onset of their Middle Triassic occurrence but for unexplained reasons were not as efficient as modern corals in building reefs. [original abstract]^1";

5258 s[5255] = "STANLEY G.D.jr, SWART P. (1995).- Evolution of the coral-zooxanthellae symbiosis during the Triassic: a geochemical approach.- *Paleobiology* 21, 2: 179-199.- FC&P 24-2, p. 90, ID=4590Topic(s): coral-zooxanthellae symbiosis, geochemical approach; coral-zooxanthellae symbiosis; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Triassic; Geography: ^Scleractinian corals first appeared during Triassic time in tropical shallow water environments. Controversy surrounds the paleoecology of scleractinian corals of the Late Triassic. Were they like their living counterparts, capable of supporting reefs, or had they not yet coevolved the important association with zooxanthellae that facilitated reef growth and construction? Indirect evidence suggests that some Upper Triassic corals from the Tethys played important constructional roles as reef builders within tropical carbonate complexes of the Tethys. To evaluate this idea, we have employed a geochemical approach based on isotope fractionation to ascertain if Late Triassic corals once possessed zooxanthellae. We have determined evidence for the ancient presence of algal symbiosis in 13 species of Triassic scleractinians from reef complexes in Turkey and northern Italy. In contrast, two higher latitude Jurassic species used as a control group for isotope analysis, lacked isotopic indications of symbiosis. These findings, together with stratigraphic and paleoecologic criteria, support the contention that Late Triassic scleractinian corals inhabiting shallow-water carbonate complexes of the Tethys were predominantly zooxanthellate, like their living counterparts from present day reefs. We view the zooxanthellate condition in calcifying reef organisms as a necessary prerequisite for constructional reef development. Our results emphasize the power of stable isotope studies in helping to answer paleobiological questions.^1";

5259 s[5256] = "CUIF J.-P., GAUTRET P., LAGHI G., MASTANDREA A., PRADIER B., RUSSO F. (1990).- Recherche sur la fluorescence UV du squelette aspicaire chez les Demosponges calcitiques triassiques.- *Geobios* 23, 1: 21-31. [in French, with English summary].- FC&P 19-2.1, p. 39, ID=2761Topic(s): UV fluorescence; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Triassic; Geography: ^The calcitic skeleton of Triassic Demospongiae produces intense fluorescent radiations when they are exposed to UV (365 nm) under the microscope. This fluorescent light has been analysed by spectrophotometry, and the skeletal response is also

correlated with data obtained by X-rays mapping. These results suggest that UV epifluorescence can be used for in situ characterization of the skeletal carbonate materials in fossils, and also, after further analysis of the emission parameters, for research dealing with their diagenetic evolution. ^1";

5260 s[5257] = "STANLEY G.D.jr (2004).- Early Mesozoic reefs and the rise of scleractinians.- Geological Society of America, Abstracts with Programs 36, 3: 51. [abstract] - FC&P 34, p. 92, ID=1342^Topic(s): Scleractinia origins; reefs; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^^1";

5261 s[5258] = "MELNIKOVA G.K., RONIEWICZ E. (1990).- On a new stylophylliid genus, Pamirophyllum (Scleractinia, Upper Triassic).- Acta Palaeontologica Polonica 35, 1-2: 85-90.http://a pp.pan.pl/article/item/app35-085.html.- FC&P 21-1.1, p. 20, ID=3206^Topic(s): taxonomy; Scleractinia, Pamirophyllum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: ^Genus Pamirophyllum nov. is known in the upper Norian of the Pamirs and Central Iran, while in the Rhaetian of the Tatra Mountains. Perfectly cerioid colonies with simple intercorallite walls of a septal origin additionally completed by auxilliary septal spines are characteristic of these corals. A new species, P. tatricum Roniewicz, has been described from the Tatra Mts. [original abstract]^1";

5262 s[5259] = "RITTEL J.F., STANLEY G.D.jr (1993).- Enhanced skeletal details and diagenetic processes of Triassic corals revealed by cathodoluminescence.- Courier Forschungsinstitut Senckenberg 164: 339-346. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 21, ID=3469^Topic(s): skeletal research, cathodoluminescence; structures diagenesis; Systematics: Cnidaria; scleractinia; Stratigraphy: Triassic; Geography: ^Triassic scleractinian corals from the Zlambach Marls of Austria and the Cassian Formation of northern Italy, display various diagenetic transitions, from unaltered original skeletal aragonite to neomorphic calcite. Many neomorphosed specimens contain calcitized aragonite needle "ghost" structures, whereas others are either totally recrystallized or are in transition to coarse neomorphic spar. In most samples, the relic microstructure is so obliterated as to preclude taxonomic study. We applied cathodoluminescence (CL) to thin sections of these diagenetically altered corals. CL not only aided in understanding the process of diagenetic replacement but also allowed original details of skeletal structures to be distinguished even in some of the most recrystallized specimens. The application was also successful with severely recrystallized Triassic corals from Nevada. Diagenetic alteration appears to have taken place by selective, preferential solubility of aragonite (and later neomorphic calcite skeletal elements) over calcite of the void cements. In carbonate material, Mn is the trace element responsible for producing the characteristic red-orange luminosity on CL where Fe may be a "quencher" affecting intensity. Mn and Fe concentration gradients remain distinct in the void and pore-filling cements of these corals and significant amounts are not incorporated into the skeletal elements during neomorphic alteration. Our research has direct application in taxonomy and systematic study of fossil corals. It shows the utility of CL techniques in distinguishing lost microstructure in a variety of scleractinians. CL is an important but neglected tool in systematic study of diagenetically altered fossil corals.^1";

5263 s[5260] = "CUIF J.-P., GAUTRET P. (1993).- Evolution des Scleractiniaires: Diversite des architectures poreuses au Trias superieur.- Geobios 26, 4: 405-412.- FC&P 22-2, p. 88, ID=3525^Topic(s): phylogeny, diversity; Scleractinia;

- Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: ^Among Triassic Scleractinia, three distinct architectural types of porous skeletons can be recognized: discontinuity between adjacent trabeculae in Araiophyllum; contraction of the septal plane in the Spongiomorphid family; occurrence of lacunae in the vertical growth of septa in representatives of the genus Seriastraea. The comparison of structural and microstructural features between these three architectural organizations provides evidences for their very unequal values from taxonomic point of view. However, the presence of these various trends to realize porous architectures among Triassic corals, demonstrates the importance of the evolutionary process at this period, before the strong taxonomic collapse of the Trias / Lias boundary.^1";
- 5264 s[5261] = "BEUVAIS L. (1973).- Deux nouveaux genres de Madréporaires triasiques.- Bulletin de la Societe geologique de France, 7e sér., 14, 1-5: 310-314; Rectification: C. R. somm. S.G.F. 1974, 3: 71.- FC&P 3-2, p. 43, ID=4969^Topic(s): new taxa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: ^Cette note renferme la description de deux nouveaux genres de polypiers du Trias supérieur; l'un de ces genres appartient à la famille des Meandriidae Alloiteau, l'autre à celle des Conophylliidae Alloiteau.^1";
- 5265 s[5262] = "CUIF J.-P. (1974).- Indices d'affinités paléozoïques chez les Madréporaires du Trias supérieur.- C. R. Acad. Sci. Paris 279, 23, sér. D: 1753-1756.- FC&P 4-1, p. 42, ID=5161^Topic(s): rugosan affinities; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic U; Geography: ^^1";
- 5266 s[5263] = "CUIF J.-P. (1975).- Recherches sur les Madréporaires du Trias III. Etude des structures pennulaires chez les Madréporaires triasiques.- Bulletin du Museum national d'histoire naturelle Paris, 3e sér., 310, Sci. de la Terre 44: 45-127.- FC&P 4-2, p. 52, ID=5236^Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^L'analyse microstructurale de Madréporaires triasiques à ornementation latérale pennulaire permet d'établir que ce type d'ornementation peut se présenter chez des formes très variées du point de vue de l'architecture septale. Les structures pennulaires elles-mêmes s'avèrent d'ailleurs très diverses. Du point de vue taxinomique, la valeur de l'analogie résultant de la présence de différenciation pennulaire demeure donc subordonnée à une analyse microstructurale complète.^1";
- 5267 s[5264] = "CUIF J.-P. (1973).- Madreporaire triassique a cloisons entierelement perforées.- FC&P 2, 2: 7-9 + 2 figs.- FC&P 2-2, p. 7, ID=6273^Topic(s): perforated septa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^^1";
- 5268 s[5265] = "RONIEWICZ E., STOLARSKI J. (2001).- Triassic roots of the Amphiastraeid Scleractinian corals.- Journal of Paleontology 75, 1: 34-45.- FC&P 30-2, p. 29, ID=1703^Topic(s): phylogeny; Scleractinia, Amphiastraeidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^The early Carnian (Upper Triassic) phaceloid coral originally described by volz (1896) as Hexastraea fritschi, type species of Quenstedtiphyllia Melnikova, 1975, reproduced asexually by "Taschenknospung" (Pocket-budding), a process documented herein for the first time. This type of budding is recognized only in the Amphiastraeidae, a family thus far recorded only from Jurassic-Cretaceous strata. Similar to amphiastraeids, Quenstedtiphyllia fritschi (Volz, 1896) has separate calcification centers and a mid-septal zone built of serially arranged trabeculae. The most important discriminating characters of the new amphiastraeid subfamily Quenstedtiphyllinae are one-zonalendotheca and radial

symmetry of the corallite in the adult stage (in contrast to two-zonal and bilateral symmetry in the adult stage in Amphiastraeinae). *Quenstedtiphyllia fritschi* shares several primitive skeletal characters (plesiomorphies) with representatives of Triassic Zardinophyllidae and, possibly, Paleozoic plerophylline rugosans: e.g. thick epithecal wall and strongly bilateral early blastogenetic stages with the earliest corallite having on axial initial septum. To interpret the phylogenetic status of amphiastraeid corals, we performed two analyses using plerophylline rugosans and the solitary scleractinian *Protoheterastraea*, respectively, as the outgroups. The resulting phylogenetic hypotheses support grouping the Zardinophyllidae with the Amphiastraeidae in the clade Pachythecaliina (synapomorphy: presence of pachytheca). *Taschenknopsung* is considered an autapomorphy for the Amphiastraeidae. This study is the first attempt to analyse the relationships of the Triassic corals cladistically.¹¹;

- 5269 s[5266] = "MONTANARO-GALLITELLI E. (1975).- Hexanthiniaria, a new ordo of Zoantharia (Anthozoa, Coelenterata).- Bolletino della Societa Paleontologica Italiana 14, 1: 55-59.- FC&P 4-2, p. 53, ID=5244Topic(s): systematics; Scleractinia, Hexanthiniaria; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^Following previous communications (1970, 1971, 1975) and publications (1974) the writer, as discussed in the cited papers, states that "Protoheterastraea leonhardi (Volz) (pars)" is not a Protoheterastraea but pertains to a new Triassic systematic unit, *Zardinophyllum zardinii* n.gen., n.sp. of the fam. Zardinophyllidae n. fam. The family cannot be included among the Scleractinia, but must be placed in a new order - Hexanthiniaria - intermediate between Rugosa and Scleractinia. It cannot even be placed among Heterocorallia.¹¹;
- 5270 s[5267] = "CUIF J.-P. (1975).- Caractères morphologiques microstructuraux et systématiques des Pachythecalidae.- Geobios 3, 8: 157-180.- FC&P 4-2, p. 51, ID=5235Topic(s): microstructures; Scleractinia, Pachythecalidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^Trois madréporaires triasiques nouveaux sont décrits: *Pachysolenia cylindrica* n.gen., n.sp. *Pachydendron microthallos* n.gen., n.sp. et *Pachythecalis major* n.gen., n.sp., très différenciés du point de vue morphologique, ils montrent des caractéristiques microstructurales identiques; thèque formée de faisceaux fibreux centrés à direction radiaire; cloisons à sclérenchyme fibreux indifférencié et plan médio-septal continu. Cette communauté microstructurale conduit à la création d'une famille nouvelle qui regroupe également des genres précédemment définis: *Volzeia* Cuif 1966 et *Protoheterastraea wells* 1937.¹¹;
- 5271 s[5268] = "CUIF J.-P. (1972).- Recherches sur les Madréporaires du Trias I. Famille des Stylophyllidae.- Bulletin du Museum national d'histoire naturelle, 3e Sér., 97, Sc. de la Terre 17: 211-291.- FC&P 2-2, p. 22, ID=4821Topic(s): ; Scleractinia, Stylophyllidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic; Geography: ^La confrontation des diagnoses des genres utilisés pour classer les Madréporaires du Trias avec les caractères microstructuraux des espèces qu'ils réunissent révèle l'hétérogénéité de groupements proposés sur des bases principalement morphologiques. Les différences structurales irréductibles ainsi mises en évidence, entre les taxons composant la famille des Stylophyllidae telle qu'elle est actuellement admise, sont confirmées, sur le plan histologique, par la variété des caractéristiques du tissu squelettique de ces polypiers.¹¹;
- 5272 s[5269] = "MELNIKOVA G.K. (1971).- New data on the morphology, microstructure and systematic position of Upper Triassic *Thamnasterioida*.- Paleontologicheskii Zhurnal 1971, 2: 21-35.- FC&P 2-1, p. 17, ID=4725Topic(s): taxonomy, systematics; Scleractinia, *Thamnasterioida*; Systematics:

Cnidaria; Scleractinia; Stratigraphy: Triassic U;
 Geography: ^An exposure of skeletal structural details and
 microstructure in the genus *Astraeomorpha* is given for the first time.
 A revision of morphological features and the microstructure of the
 skeleton of the Upper Triassic genus *Thamnasteria* has permitted the
 distinction of two independent genera: *Thamnasteriomorpha* gen. nov.
 (type-species *Thamnastraea frechi*) and *Pamiroseris* gen. nov.
 (type-species *Thamnastraea meriani*). The genus *Thamnasteriomorpha* is
 close to *Astraeomorpha* and both belong to the family *Astraeomorphidae*;
 a diagnosis of this family and the distribution of its genera is given.
 The generic type species of *Astraeomorpha* is described in detail as
 well as the new species *A. multisepta* and *Th. dranovi*. Skeletal
 features and septal microstructure place *Pamiroseris* in the family of
Thamnasteriidae. The type-species of this genus is described in
 detail.^1";

5273 s[5270] = "CUIF J.-P. (1979).- Caracteres structuraux de trois
 Sclerosponges triasiques.- Coll. Int. C. N. R. S. Biol. Spong.:
 475-481.- FC&P 9-1, p. 17, ID=5776^Topic(s): ;
 Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae;
 Stratigraphy: Triassic; Geography: ^^1";

5274 s[5271] = "CUIF J.-P. (1973).- Histologie de quelques Sphinctozoaires
 (Poriferes) triasiques.- Geobios 6, 2: 115-125.- FC&P 2-2,
 p. 25, ID=4833^Topic(s): microstructures; Porifera, Sphinctozoa;
 Systematics: Porifera; Sphinctozoa; Stratigraphy:
 Triassic; Geography: ^The microscopic study and mineralogic
 determination of two triassic Sphinctozoa show that the spherulitic
 sclerodermites are exclusively built by fibro-cristalline aragonite. It
 is suggested that these structures have a significant systematic
 character. It is also shown, in the second part of the paper, that
 other organisms present precise analogies with typical Sphinctozoa
 regarding histology and mineralogy.^1";

5275 s[5272] = "RUSSO F., MASTANDREA A., BARACCA A. (1994).- Microstructure,
 biomineralization and diagenesis of the halichondrid stromatoporoid
Stromatowendtia triassica n.gen. n.sp.- Memorie di Scienze Geologiche
 46: 245-253.- FC&P 24-2, p. 97, ID=4603^Topic(s):
 microstructures, systematics, new taxa; stroms, *Stromatowendtia*;
 Systematics: Porifera; Stromatoporoidea; Stratigraphy:
 Triassic; Geography: ^The finding of ferroan calcite
 pseudomorphs of spicules within the aragonitic basal stromatoporoid
 skeleton of *Stromatowendtia triassica* n.gen. n.sp. indicate the
 poriferan affinity of this Triassic form. A new Family, the
Stromatowendtidae, is erected for the unique combination of the
 spicular skeleton and irregular aragonitic microstructure of the
 secondary calcareous skeleton. On the basis of spicule type and
 organization, together with the apparent absence of microscleres, the
 new family is tentatively assigned to the Order Halichondrida. The
 secondary calcareous skeleton is preserved in its original mineralogy
 with a relatively high Sr content (7,000 - 8,000 ppm). The
 microstructure is of irregular type like that of the living
 sphinctozoa *Vaceletia crypta* (Vacelet). The biomineralization process
 of the vertical elements, the pillars, occurred in sealed off spaces
 delineated by phragmas, now observable as discontinuities or remains of
 insoluble organic matrix. The incipient diagenesis of aragonitic
 skeleton is minimal and of aggrading type. We recognized two cements
 filling intraskeletal cavities: a primary marine isopachous cement
 consisting of aragonite crystallites that grow on the skeletal tissue,
 and a late cement of blocky anhedral ferroan calcite engulfing the
 primary and/or the calcareous skeleton.^1";

5276 s[5273] = "FLUGEL E. (1982).- Evolution of Triassic reefs: current
 concepts and problems.- Facies 06: 297-328.- FC&P 11-2, p.
 39, ID=0620^Topic(s): reefs; reefs; Systematics: ;
 Stratigraphy: Triassic; Geography: ^The paper is
 concerned with some key questions resulting from current studies of

Triassic reefs and reef biota. A survey of the distribution of the reefs in time and space indicates the existence of Anisian buildups (starting in the Pelsonian), and significantly restricted to the southern part of Europe. Ladinian and Carnian reefs exhibit a larger distribution pattern, including Europe, Asia and western North America as well as Peru. Even broader is the distribution of Norian and Rhaetian reefs, which are known from many parts of the Tethys but have been studied in detail only in Europe, Central Asia and in western North America. The exact age of many Triassic reefs is controversial because of the strong facies control of reef biota. The composition of the frame building fauna (especially calcisponges and corals) can only differentiate an Anisian to Carnian time interval from a Late Upper Triassic interval. The current state of research is characterized geographically by strongly biased information (more than 75% of the Triassic reefs studied in more detail are situated in the Alpine-Mediterranean region and in the Cordilleran of western North America). Information about the composition of the frame building and binding communities as well as about facies types is generally good, but there is a strong need for more study of the reef-dwelling organisms and especially of the diagenetic history of reef carbonates. [first part of extensive summary]^1";

- 5277 s[5274] = "STANLEY G.D.jr (2005).- Late Triassic events among reef ecosystems during the latest Triassic interval.- 5th Field Workshop IGCP Project 458, Triassic-Jurassic Boundary Events; Tata, Hungary: 22-23. [abstract] - FC&P 34, p. 104, ID=1369^Topic(s): reef complexes, events; reef complexes; Systematics: ; Stratigraphy: Triassic U; Geography: ^^1";
- 5278 s[5275] = "FLUGEL E., SENOWBARI-DARYAN B. (1996).- Evolution of Triassic Reef Biota: State of the Art.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Newwiler F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 40, ID=3603^Topic(s): reef biota; reefs; Systematics: ; Stratigraphy: Triassic; Geography: ^The study of the taxonomic composition of Triassic reef-building and reef-dwelling biota reveals the existence of four major time-dependent biotic units occurring in the Upper Anisian, Ladinian-Cordevolian, Tuvanian-Julian (and Lower Norian?) and Norian-Rhaetian time intervals. Lower Triassic reef organisms as well as undisputed Permian holdovers are missing. The change in the biotic composition of Anisian to Ladinian-Cordevolian reefs represents a gradual transition characterized by the replacement of taxa whereas the change near the Carnian / Norian boundary corresponds to an extinction event of reef organisms. Anisian reefs are characterized by Olangocoelia and sponges; corals and microbial crusts are of no major importance. Ladinian and early Carnian (Cordevolian) reefs are characterized by the abundance of sponges, significant microbial contributions, occurrence of corals and frequency of carbonate cement. The biotic composition of Middle and Late Carnian reefs is similar to that of Ladinian-Cordevolian but diversity is higher. Norian and Rhaetian reef biota differ distinctly from Middle Triassic and Carnian reef organisms in taxonomic composition, diversity and importance of microproblematica different from Middle Triassic and Carnian biota. Some Norian taxa show morphological similarities with Upper Permian taxa indicating homologies or a survival of Late Paleozoic taxa until late Triassic time.^1";
- 5279 s[5276] = "CUIF J.-P. (1979).- Caracterization mineralogique directe par microsonde laser a effet Raman des alterances calcite-aragonite mises en evidence chimiquement par microanalyse ionique dans une Algue Solenopore triasique.- C. R. Acad. Sci. Paris 288, D: 19-22.- FC&P 8-1, p. 14, ID=5689^Topic(s): aragonite - calcite transition; mineralogy; Systematics: ; Stratigraphy: Triassic; Geography: ^Recherche des possibilites et limites de la sonde Raman pour l'analyse des biomineralisations

- carbonatées. Possibilité de reconnaissance directe des réseaux cristallins des deux carbonates majeurs, mais limitations dues à la faible résolution spatiale de la méthode.¹";
- 5280 s[5277] = "BARBILLAT P., CUIF J.P., DHAMELIN COURT P., LAUREYNS J., LEFEVRE R. (1979).- Caractérisation minéralogique directe par microsonde laser à effet Raman des alternances calcite-aragonite mises en évidence chimiquement par microanalyse ionique dans une algue Solenopore triasique.- C. R. Acad. Sci. Paris 288, D: 19-22.- FC&P 9-1, p. 17, ID=5775Topic(s): aragonite - calcite transition; carbonates aragonite>calcite; Systematics: ; Stratigraphy: Triassic; Geography: ^^1";
- 5281 s[5278] = "GEISTER J. (1981).- Report on the International Symposium on Triassic Reefs (Erlangen 1981).- FC&P 10, 2: 6-9.- FC&P 10-2, p. 6, ID=6305Topic(s): symposium; reefs; Systematics: ; Stratigraphy: Triassic; Geography: ^[short account of the symposium, of presented contributions and of the post-symposium trip to the Alpine reefs]^1";
- 5282 s[5279] = "FLUGEL E., WURM D. (1984).- Triassic reefs: Facts and problems.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 11.1-11.2.- FC&P 13-1, p. 11, ID=6324Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Triassic; Geography: ^The current state of Triassic reef research is characterized geographically by strongly biased information: more than 75% of the Triassic reefs studied in more detail are situated in the Alpine-Mediterranean region (Alps, Sicily, Slovenia, Greece, Anatolia) and in the Cordillera of western North America. Information regarding the composition of the framebuilding and binding communities as well as about facies types is generally good. However, there is a strong need for more investigations on the reef-dwelling organisms. [first part of an introduction]^1";
- 5283 s[5280] = "MELNIKOVA G.K. (1994).- The crisis and mass extinction of corals and other invertebrates at the Triassic / Jurassic boundary.- Izvestiya AN Respubliki Tajikistan, otd. nauk o Zemle 2, 5: 4-7. [in Russian].- FC&P 24-1, p. 48, ID=4456Topic(s): extinctions; extinctions; Systematics: Cnidaria; Anthozoa; Stratigraphy: Triassic / Jurassic; Geography: ^^1";
- 5284 s[5281] = "LATHUILLIERE B., MARCHAL D. (2005).- Crises de diversité des coraux du Trias au Dogger.- Colloque l'Hettangien a Hettange, de la science au patrimoine, Hettange, 1-3 avril 2005, univ. H. Poincaré, Nancy 1, pp27-32.- FC&P 34, p. 62, ID=1285Topic(s): extinctions T/J; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic - Jurassic M; Geography: ^^1";
- 5285 s[5282] = "LATHUILLIERE B., MARCHAL D. (2005).- Diversity crises of corals from Triassic to Dogger.- 5th Field workshop IGCP Project 458, Triassic-Jurassic Boundary Events, Tata, Hungary: 18-19. [abstract] - FC&P 34, p. 62, ID=1286Topic(s): extinctions T/J; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic - Jurassic M; Geography: ^http://; paleo.cortland.edu/IGCP458/final/Abstracts_IGCP458_2005.pdf^1";
- 5286 s[5283] = "RONIEWICZ E., MORYCOWA E. (1989).- Triassic Scleractinia and the Triassic / Liassic boundary.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 347-354.- FC&P 19-1.1, p. 14, ID=2554Topic(s): extinctions T/J; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic / Jurassic; Geography: ^^1";
- 5287 s[5284] = "LATHUILLIERE B., MARCHAL D. (2009).- Extinction, survival and recovery of corals from the Triassic to Middle Jurassic time.- Terra Nova 21, 1: 57-66.- FC&P 36, p. 92, ID=6506Topic(s): distribution patterns; corals, extinctions; Systematics:

- Cnidaria; Scleractinia; Stratigraphy: Triassic - Jurassic M; Geography: ^Recognizing extinction events and determining their cause at the Triassic/Jurassic (T/J) transition and near the Pliensbachian-Toarcian (Lower Jurassic) boundary is a field of growing interest. We provide arguments for these events through a literature based new evaluation of coral diversity from Triassic to Dogger and a new palaeobiogeographical map. The T/J extinction of corals is clearly related to the breakdown of reef environments. Origination curves show that Hettangian (the lowest Jurassic stage) was not only a survival phase but already rather a recovery phase. Post-extinction evolution of reefs and their survival only in the northernmost margin of the Tethys support the hothouse hypothesis for the T/J extinction event. During Pliensbachian, many new taxa appear, but mostly solitary corals, not really framebuilders. Many of these taxa do not occur anymore during the following stages. The new increase in diversity is related to the development of Bajocian (Middle Jurassic) reefs. [original abstract]^1";
- 5288 s[5285] = "LOSER H., SUGIYAMA T., MORI K. (2002).- Catalogue of the Mesozoic corals at the Tohoku University Museum.- Bulletin of the Tohoku University Museum 2: 47-76.- FC&P 33-2, p. 34, ID=1168^Topic(s): collection of fossils, catalogue; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^The Mesozoic corals held at the Tohoku University Museum were recorded in a computer database. The collection encompasses Mesozoic corals described by Beauvais & Mori (1988), Eguchi (1934, 1936, 1942ab, 1944, 1948, 1951), Mori (1963), Murata (1962), Yabe & Eguchi (1933, 1936) and Yabe & Sugiyama (1933, 1939). All specimens and thin sections were compared to the illustrations in the literature. The numbers of the specimens given in the literature were compared to the specimens in the collection as well. As a result, type specimens and figured specimens were isolated. The collection is not complete. A certain number of specimens were not to be found in the collections.^1";
- 5289 s[5286] = "LOSER H. (1997).- The Mesozoic Corals. Bibliography 1758-1993. Supplement 2.- Coral Research Bulletin 05: 375-380.- FC&P 27-1, p. 93, ID=3839^Topic(s): bibliography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^The supplement to the bibliography (Coral Research Bulletin 1, 1994) contains almost 100 further references up to 1995.^1";
- 5290 s[5287] = "LOSER H. (1997).- The Mesozoic Corals. Bibliography 1758-1993. Supplement 3.- Coral Research Bulletin 05: 381-389.- FC&P 27-1, p. 93, ID=3840^Topic(s): bibliography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^The supplement to the bibliography (Coral Research Bulletin 1, 1994) contains almost 200 further references up to 1996.^1";
- 5291 s[5288] = "LOSER H. (1998).- The Mesozoic Corals. Bibliography 1758-1993. Supplement 4 (-1997).- Coral Research Bulletin 06: 141-145.- FC&P 28-1, p. 43, ID=3976^Topic(s): bibliography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^This (fourth) supplement to the bibliography (published in the Coral Research Bulletin 1, 1994) contains almost 100 additional references to literary material on the taxonomy, palaeoecology and palaeogeography of Mesozoic corals (Triassic - Cretaceous; Scleractinia, Octocorallia). The bibliography is available in the form of a data bank with a menu-driven search program for IBM-compatible computers through an optional service, including updating.^1";
- 5292 s[5289] = "GILL G.A., RONIEWICZ E. (1982).- A project for an illustrated catalogue of Mesozoic coral genera.- FC&P 11, 2: 8.- FC&P 11-2, p. 8, ID=6141^Topic(s): collections of fossils; catalogue of fossils; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^The need for an

up-to-date illustrated catalogue of coral genera is strongly felt among all those who are concerned with coral identification and classification. After much hesitation, we have decided to undertake this work with the hope of creating a useful standard reference in the relatively near future. To do so we intend to accumulate precise descriptions of each genus which will be condensed into a maximum of one or two pages. Diagnoses and illustrations will be followed by details of geographic distribution, age and related bibliographic references. The volume will present the generic descriptions in alphabetical order. When possible, a proposed systematic position for each genus will be indicated separately in an adjoining paragraph. * We count on the collaboration of all those who feel able and willing to propose a good overall summary of one or more genera, and as of now would appreciate suggestions for the treatment of individual genera. Each contribution will be signed by its author(s). Final editing is reserved for the organizers. English has been chosen as the language of publication. * Individual Technical Draft for Generic Treatment: (1) name (2) type species - locality, age and collection number(s) of the specimen(s) concerned in the description (3) diagnosis - detailed, including characteristic dimensions and septal layout (4) illustration(s) - preferably 3 oriented sections (transverse, radial & tangential) in thin sections, peels or polished surfaces under adequate magnification; general form; highly magnified diagnostic details (5) distribution - I geographic (eventually map) and stratigraphic; main references (6) species - major forms and overall commentary (7) bibliography - main sources (8) systematics - supposed position with argumentation [original note, with minor layout changes]^1";

- 5293 s[5290] = "LOSER H. (ed,) (1994).- The Mesozoic Corals. Bibliography 1758-1993.- Coral Research Bulletin 01: 100 pp., diskette.- FC&P 23-1, p. 95, ID=6849^Topic(s): bibliography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^^1";
- 5294 s[5291] = "LOSER H. (2002).- The Mesozoic corals of the Tohoku University Museum (Sendai, Japan) - an overview.- Coral Research Bulletin 7: 109-114. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 33, ID=7102^Topic(s): collections of fossils; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic; Geography: ^Specimens and thin sections of Mesozoic corals presently conserved at the Tohoku University Museum (Sendai, Japan) are briefly reported. Types and illustrated specimens have been verified. For many species, another genus than the original listed is here tentatively proposed. [original summary]^1";
- 5295 s[5292] = "CUIF J.-P., FEUILLEE P., FISCHER J.C., PASCAL A. (1973).- Présence d'astrorhizes chez les Chaetetida mésozoïques.- C. R. Acad. Sci. Paris 277, 22, sér. D: 2473-2476.- FC&P 3-1, p. 32, ID=4903^Topic(s): astrorhizae; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Mesozoic; Geography: ^Pour la première fois se trouvent signalées et décrites des structures de type astrorhize chez des Chaetetida, ce qui tend à renforcer les liens phylogéniques déjà pressentis entre ces organismes et les Stromatoporoidea. * L'étude comparative, en mettant en évidence une pluralité d'aspects morphologiques, pose la question de la valeur systématique du processus astrorhizal. * Description de Blastochaetetes karashensis Cuif et Fischer, Ptychochaetetes peroni Fischer, Acanthochaetetes ramulosus (Mich.) et Acanthochaetetes seunesi (All. M.S.) Fischer. * Comparaisons avec les Sclérosponges actuels.^1";
- 5296 s[5293] = "SOLOVYEVA V.V. (1980).- Mezozoyskiye khetetidy. [Mesozoic chaetetids; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: . pp- FC&P 9-1, p. 41, ID=5827^Topic(s): ; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Mesozoic; Geography: ^^1";

- 5297 s[5294] = "SOLOVYEVA V.V. (1980).- Nekotorye novye mezozoyskie khetetidy i ikh mikrostruktura. [some new Mesozoic chaetetids and their microstructure; in Russian].- Paleontologicheskii Zhurnal 1980, 4: 29-38.- FC&P 10-1, p. 56, ID=6001^Topic(s): microstructures; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Mesozoic; Geography: ^Presented are the new results of studies of microstructures and vegetative increase of Mesozoic chaetetids. Microstructural details allow for revision of species and genera. Described is the new genus Planochaetetes with two new species - P. fischeri (= type species of the genus) and P tauricus from the Lower Cretaceous of Crimea, and two species of Bauneia - B. cyclica and B. goreau from the Upper Jurassic of Caucasus - with fibrous wall structure [translated abstract]^1";
- 5298 s[5295] = "BEAUVAIS L. (1981).- Donnes actuelles sur la paleobiogeographie des Madreporaires mezozoiques.- C.R. Soc. Biogeographie 51-64.- FC&P 11-1, p. 27, ID=1745^Topic(s): biogeography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: ^^1";
- 5299 s[5296] = "BEAUVAIS L. (1982).- Quelles coupures les Madréporaires permettent-ils d'établir au sein du Mésozoïque ?.- RAST 9: 37.- FC&P 11-1, p. 27, ID=1748^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: ^^1";
- 5300 s[5297] = "BEAUVAIS L. (1994).- Sur le genre Heliocoenia Etallon, Scleractiniaire mesozoique.- Eclogae Geologicae Helvetiae 87, 3: 869-893. [in French, with English summary].- FC&P 24-1, p. 67, ID=4488^Topic(s): ; Scleractinia, Heliocoenia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: ^The holotype of the type species of the genus Heliocoenia has not been found. Specimens from the type-locality (Valfin, Jura) have been investigated. wall and peritheca structures, septal microstructure and development of the septal apparatus are specified. The systematic position is more accurately defined: Heliocoenia Etallon is placed in the family Agatheliidae, between the suborders Stylinida and Heterocoeniida. Variability and correlation of the calicinal diameter and the number of septa of the 35 species described by the authors show that only 10 species and 2 subspecies may be valid. The possibility of a monospecific genus is taken under consideration.^1";
- 5301 s[5298] = "ZLATARSKI V.N. (1988).- List of Original Publications Including Types of Mesozoic Scleractinia at the U. S. National Museum of Natural History, Smithsonian Institution.- FC&P 17, 2: 40-42.- FC&P 17-2, p. 40, ID=6772^Topic(s): bibliography, collections, types; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: ^This is a continuation of Stephen D. Cairns's "Types and Figured Specimens of Stylasterina and Scleractinia at the NMNH, Smithsonian. Part 1. Recent and Cenozoic" (FC&P 7, 2: 9-14). * All or some of the type-specimens of Mesozoic Scleractinia included in the following list of original publications are present in the Department of Invertebrate Zoology of the U. S. National Museum of Natural History, Smithsonian Institution, except the type-specimens mentioned by J. W. Wells (1944a) and E. L. Hamilton (1956), which are lost. [introductory part of a note]^1";
- 5302 s[5299] = "LOSER H. (1991).- Bibliography of Mesozoic corals (Scleractinia) 1940-1990.- FC&P 20, 1.2: 1-35.- FC&P 20-1.2, p. 1, ID=6801^Topic(s): bibliography; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic; Geography: ^The bibliography has been compiled from data banks made available by Dragica Turnsek (Ljubljana, Yugoslavia) - Triassic and Additions, Bernard Lathuiliere (Nancy, France) - Jurassic, and Hannes Loser (Dresden, Germany) - Cretaceous

and General Topics. * The bibliography quotes papers published between 1940 and 1990 on subjects related to the taxonomy, systematics, morphology, palaeoecology and palaeogeography of post-Palaeozoic Scleractinia as well as the geology of coral-bearing deposits. * The list (as complete as possible) is a partial printout of a computer data bank with more than 1600 entries based on the data banks of the above-named colleagues. Within the project presented by Loser & Lathuiliere (Data Banks In Palaeontology and the Need for Standardization) the data bank is available for IBM-PC XT/AT compatible computers in all usual data formats. The object in publishing this bibliography is not only to document coral research in the past fifty years but also to demonstrate the efficacy of transnational cooperation in building up data banks. [original introduction]^1";

- 5303 s[5300] = "WOOD R.A. (1986).- New taxonomic framework for Mesozoic stromatoporoids.- 4th North American Paleontological Convention.- FC&P 15-2, p. 46, ID=0760^Topic(s): convergence; stroms, taxonomy; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Mesozoic; Geography: ^Mesozoic stromatoporoids have spicules and can be classified as demosponges. Calcareous skeletons are convergent features.^1";
- 5304 s[5301] = "WOOD R.A., REITNER J. (1986).- Poriferan affinities of Mesozoic stromatoporoids.- Palaeontology 29, 3: 469-473.- FC&P 15-2, p. 12, ID=1923^Topic(s): poriferan affiliations; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Mesozoic; Geography: ^The finding of calcite and pyrite spicule pseudomorphs of monaxon spicules in six genera of Mesozoic stromatoporoids confirms poriferan affinities for at least some representatives of this group. Previously, the systematic position has been speculated upon solely from the internal organization of the skeleton [original abstract]^1";
- 5305 s[5302] = "STANLEY G.D.jr (1997).- Evolution of reefs of the Mesozoic.- Proceedings of the 8th International Coral Reef Symposium Panama City 2: 1657-1662.- FC&P 27-2, p. 61, ID=3928^Topic(s): history; reefs; Systematics: ; Stratigraphy: Mesozoic; Geography: ^The history of Early Mesozoic reefs is recorded in the Tethys after the Permo-Triassic mass extinction. From this time through the Paleogene, at least four stable reef ecosystems are recognized. Each is preceded by mass extinctions of either first or second-order importance and a perturbation phase characterized by an eclipse of reefs. A recovery interval after the eclipse leads to a new stable reef ecosystem. Following an early Triassic reef eclipse and a middle to early Late Triassic recovery phase, a new ecosystem developed toward the end of the Triassic. Following a small-scale Late Triassic extinction zooxanthellate corals became dominant reef-builders. The end-Triassic extinction abruptly terminated reefs and there followed an early Jurassic eclipse interval and a Middle Jurassic recovery. This led to coral-algal dominated ecosystems of the Jurassic. Following a second-order mass extinction at the end of the Jurassic, a coral-dominated ecosystem resumed. This was interrupted by a rudist takeover later in the Cretaceous. The rudist-dominated ecosystem lasted until near the end of the Cretaceous when a first-order mass extinction disrupted reef ecosystems. This allowed surviving scleractinians to reclaim reef ecosystems of the Genozoic. Important physical, chemical and biological themes seem relevant throughout the Mesozoic history of reefs.^1";
- 5306 s[5303] = "ROSEN B.R., AILLUD G.S., BOSELLINI F., CLACK N.J., INSALACO E., VALLDEPERAS F.X., WILSON M.E.J. (2002).- Platy coral assemblages: 200 million years of functional stability in response to the limiting effects of light and turbidity.- Proceedings of the 9th International Coral Reef Symposium, Bali, Indonesia, pp 255-265.- FC&P 34, p. 100, ID=1106^Topic(s): platy, ecology; platy coral assemblages; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic Cenozoic; Geography: ^Ecological assemblages of

platy corals occur through most of the geological record of the Scleractinia (late Triassic to Recent) but they have received almost no detailed attention. Recent studies have suggested that they represent a photoadaptive response by photosymbiotic corals to reduced illumination in deeper and/or more turbid waters. As an informal working group, we have aimed to establish (1) if this model applies more generally to the geological record, and (2) if so, what implications this may have for long-term stability of tropical marine ecosystems (e.g. role of photosymbiosis). Here we discuss preliminary results compiled from our own independent projects in 32 study areas ranging from late Jurassic to mid Miocene age. We set out simple descriptive concepts of platy corals and platy coral assemblages and provide other palaeoecological and geological information that characterises these assemblages. Sedimentological and palaeoecological evidence supports the photoadaptive nature of platy coral assemblages ('euphotic floor model'), and indicates their ecological functional stability since the late Triassic. We recognise seven variants of such assemblages according to the role of turbidity in different spatiotemporal settings. Preliminary work so far has failed to reveal closely comparable modern analogues.¹;

- 5307 s[5304] = "LOSER H. (2002).- Verfahren einer von der Taxonomie unabhängigen paläobiogeographischen Analyse post-paläozoischer Korallen.- *Mathematische Geologie* 6: 15-43.- **FC#038;P 33-2**, p. 32, ID=1162^Topic(s): biogeography, numerical approach; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic Cenozoic; Geography: ^Various unconventional methods which are described in detail were used to analyse the palaeobiogeography of post-palaeozoic corals. In view of the complicated species concept in the group of organisms investigated, traditional taxonomy was abandoned and operational taxonomical units (OTUs) were derived exclusively from samples, using methods of numerical taxonomy. The homogeneous units thus obtained are much more likely representatives of species than the taxa were in the literature. This method is practically a new approach not only to corals since large scale palaeobiogeographical analyses covering a long time span were up to now mainly based on data from the literature. The distribution data thus obtained were tested by various methods to discover invariant factors and patterns in the distribution of the organisms. This mainly involves calculating the correlation of the distribution of the OTUs with operational geographical units (OGUs), stratigraphy, palaeo-latitude as well as palaeo-longitude. The specificity of various correlation coefficients is discussed. Other methods not used in this study are explained and their applicability and reliability are discussed. The structures of the data and the software used to record, process and estimate the data are briefly described. The need for transparent data structures and evaluation methods is pointed out.¹;
- 5308 s[5305] = "LOSER H., BACH F., MULLER A. (2002).- Die Sammlung Mesozoischer und Känozoischer Korallen von Johannes Felix am Geologisch-Paläontologischen Institut der Universität Leipzig.- *Leipziger Geowissenschaften* 14, pp 1-70.- **FC#038;P 31-2**, p. 38, ID=1164^Topic(s): collections of fossils; Anthozoa collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic Cenozoic; Geography: ^One of the richest collections of Mesozoic and Cenozoic corals worldwide, that at the Geological-Palaeontological Institute of the Leipzig University collected by the scientist and university teacher Johannes Felix (1859-1941), has now been catalogued and recorded in a computer database. Figured specimens and types have been checked. This paper gives an overview of Felix's life and work, of the genesis and troubled history of the collection and a condensed catalogue in the appendix.¹;
- 5309 s[5306] = "BEAUVAIS M., BEAUVAIS L. (1973).- Influence de la diagénèse sur la microstructure des Madréporaires fossiles.- C. R. Séances Ac.

Sc., Sér. D, 277: 1629-1632.- **FC#038;P 2-2**, p. 21, ID=4818^Topic(s): diagenesis, microstructures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Mesozoic Cenozoic; Geography: ^In this note we try to prove with some examples taken from the post-paleozoic corals, that the mineralogic transformations of the fossil madreporarian skeleton, consequently of the diagenesis, plays a primordial role in the microstructures observed under the light microscope. In fact, mineralogic analysis made upon some triassic and cretaceous specimens have showed that, in certain conditions, the skeletal elements of the Madreporaria can be entirely or partially kept in aragonite. In the case where they are kept in aragonite, the Corals we have studied, have the same fibrous structure than the one of the living Madreporaria. But all the Madreporaria which showed under the light microscope a fibro-lamellar or a granulo-lamellar structure, are entirely or in part changed into calcite. So, we can think that the microstructure of the fossil Corals is subordinate to their state of preservation and that only the mineralogic analysis of their skeleton allows to prove that the microstructure observed is a primitive one.^1";

5310 s[5307] = "STANLEY G.D.jr (2010).- Recovery of corals and reefs after the end-Permian and the "Naked Coral" Lazarus effect.- Journal of Earth Science (China) 21: 161-164.- **FC#038;P 36**, p. 133, ID=6593^Topic(s): coral reefs; corals, reefs, recovery; Systematics: Cnidaria; Anthozoa; Stratigraphy: Permian-post; Geography: ^1";

5311 s[5308] = "WENDT J. (1976).- Der Skelettbau mesozoischer und rezenter Kalkschwämme.- Zentralblatt für Geologie und Paläontologie II, 5/6: 558-573.- **FC#038;P 6-2**, p. 18, ID=5549^Topic(s): ; Porifera calcarea; Systematics: Porifera; Calcarea; Stratigraphy: Mesozoic - Recent; Geography: ^[contains some discussion of the original mineralogy of Paleozoic and Mesozoic stromatoporoids (aragonite) and the lack of siliceous spicules in fossil calcareous sponges and stromatoporoids]^1";

5312 s[5309] = "FISCHER J.C. (1977).- Biogeographie des Chaetetida et des Tabulospongida post-paléozoïques.- Bureau Recherches Géologiques et Minières Memoir 89: 530-534 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- **FC#038;P 6-1**, p. 29, ID=092^Topic(s): biogeography; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Paleozoic-post; Geography: ^biogeography^1";

5313 s[5310] = "FISCHER J.C. (1970).- Révision et essai de classification des Chaetetida (Cnidaria) post-paléozoïques.- Annales de Paléontologie, Invertébrés 56: 72 pp.- **FC#038;P 1-2**, p. 24, ID=4700^Topic(s): classification; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Paleozoic-post; Geography: ^Habitually considered as exclusively Paleozoic, the Chaetetida group is particularly ignored, probably because the difficulties posed by the study of its systematics. In none of the treatises of paleontology are found the few representatives of this group that have been described in post-Paleozoic beds. The present work, which treats these Mesozoic and Cenozoic organisms successively placed near the Alcyonaria, Tabulata and Bryozoa, shows that a good number of them belong to the order Chaetetida, whose phylogenetic duration, in consequence, is considerably extended. The author, first of all, strives to specify the general characteristics, the methods of study and the terminology concerning these organisms. He proposes next a new definition of the Chaetetida and confirms their position (Cnidaria, Hydrozoa). Then, after having searched to determine in what should consist the diverse criteria of familial, generic and specific rank, he proposes a new classification which recognizes nearly 40 post-paleozoic species, distributed in 3 families and 11 genera or subgenera. A last chapter is devoted to doubtful organisms, insufficiently characterized or which are preferably excluded from the

- Chaetetida.^1";
- 5314 s[5311] = "GRUBER G. (1993).- Mesozoische und rezente desmentragende Demospongiae (Porifera, "Lithistida") (Paläobiologie, Phylogenie und Taxonomie).- Berliner geowissenschaftliche Abhandlungen E10: 73 pp., 21 figs, 27 pls.- FC&P 22-2, p. 75, ID=6828^Topic(s): biology, phylogeny, taxonomy; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Mesozoic - Recent; Geography: ^within the demosponges in all main taxa, irregular spicules, the desmas are observed. Therefore, the polyphyletic "Lithistida" Schmidt 1870 is eliminated. Desma-bearing demosponges are known since the Middle Cambrian. The desma-types are differentiated by their axial symmetry. In the present theory, the character desma probably evolved from a regular tetraxonid calthrops through "secondary" (intracellular) silification within the scleroblast. This is indicated by the ornamentation and zygomes (ends of these spicules) of this special type of spicules. First the tetraxonid desmas (tetraclones) evolved. Then a possible reduction of two calthrops rays to diactine forms, like oxeas, and the reduction of three rays to monactine spicules, like styles, took place. The monaxonid desmas (rhizoclones, dicranoclones, dendroclones) are derived from "normal" spicules, such as styles. The hypothesis is that the reduction of rays of the calthrops first lead to normal monaxonid spicules, and monaxonid desmas evolved by "secondary" silification. [initial part of extensive summary]^1";
- 5315 s[5312] = "MEHL D. (1992).- The Hexactinellida from the Mesozoic until today: paleobiology, phylogeny, evolutionary ecology.- FC&P 21, 1.1: 38-39. [short note] - FC&P 21-1.1, p. 38, ID=6806^Topic(s): systematics; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Mesozoic - Recent; Geography: ^The Hexactinellida (earliest Cambrian - Recent) may be the best established monophylum within the Porifera. They are the adelphotaxon ("sister group") of the Pinacophora (Demospongiae/Calcarea-taxon), from which they have evolved separately at least since the earliest Cambrian. Because of the syncytial organization of their soft tissues, Hexactinellida fundamentally differ from all other sponges. Contrary to other current phylogenetic assumptions, the closest relatives of the Demospongiae within the Porifera probably are not the Hexactinellida but the Calcarea. The siliceous spicules of Hexactinellida appear to have evolved convergently to those of Demospongiae as a true functional and constructive morphological homoplasy. Thus follows consequently the conclusion that spicules do not belong to the poriferan basic pattern. Spicules of rectilinear triaxial symmetry (basic type is the regular hexactin), with an axial filament that is square in cross section, represent a unique character within the Porifera. [initial fragment of Thesis]^1";
- 5316 s[5313] = "MEHL D. (1993).- Die Entwicklung der Hexactinellida seit dem Mesozoikum. Palaobiologie, Phylogenie und Evolutionsökologie.- Berliner geowissenschaftliche Abhandlungen E02: 164 pp., 35 figs, 22 pls.- FC&P 22-2, p. 76, ID=6829^Topic(s): biology, phylogeny, ecology; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Mesozoic - Recent; Geography: ^The Hexactinellida (earliest Cambrian - Recent) may be the best established monophylum within the Porifera. They are the adelphotaxon ("sister group") of the Pinacophora (Demospongiae/Calcarea-taxon), from which they have evolved separately at least since the earliest Cambrian. Because of the syncytial organization of their soft tissues, Hexactinellida fundamentally differ from all other sponges. Contrary to other current phylogenetic assumptions, the closest relatives of the Demospongiae within the Porifera probably are not the Hexactinellida but the Calcarea. The siliceous spicules of Hexactinellida appear to have evolved

convergently to those of Demospongiae as a true functional and constructive morphological homoplasy. Thus follows consequently the conclusion that spicules do not belong to the poriferan basic pattern. Spicules of rectilinear triaxial symmetry (basic type is the regular hexactin), with an axial filament that is square in cross section, represent a unique character within the Porifera. [initial part of extensive summary; publication derived from (and summary identical with) Mehl's Thesis (Mehl 1992)]^1";

- 5317 s[5314] = "RIDING R. (2002).- Structure and composition of organic reefs and carbonate reef mounds: concepts and categories.- Earth-Science Reviews 58, 1-2: 163-231.- FC#038;P 33-1, p. 41, ID=7197^Topic(s): structures, composition; reefs; Systematics: ; Stratigraphy: ; Geography: ^Defined here as 'essentially in place calcareous deposits created by sessile organisms'; Organic Reefs are diverse and complex structures with a long geological history. Their classification has been the subject of fierce debate, often characterized by reliance on subjective features such as wave-resistance and qualitative attempts to discriminate between 'first' and 'second class' reefs. In contrast, emphasis is here placed on the objective characteristic of the type of sedimentary support, which largely determines the sedimentary composition of the deposit. * Constructional and depositional processes result in three principal sedimentary components: matrix (M), essentially in place skeletons (S) and cavity/cement (C), whose proportions can be represented on MSC triangular plots. Separately or together, these components also provide the structural support for the reef. On these compositional and structural bases, three main categories of Organic Reef are recognized: (1) Matrix-supported reefs (Agglutinated Microbial Reefs, Cluster Reefs, Segment Reefs), (2) Skeleton-supported reefs (Frame Reefs), (3) Cement-supported reefs (Cement Reefs). [initial part of extensive summary]^1";
- 5318 s[5315] = "CUIF J.-P., DENIS A., GAUTRET P., MARIN F., MASTANDREA A., RUSSO F. (1992).- Recherches sur l'alteration diagenetique des biomineralisations carbonatees: evolution de la phase organique intrasquelettique dans des polypiers aragonitiques de Madreporaires du Cenozoique (Basin de Paris) et du Trias superieur (Dolomites et Turquie).- C. R. Acad. Sci. Paris 314, II: 1097-1102.- FC#038;P 21-2, p. 15, ID=3301^Topic(s): diagenetic alterations; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Triassic - Cenozoic; Geography: ^^1";
- 5319 s[5316] = "MORYCOWA E., RONIOWICZ E. (1995).- Microstructural disparity between Recent fungine and Mesozoic microsolenine corals.- Acta Palaeontologica Polonica 40, 4: 361-385.- FC#038;P 25-1, p. 42, ID=2994^Topic(s): microstructures, disparity; Scleractinia, microstructures; Systematics: Cnidaria; Scleractinia; Stratigraphy: Mesozoic - Recent; Geography: ^The Mesozoic families Microsolenidae, Latomeandridae, Synastraeidae and Cunolitidae were separated from the suborder Fungiina and and new suborder Microsolenina is proposed. The suborder is characterized by possessing collar-like structures (pennulae sensu Gill 1967), spaced along the trabeculae, tending to merge into more or less continuous falnges parallel to the septal distal margin, distributed on each face of the septa. The suborder Fungiina show trabeculae with granulations set off the the trabecular axis towards interseptal space (vepreculae according to Jell 1974). The fungiids are considered to be more close to the faviids.^1";
- 5320 s[5317] = "FAGERSTROM J.A. (1984).- The ecology and paleoecology of the Sclerospongiae and Sphinctozoa (sensu stricto).- Palaeontographica Americana 54: 370-381 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC#038;P 14-1, p. 55, ID=1039^Topic(s): ecology; Porifera ecology; Systematics:

Porifera; Stratigraphy: Triassic - Recent; Geography: ^The occurrence of these organisms in modern seas is reviewed. Their roles as encrusters, binders, or baffles in modern Jamaican reefs, middle Permian sphenozoan reefs. Middle and Late Triassic reefs is described.^1";

- 5321 s[5318] = "MEHL D., WIEDENMAYER F. (1996).- Book review: "Contributions to the knowledge of post-Palaeozoic neritic and archibenthal sponges (Porifera). - Schweiz. Pal. Abh. 116 (1994)".- Historical Biology 12, 1: 77-78.- FC&P 26-1, p. 73, ID=3646^Topic(s): book review; Porifera; Systematics: Porifera; Stratigraphy: Mesozoic Cenozoic; Geography: ^^1";
- 5322 s[5319] = "WIEDENMAYER F. (1994).- Contributions to the knowledge of post-Palaeozoic neritic and archibenthal sponges (Porifera).- Schweizerische Palaeontologische Abhandlungen 116: 147 pp., 36 figs., 5 tbls., 2 pls.- FC&P 24-1, p. 76, ID=4509^Topic(s): neritic, archibenthal; Porifera; Systematics: Porifera; Stratigraphy: Mesozoic Cenozoic; Geography: ^The review of the stratigraphic record, including excursions into Palaeozoic lineages, concentrates on recognizable genera and families of demosponges, relying chiefly on isolated spicules. Lithistid suborders are reviewed with reference to de Laubenfels' (1955) erroneous treatment and to newer systematic accounts. 715 individual spicules, including examples from living species for comparison, are illustrated in 35 figures in systematic order. They are redrawn from various fully quoted articles, including those in the Initial Reports of the Deep Sea Drilling Project. The notes on fossil faunas, palaeoecology, and palaeobiogeography elaborate on several aspects previously neglected or widely scattered in the literature.^1";
- 5323 s[5320] = "PISERA A. (1999).- Post-Paleozoic history of the siliceous sponges with rigid skeleton.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 463-473.- FC&P 28-2, p. 9, ID=6976^Topic(s): history; Porifera; Systematics: Porifera; Stratigraphy: Mesozoic Cenozoic; Geography: ^^1";
- 5324 s[5321] = "KRAUTTER M. (1997).- Aspekte zur Palaeoekologie postpalaeozoischer Kieselschwämme.- Profil 11: 199-324.- FC&P 27-1, p. 101, ID=3853^Topic(s): ecology; Porifera siliceous; Systematics: Porifera; Stratigraphy: Mesozoic Cenozoic; Geography: ^Sedimentary rocks characterized by siliceous sponges occur during several time episodes in Earth history. The spongiolithic facies culminates in the Late Jurassic. On the northern shelf of the Tethys and in the adjacent North Atlantic basins, siliceous sponges formed a discontinuous reef belt extending over more than 7000 km. The scope of this study is the palaeoecological analysis of post-Palaeozoic siliceous sponges in order to obtain a valuable tool for the environmental and genetic interpretation of siliceous sponge-bearing rocks. Methodically, the actualistic or uniformitarianistic concept was applied to the group of siliceous sponges for the first time. The knowledge of the biology and the ecology of recent siliceous sponges is an important fundamental prerequisite for transforming the results to the fossil record. The heterogeneous group of siliceous sponges belong either to the desma-bearing demosponges ("Lithistida") or to the Hexactinellida. Both siliceous sponge groups differ fundamentally in their biology (e.g., anatomy, reproduction, nutrition). Consequently, they also differ remarkably in their ecological demands. Ecologically important factors are bathymetry, substrate, water energy, temperature, quantity and quality of food, sedimentation rate, settling density, available space, space competition, water chemistry, and reproduction rate. Usually, these factors do not work independently. Their interaction determines the occurrence, spatial distribution and the dominance of siliceous sponge groups. Most demosponges are active filter feeders. Owing to the minute size of their ostia, bacteria are

their main food source. Demosponges are able to host bacteria to a great amount in their mesohyl. Most of these sponges can live either on the hosted bacteria itself or on the metabolic products of the bacteria. [part of very extensive summary]^1";

- 5325 s[5322] = "ALI O.E. (1984).- Sclerochronology and carbonate production in some Upper Jurassic reef corals.- *Palaeontology* 27, 3: 537-538.- FC&P 14-1, p. 60, ID=1067^Topic(s): hermatypic, sclerochronology; reef corals, carbonate production; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Oxf; Geography: ^Annual banding evident from epithecal increments and associated internal structural changes in phaceloid and massive Oxfordian corals show a range in growth rate from 5 to 10 mm yr⁻¹ in branching colonies (*Thecosmilia*) and 1.5 to 3 mm yr⁻¹ for massive colonies (*Thamnasteria*, *Fungiastraea*, *Isastraea*). High- and low-density growth bands are identified in massive colonies. The denser part of each couplet is consistently the broader, in contrast with that of most shallow-water modern corals. This is interpreted as due to high local turbidity. The formation time for two sections is estimated with gross carbonate production of 2000 to 3300 g CaCO₃ m² yr⁻¹.^1";
- 5326 s[5323] = "GEISTER J. (1989).- Qualitative aspects of coral growth and carbonate production in a Middle Jurassic reef.- *Mem. Ass. Australas. Palaeontols* 8 [Jell P. A. & Pickett J. W. (eds): *Fossil Cnidaria 5* (Proceedings of the Fifth International Symposium on Fossil Cnidaria including *Archaeocyatha* and *Spongiomorphs*)]: 425-432.- FC&P 19-1.1, p. 14, ID=2560^Topic(s): coral growth, carbonate production; reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic M; Geography: ^^1";
- 5327 s[5324] = "BERTLING M. (1998).- Bioerosion of Late Jurassic reef corals - implications for reef evolution.- *Proceedings of the 8th International Coral Reef Symposium Panama City*, 2: 1663-1669.- FC&P 27-1, p. 91, ID=3834^Topic(s): hermatypic, bioerosion; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic U; Geography: ^European Late Jurassic reef coral occurrences from comparable environments (subtropical climate, shallow agitated water, raised nutrient levels) were evaluated with respect to variations in bioerosion. Net-sedimentation rate obviously was the most important ecofactor regarding intensity of bioerosion as well as the organisms involved. Lower sedimentation rates favour dead-coral borers (*Lithophaginae* and *Sipunculida* / *Polychaeta*) and strong bioerosion; increased sedimentation leads to dominance of live-coral borers (*Gastrochaenidae*) with relatively much reduced boring activity. Boring sponges (*Clionidae*) are the prominent macroborers in Neogene reefs; however, with grazing reef fish not yet evolved, they could become important only under special circumstances: in microbial-coral reefs, bacterial mats provided their nutrition and excluded competitors such as encrusters and dead-coral borers.^1";
- 5328 s[5325] = "BEAUVAIS L. (1979).- Palaeobiogeography of the Middle Jurassic Corals.- *Historical Biogeography, Plate Tectonics and the changing environment* [J. Gray & A.J. Boucot (eds); *Oregon State Univ. Press*]: 289-303.- FC&P 9-1, p. 16, ID=5770^Topic(s): biogeography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic M; Geography: ^^1";
- 5329 s[5326] = "KLEEMANN K.H. (1980).- Korallenbohrende Muschel seit dem Mittleren Lias unverändert.- *Beiträge zur Paläontologie Österreichs* 7: 239-249.- FC&P 15-2, p. 6, ID=06734^Topic(s): coral-borers; coral-borers; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic L; Geography: ^^1";
- 5330 s[5327] = "LATHUILLIERE B., WEIS R. (2008).- Jurassic coral reefs and coleoids at the Ottange-rumelange quarry.- *Coleoid cephalopods through time, 3rd international symposium, Luxembourg*: 127-133.www.g2r.uhp-nancy.fr/annuaire/lathuilliere3.html.- FC&P

- 36, p. 116, ID=6555^Topic(s): reefs; reefs Cephalopoda; Systematics: Cnidaria Mollusca; Anthozoa Cephalopoda; Stratigraphy: Jurassic; Geography: ^^1";
- 5331 s[5328] = "BABAYEV R.G. (1973).- On the discovery of a rare Tithonian hydroid in the USSR.- Paleontologicheskii Zhurnal 1973, 2: 122-123.- FC&P 2-2, p. 21, ID=4816^Topic(s): ; Hydrozoa, Sphaeractinia; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Jurassic Tith; Geography: Russia?^[description of Sphaeractinia diceratina Steinmann 1878]^1";
- 5332 s[5329] = "BEAUVAIS L. (1977).- Problems d'homeomorphie et d'homomorphie lies aux conditions ecologiques chez les Madreporaires du Jurassique.- Bureau Recherches Geologiques et Minieres Memoir 89: 264-270 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 28, ID=0079^Topic(s): homeomorphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: ^^1";
- 5333 s[5330] = "BEAUVAIS L. (1985).- Les Madreporaires Jurassiques, indicateurs de paleoenvironnements (quelques exemples).- Palaeogeography, Palaeoclimatology, Palaeoecology ... : 207-215.- FC&P 15-1.2, p. 14, ID=0895^Topic(s): ecology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: ^^1";
- 5334 s[5331] = "BEAUVAIS L. (1985).- Evolution and diversification of Jurassic Scleractinia.- Palaeontographica Americana 54: 219-224 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 15-1.2, p. 14, ID=0896^Topic(s): phylogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: ^^1";
- 5335 s[5332] = "RONIEWICZ E. (1982).- Pennular and non-pennular Jurassic scleractinians - some examples.- Acta Palaeontologica Polonica 27, 1-4: 157-193.- FC&P 12-1, p. 22, ID=1886^Topic(s): structures, pennulae; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: ^Four Malmian corals of different microstructures have been described: Thamnasteria concinna, Dimorphastraea sp., Actinaraeopsis exilis and Isastraea cf. bernensis. Aragonite coral tissue being preserved, histological observations have been initiated. Taxonomical value of microstructure and histology, as decisive for suprageneric division, is confirmed. In four discussed species, trabeculae are of a branched morphology and non-sclerodermite structure. Each species represents a different variety of trabecular histology. A restricted significance of synapticalae for taxonomical purposes is confirmed. Vertical adtrabecular bars are described, a new skeletal element in Th. concinna.^1";
- 5336 s[5333] = "HERBIG H.-G. (1989).- Ein besonderes Fossil.- Paläontologische Zeitschrift 63, 1-2: 1-2.- FC&P 18-2, p. 39, ID=2491^Topic(s): litofagous borings within; litofagous borings; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic M; Geography: ^Borings of lithophageous bivalves within the Middle Jurassic solitary cupulate scleractinian Ellipsoidastraea hemisphaerica Brede, Hauptmann & Herbig 1989 are figured. They are unusual, because the coral lived in oolite shoals which posed strongest restrictions to endolithic organisms.^1";
- 5337 s[5334] = "LATHUILLIERE B., GILL G.A. (1998).- Dendraraea corail scleractiniaire branchu jurassique: structure, systematique, ecologie. - Dendraraea, a Jurassic branching scleractinian coral: structure, systematics and ecology.- Palaeontographica A248: 145-162.- FC&P 27-2, p. 62, ID=3929^Topic(s): taxonomy, ecology; Scleractinia, Dendraraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: ^Dendraraea d'Orb. 1849 is a branching ramose Jurassic coral

having a fundamentally pennular perforate septal structure. This long ignored pennular character is more or less obliterated in the slow growth directions where predominance of horizontal tabuloid dissepiments gives rise to a layered pattern. The way in which the obliteration of pennular structure occurs introduces a new feature to be taken into account in the classification of Mesozoic perforate corals. The revision of Jurassic species using discriminant analysis sketches evolutionary patterns through four stages: Bajocian (*D. dendroides*), Bathonian (*D. excelsa*, *D. pauciradiata* and *D. sp.*), Callovian (*D. sp. 2* and *sp. 3*) and Oxfordian (*D. racemosa*). The analysis of the colonial ontogeny (astogeny) permits a better understanding of some ecological aspects particularly the role of two factors: the bioerosion and the distance between the top of the colony and the sea floor.¹;

- 5338 s[5335] = "MORSCH S.M. (1994).- Mise au point sur les genres *Confusastrea* d'Orbigny et *Complexastrea* d'Orbigny (*Scleractinia* - Jurassique).- *Annales de Paleontologie (Vert.-Invert.)* 80, 4.- **FC**;P 23-2.1, p. 51, ID=4391**Topic(s)**: **revision**; *Scleractinia*, *Confusastrea*; **Systematics**: **Cnidaria**; *Scleractinia*; **Stratigraphy**: **Jurassic**; **Geography**: **The** revision of the specimen figured by Leymerie (1846) and appointed by d'Orbigny (1849) as the example of *Complexastrea*, as well as the study of additional material belonging to the same species, permits to give the diagnosis emended of this genus: *Corallum* plocoid appearing subcerioid; septocostae compact, non confluent (sometimes subconfluent) and composed of thick trabeculae probably with triangular teeth on upper edge. Lateral surface with few opposite carinae; axial edge entire. Vesiculoid endotheca. Budding is intracalicular but extracalicular budding can be present too. The nomenclatural problem concerning the type species of *Complexastrea* is resolved. The type species is: *Complexastrea subburgundiae* d'Orbigny (1850) and the holotype is the specimen figured by Leymerie (1846, p. 252, pl. 10, fig. 13) and named by him *Astrea burgundiae*. The following species are not synonymous of *Confusastrea subburgundiae*: 1803 - *Madrepore petrifiée*; Faujas de St. Fond, p. 99, pl. 4 1830 - *Astrea burgundiae* Blainville, p. 339 1834 - *Astrea burgundiae* Blainville, p. 373. The name *Astrea burgundiae* should be reserved to the specimen figured by Faujas de St. Fond (1803). The study of thin sections of the holotype of *Agarida crassa*, figured by Goldfuss and appointed by d'Orbigny as the example of *Confusastrea*, shows that this specimen belongs to the genus *Isastrea*. Consequently *Confusastrea* is a senior synonym of *Isastrea*. *Astrea rustica* DeFrance would not be considered a valid species because it was described from a not figured specimen and of unknown age and origin, and on top of that is lost. Thus, *Astrea rustica* could not be mentioned as type species of *Complexastrea* as it was made by some authors.¹;
- 5339 s[5336] = "BEAUVAIS L. (1970).- *Madréporaires du Dogger: étude des types de Milne-Edwards et Haime*.- *Annales de Paléontologie, Invertébrés* 56, 1: 39-74.- **FC**;P 1-2, p. 20, ID=4673**Topic(s)**: **types of Milne-Edwards**; *Scleractinia*; **Systematics**: **Cnidaria**; *Scleractinia*; **Stratigraphy**: **Jurassic M**; **Geography**: **This** paper contains a systematic revision of the middle Jurassic *Madreporearia* types from the Milne-Edwards collection. The stratigraphical position of the Dogger coral-formations from England and Calvados is stated.¹;
- 5340 s[5337] = "BEAUVAIS L. (1971).- *Essai de répartition stratigraphique des Madréporaires du Dogger*.- *C. R. Acad. Sci. Paris* 272, sér. D: 3256-3259.- **FC**;P 1-2, p. 20, ID=4675**Topic(s)**: **stratigraphy**; *Scleractinia*; **Systematics**: **Cnidaria**; *Scleractinia*; **Stratigraphy**: **Jurassic M**; **Geography**: **The**¹;
- 5341 s[5338] = "GILL G.A. (1972).- *Croissance vers le bas et possibilité d'un déplacement autonome chez Genabacia, Madréporaire en petite colonie libre du Dogger*.- *C. R. Acad. Sci. Paris*, sér. D, 274:

- 2459-2462.- FC&P 2-1, p. 20, ID=4681Topic(s):automobility; Scleractinia, Genabacia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic M; Geography:^A downward growth of the skeleton analogous to the one observed in Chomatoseris is now recorded in Genabacia, a small microsolenid colonial genus from the Bathonian of western Europe. As in Chomatoseris the author suggests for this genus the ability to move independently; such an ability in the case of a colony, requires a close coordination of polyps. Similar structural features were already mentioned by the author within diverse taxonomic groups of solitary corals, notably Chomatoseris (Dogger), Combophyllum (Devonian), Micrabacia (Cretaceous-Recent). It is also the case with Fungia and Cycloseris (Diaseris). This autonomous mobility enables these corals to prosper in both very soft substrates and on mobile, high energy, coarse, sandy bottoms - environments where sessile forms do not thrive.^1";
- 5342 s[5339] = "BEAUVAIS L. (1974).- Quelques exemples pris dans le Malm montrant le rôle des Madréporaires dans la théorie de la mobilité continentale.- Bulletin de la Societe Geologique de France, 7e sér., 16, 4: 465-469.- FC&P 4-1, p. 41, ID=5158Topic(s):biogeography; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic U; Geography:^^1";
- 5343 s[5340] = "BEAUVAIS L. (1976).- Madréporaires du Jurassique.- Mem. Soc. geol. Fr., NS 55: 81 pp., 14 pls.- FC&P 6-1, p. 5, ID=5474Topic(s):Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic; Geography:^Etude sur la morphologie, la taxonomie et la phylogénie des Amphiastreaeida All. * Révision des Madréporaires liasiques décrits par Duncan (1867).^1";
- 5344 s[5341] = "RONIEWICZ E. (1979).- Jurassic scleractinian coral Thamnoseres Etallon 1864 and its homeomorphs.- Acta Palaeontologica Polonica 24, 1: 51-64.- FC&P 10-1, p. 57, ID=6006Topic(s):homeomorphy; Scleractinia, Thamnoseres; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic; Geography:^^1";
- 5345 s[5342] = "BEAUVAIS L. (1974).- Revision des types de Montlivaltia gregaria McCoy.- FC&P 3, 2: 20-22.- FC&P 3-2, p. 20, ID=6276Topic(s):lectotype selection; Scleractinia, Montlivaltia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic; Geography:^[Montlivaltia gregaria McCoy est une espece valable appartenant au genre Confusastraea d'Orbigny. Elle est definie par trois syntypes conserves au Sedgwick Museum de Cambridge. Le lectotype choisi [ici] est Confusastraea gregaria (McCoy) de l'Inferior Oolite de Dundry, collection McCoy, nr J 34976; taken from conclusions of the paper]^1";
- 5346 s[5343] = "LATHUILLIERE B. (1987).- Mise au point nomenclaturale sur Edwardsoseres Alloiteau et Kobymeandra Alloiteau, scléactiniaires jurassiques.- FC&P 16, 1: 53-55.- FC&P 16-1, p. 53, ID=6765Topic(s):nomenclature; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic; Geography:^Depuis le siècle dernier les auteurs ont interprété diversement l'espèce Meandrina corrutata Michelin Cette multiplicité des conceptions a motivé la création des deux genres Edwardsoseres Aloiteau et Kobymeandra Alloiteau. Au cours de cette histoire les erreurs nomenclaturales se sont multipliées a tel point qu'une clarification est devenue nécessaire. [introduction to short nomenclatorial note]^1";
- 5347 s[5344] = "LATHUILLIERE B. (1989).- Book presentation: Répertoire objectif des coraux jurassiques.- FC&P 18, 1: 56-57. ISBN 2-86480-377-1. [book presentation] - FC&P 18-1, p. 56, ID=6776Topic(s):book review; Scleractinia; Systematics:Cnidaria; Scleractinia; Stratigraphy:Jurassic; Geography:^This work contains an up to date list of all the

Jurassic species of Scleractinia in the world. It is an objective (unrevised) catalogue where every species is located in alphabetical order, in the different genera in which they have been placed by various authors. For each species, symbols allow the recognition of the successive generic positions (original, transitory, present) and if need be, a junior synonymy. The age and the name of the type locality are indicated. * The check-list is followed by a substantial and useful bibliography. [book presentation]^1";

5348 s[5345] = "LATHUILIERE B., COIFFAIT P. (1990).- Utilisation d'un système de gestion de base de données dans la détermination générique approchée des coraux jurassiques. [using a database management system in non exhaustive generic identification of Jurassic corals].- ... -FC&P 19-1.1, p. 30, ID=6784^Topic(s): computer-aided classification; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic; Geography: ^The database is a set of 405 cards. Each card corresponds to a genus with 17 characters, the present program allows a subset corresponding to the characters selected by the user to be extracted from this database. * It runs on an IBM PC compatible micro-computer with a dBase III+ compatible program. Each card comprises 18 fields. The first one for the genus name, the 17 others for descriptive characters. Every character-state is coded in the following way: A for an absent character, P for a present one and AP for an ambiguous case. On running, with the same codes A, P, and AP, the operator submits a combination of 17 character-states corresponding to the specimens he wants to identify. Then, the computer quickly displays or prints a list of genera. A card (or a genus) is chosen if and only if all its fields at the state A correspond to an A or an AP of the request and if all its fields at the state P correspond to a P or an AP of the request. The check-list obtained shows junior synonyms genera and old comprehensive genera. This allows the omission of non reclassified species to be avoided and this is a major advantage for a zoological group in which generic assignments fluctuate so much. The program can be optimized by adding cards and characters. It runs as a generator of artificial classifications. The hierarchy of characters, inherent to the so called natural classifications is avoided and for a group in which fundamental characters are least conspicuous, the quality of identification may only be improved.^1";

5349 s[5346] = "TERMIER H., TERMIER G. (1985).- Problemes poses par Burgundia trinorchii Munier-Chalmas (Kimmeridgian), stromatopore a structure stromatolithique et anatomie spongiaire.- Comptes Rendu, Academie des Sciences, ser. 2, 300: 33-38.- FC&P 16-2, p. 35, ID=2089^Topic(s): morphology, sytematic psition; stroms, Porifera; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Jurassic Kimm; Geography: ^^1";

5350 s[5347] = "BROGLIO LORIGA C. (1984).- Paléocéologie des bioconstructions du faciès à Lithiotis du Lias.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 20.1-20.11.- FC&P 13-1, p. 11, ID=6333^Topic(s): reefs; Lithiotis buildups; Systematics: Mollusca; Stratigraphy: Jurassic L; Geography: ^En 1971, Berti, Bosellini et Broglio Loriga proposèrent l'emploi des termes "Calcari a Lithiotis", "Banchi a Lithiotis", "Faciès a Lithiotis" pour désigner les couches riches en grands bivalves appartenant à différents genres, caractéristiques de la formation liasique de plate-forme, Calcari grigi affleurant sur une vaste zone des Préalpes vénitiennes (Vérone, Vicence, Trente). Lithiotis est le nom d'un genre de bivalve présentant une morphologie particulière. Créé par Gumbel en 1871, il est représenté par l'espèce L. problematica Gumbel: il s'agit du taxon le plus connu des "Calcari Grigi" et c'est sans aucun doute à ce fossile que l'on doit la notoriété de la Formation. [initial part of an introduction]^1";

- 5351 s[5348] = "BROGLIO LORIGA C., MASETTI D., FORASTIERI S., TREVISANI E. (1991).- Comunita a Poriferi nei Calcarei Grigi delle Vette Feltrine (Giurassico inferiore, Prealpi Bellunesi).- Annali dell'Universita di Ferrara, n.s., ser. Scienze della Terra 3, 4: 51-81.- FC&P 22-1, p. 46, ID=3300Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Jurassic L; Geography: ^[...] From this approach to the Porifer facies of the Lower Jurassic, the occurrence of the following taxa have been suggested: 1) Demospongea, subcl. Ceractinomorpha and Tetractinomorpha; 2) Hexactinellida, ord. Lychniscosida; 3) Sclerospongea, ord. Stromatoporida and Ceratoporellida; The taxa associations appear to establish three kinds of Porifer communities: 1. Demospongea and Exactinellida comm. (Calcarede1 Misone, Calcarei Selciferi a Poriferi and Malga Agnerola facies); 2. Demospongea and Sclerospongea comm. (Calcarei Grigi of Grappa Mt.); 3. Inozoa comm. (Giallo Reale and Calcarei Gialli). The Demospongea and Exactinellida community from the Cherty Limestone of the Vette Feltrine could represent a Porifer meadow, while all the others have been referred to Porifer mud mounds. Meadows and mounds should be placed on the external platform, below the wave base. The setting depth has not been defined. On a sedimentological basis, the Porifer Cherty Limestones bearing the Demospongea-Hexactinellida community (Vette Feltrine) should correspond a hundred meter-deeps. [fragment of extensive (!) summary]^1";
- 5352 s[5349] = "HELM C. (2002).- 50 Jahre im Leben eines Korallenriffs des Oberjura.- Fossilien 19, 2: 102-109.- FC&P 33-2, p. 29, ID=1149Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: ^^1";
- 5353 s[5350] = "LATHUILLIERE B., CARPENTIER C., HUAULT V., MARTIN-GARIN B. (2006).- Biological zonation of Oxfordian reefs.- Volumina Jurassica 4: 120. [abstract] - FC&P 34, p. 85, ID=1328Topic(s): reefs, biological zonation; reefs ecology; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: ^^1";
- 5354 s[5351] = "LEINFELDER R.R., WERNER W., NOSE M., SCHMID D.U., KRAUTTER M., LATERNSE R., TAKACS M., HARTMANN D., (1996).- Paleoecology, Growth Parameters and Dynamics of Coral, Sponge and Microbolite Reefs from the Late Jurassic.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke1 F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 37, ID=3597Topic(s): ecology, growth; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: ^Reefs from the Late Jurassic comprise various types of coral reefs, siliceous sponge reefs and microbolite reefs. Upper Jurassic corals had a higher ratio of heterotrophic versus autotrophic energy uptake than modern ones, which explains their frequent occurrence in terrigenous settings. Coral communities changed along a bathymetric gradient but sedimentation exerted a stronger control on diversities than bathymetry. One coral community was adapted to brackish waters. Reefal siliceous sponge biostromes and sponge microbolite mud mounds generally occur below the coral facies, and hexactinellid-dominated sponge communities generally occur below a zone of mixed "lithistid"-hexactinellid growth. This distribution mirrors differences in nutrient conditions, with coral facies related to stable, moderately oligotrophic to mesotrophic conditions whereas siliceous sponges could tolerate fluctuating levels and hence may range from extremely oligotrophic to strongly mesotrophic settings. This is due to the fact that hexactinellid sponges can largely live on osmotrophy and "lithistid" sponges develop deposits of living organic matter by hosting a huge mass of bacteria. Microbolite crusts demand strongly reduced sedimentation and are important framework contributors in many coral and sponge reefs. Eutrophication or oxygen depletion may exclude reef fauna, giving rise to pure microbolite reefs. Most Upper Jurassic reefs developed in ramp settings. High-energy reefs contain little preserved framework, whereas

Low-energy reefs may have excellently preserved framework and pronounced relief whenever microbolite crusts provided stabilization. Reefs in steepened slope settings are generally rich in microbolites because of bypass possibilities for allochthonous sediment. Reef rimmed shallow-water platforms did occur but only developed on preexisting uplifts. Upper Jurassic sponge-microbolite mud mounds grew in subhorizontal mid to outer ramp settings and reflect a delicate equilibrium of massive and peloidal microbolite precipitation and accumulation of allochthonous mud and fine allochems, determined by the distance to shallow-water carbonate factories. Disturbances in this equilibrium lead to the development of sponge biostromes or the disappearance of sponge facies … [fragment of extensive summary]^1";

5355 s[5352] = "HELM C., SCHULKE I. (1998).- A Coral-microbialite Patch Reef Jurassic (florigemma-Bank, Oxfordian) of NW Germany (Sunteł Mountains).- Facies 39, 1: 75-104.- FC&P 27-2, p. 74, ID=3942^Topic(s): patch reef; reefs; Systematics: ; Stratigraphy: Jurassic Oxf; Geography: ^An in situ Oxfordian patch reef from the Sunteł hills (florigemma-Bank, Korallenoolith, NW-Germany) is described. It is composed of an autochthonous reef core overlain by a'parautochthonous' biostrome. The exposed reefal area amounts to about 20 m in lateral and up to 4 m in vertical direction. Nearly all major marine reefal fossil associations from the Tethyal realm are present. In the reef core two facies can be distinguished: (1) Thamnasteria dendroidea thicket facies and (2) thrombolite facies. [first fragment of extensive summary]^1";

5356 s[5353] = "LEINFELDER R.R. (1993).- Upper Jurassic reef types and controlling factors.- Profil 5: 1-45.- FC&P 23-1.1, p. 88, ID=4204^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic U; Geography: ^Reefs occurred widespread during the Late Jurassic, particularly along the northern Tethyan shelf and the marginal basins of the young North Atlantic Ocean. They thrived in a variety of settings such as on intrabasinal tectonic and halokinetic uplifts, within lagoons or within siliciclastic fan deltas. Most frequently they grew in homoclinal to steepened ramp settings, where they occupied a wide bathymetric field from the innermost, partly even hypohaline, part down to outer ramp settings. Compositionally they comprise the end members 'coral facies'; 'siliceous sponges facies'; and 'microbial facies'; but transitions and successions are frequent. Microbial crusts are important not only in the microbial facies where they build thrombolitic reefs up to 30 meters thick but also within the siliceous sponge and coral facies where they occur at variable quantities and are largely responsible for constructing a positive relief. [part of extensive summary]^1";

5357 s[5354] = "LEINFELDER R.R., KRAUTTER M., LATERNER R., NOSE M., SCHMID D.U., SCHWEIGERT G., KEUPP H., BRUGGER H., HERRMANN R., REHFELD-KIEFER U., SCHROEDER J.H., REINHOLD C., KOCH R., ZEISS A., SCHWEIZER V., CHRISTMANN H., MENGELS G., LUTERBACHER H., (1994).- The origin of Jurassic reefs: Current research developments and results.- Facies 31: 1-56.- FC&P 24-1, p. 88, ID=4523^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic; Geography: ^In order to elucidate the control of local, regional and global factors on occurrence, distribution and character of Jurassic reefs, reefal settings of Mid and Late Jurassic age from southwestern Germany, Iberia and Romania were compared in terms of their sedimentological (including diagenetic), palaeoecological, architectural, stratigraphic and sequential aspects. Upper Jurassic reefs of southern Germany are dominated by siliceous sponge - microbial cnist [...] automicritic to allomicritic mounds. During the Oxfordian these form small to large buildups, whereas during the Kimmeridgian they more frequently are but marginal parts of large grain-dominated massive buildups. Diagenesis of sponge facies is largely governed by

the original composition and fabric of sediments. The latest Kimmeridgian and Tithonian spongiolite development is locally accompanied by coral facies, forming large reefs on spongiolitic topographic elevations or, more frequently, small meadows and patch reefs within bioclastic to oolitic shoal and apron sediments. New biostratigraphic results indicate a narrower time gap between Swabian and Franconian coral development than previously thought.

Palynostratigraphy and mineralostratigraphy partly allow good stratigraphic resolution also in spongiolitic buildups, and even in dolomitised massive limestones.[part of extensive summary]^1";

5358 s[5355] = "BEAUVAIS L. (1980).- Evolution des récifs au cours du Jurassique.- Bulletin de la Societe geologique de France 7, 22, 4: 595-598.- FC&P 10-1, p. 22, ID=5890^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Jurassic; Geography: ^^1";

5359 s[5356] = "LEINFELDER R.R., NOSE M., SCHMID D.U., WERNER W. (1993).- Microbial Crusts of the Late Jurassic: Composition, Palaeoecological Significance and Importance in Reef Construction.- Facies 29, 1-2: 195-230.- FC&P 23-1.1, p. 87, ID=6845^Topic(s): carbonates microbial; microbial crusts; Systematics: ; Stratigraphy: Jurassic U; Geography: ^^1";

5360 s[5357] = "LOSER H. (2009).- Fossile Korallen aus Jura und Kreide. Aufbau, Klassifikation, Bestimmung und Fundmöglichkeiten.- CPress Verlag, Dresden, VI, 206 pp., 279 (15 colour) figures (440 single figures). ISBN 978-3-931689-12-4. [encyclopedia] - FC&P 36, p. 96, ID=6513^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Jurassic Cretaceous; Geography: ^Coral reefs are complex ecosystems. Their main producers - the corals - are more primitive organisms. Nevertheless they create complicated constructed skeletons presenting a wide range of shapes. For half a billion years exist corals, for about 250 million years the stony corals (Scleractinia) which colonize also today oceans. Changing environmental conditions forced the sensible organisms to create again and again new constructions resulting in a almost unlimited richness of forms through time. Not much is known about the relationship between the construction of the skeleton made of calcium carbonate and the biology of the living animal, mainly for groups which lived in periods long ago making classification and taxonomy difficult. This book will be help to work with Mesozoic corals (without Triassic) and gives in five large chapters (morphology; palaeoecology, diversity and evolution; sampling and examination; systematics and list of common genera; coral localities) insight in the most important aspects of a difficult organism group. The book is based on lecture material and is written for geology and biology students, as well for interested amateurs and biologists or geologists who want to gain insight in this invertebrate group. Much yet unpublished data on systematics, diversity and taxonomy makes the book up to date and might be interesting also for specialists. All drawn figures of the book are new; the majority of fossil thin sections has been not published before. The numerous illustrations of fossil corals have been selected from a pool of more than 4000 scanned thin sections and peels - material from the whole world, among them samples from countries as exotic as Iran, Jamaica, Japan or Tanzania. [summary]^1";

5361 s[5358] = "MORYCOWA E., RONIEWICZ E. (1991).- Revision of the genus Cladophyllia and description of Apocladophyllia gen. n. (Cladophylliidae fam. n., Scleractinia).- Acta Palaeontologica Polonica 35, 3-4: 165-190.- FC&P 21-1.1, p. 20, ID=3202^Topic(s): revision; Scleractinia, Cladophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic U, Cretaceous L; Geography: ^Authors redescribe Lithodendron dichotomum Goldfuss, Cladophyllia minor Beauvais and C. conybearei Milne-Edwards & Haime. They regard the genus Schizosmia as a synonym of Cladophyllia. The genus Apocladophyllia is known from the uppermost Jurassic and

- Lowermost Cretaceous of the Tethyan realm.^1";
- 5362 s[5359] = "LOSER H. (1993).- Morphologie und Taxonomie der Gattung Mixastraea Roniewicz 1976 (Scleractinia; Jura-Kreide).- Berliner geowissenschaftliche Abhandlungen E09: 103-109.- FC&P 22-2, p. 89, ID=3527^Topic(s): taxonomy; Scleractinia, Mixastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic Cretaceous; Geography: ^The genus Mixastraea Roniewicz 1976 (Scleractinia), up to now only known from the Upper Jurassic of Romania, has been morphologically examined in detail and taxonomically revised on the base of the type species and additional specimens from the Cenomanian (Cretaceous) of Westfalen (Germany). The material from the Cretaceous is described as a new species.^1";
- 5363 s[5360] = "MELNIKOVA G.K., RONIEWICZ E., LOSER H. (1993).- New microsolenid coral genus Eocomoseris (Scleractinia, Early Lias-Cenomanian).- Annales Societatis Geologorum Poloniae 63: 3-12.- FC&P 23-1.1, p. 76, ID=4169^Topic(s): taxonomy; Scleractinia, Eocomoseris; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic L - Cretaceous Ceno; Geography: ^The new microsolenid coral genus Eocomoseris, related to Comoseris, is characterized by a thamnasterioid-subcerioid calice arrangement. Five species from the early Lias to the Cenomanian from Europa and Asia are attributed to the new genus, three of them are described as new: E. ramosa and E. lamellata from the Lias of SE Pamirs (Tadzhikistan) and E. raueni from the Lower Cenomanian of Westphalia (Germany).^1";
- 5364 s[5361] = "WOOD R.A. (1987).- Biology and revised systematics of some late Mesozoic stromatoporoids.- Palaeontological Association, Special Papers in Palaeontology 37, 89 pp. ISBN 13: 9780901702340.- FC&P 17-1, p. 15, ID=2109^Topic(s): biology, systematics; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Mesozoic U; Geography: ^^1";
- 5365 s[5362] = "TOLAND C. (1994).- Late Mesozoic stromatoporoids: their use as stratigraphic tools and paleoenvironmental indicators.- Micropaleontology and Hydrocarbon Exploration in the Middle East [Simons M.D. (ed.); British Micropalaeontological Society Publication series]: 113-125.- FC&P 27-1, p. 112, ID=3870^Topic(s): stratigraphy, ecology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: Mesozoic U; Geography: ^^1";
- 5366 s[5363] = "REHFELD U. (1996).- Mediating and Limiting Processes During the Development of Spongiolitic Bioconstructions in Jurassic and Cretaceous Strata - A Paleontological, Facial and Geochemical Analysis.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 38, ID=3598^Topic(s): spongiolites; sponge reefs; Systematics: Porifera; Stratigraphy: Jurassic Cretaceous; Geography: ^Investigations are based on three different depositional areas in which siliceous sponges, mainly with a rigid skeleton (hexactinellids and "lithistids") represent the prevailing faunal elements. Within these sedimentary environments different forms of sponge bioconstructions developed, which comprise bioherms, biostromes and sponge meadows. The mainly flat-shaped "lithistid" biohermal assemblage of the Kimmeridgian developed in a deeper lagoonal environment, poor in water-derived nutrients. They gained bottom-derived nutrients and / or harbored autotrophic cyanobacteria. The dominating erect hexactinellids of the other two depositional areas reflect sufficient nutrient supply in the water body. They developed in a partly restricted (Bajocian sponge biostromes) to open-marine (Lower Campanian sponge meadows) environment. Densely populated bioherms, associated with organic crusts developed under oligotrophic conditions to guarantee appropriate nutrients and substrate for attachment. A

self-regulating biotic system developed, independent of the surrounding environment. This state of self-organization was not reached by sponges of biostromes and meadows. Sponge bioconstructions developed during transgressions since nutrients are better available and provided in a fine fraction, that can be metabolized by the organisms. Furthermore, low energies were necessary for transferring sponge tissue to automicrite. Different types of automicrite, aphanitic and peloidal cements reflect differences in water energy and chemistry. Higher energies and higher pH-values correspond to peloidal automicrites, low energy and more alkaline water to aphanitic ones. This is reflected in the state of preservation of sponges and the time of dissociation of their skeletons. Geochemical analyses hint at an original low-Mg-composition of those automicrites. Sulfur, organic carbon and the DOP (degree of pyritization)-values show different paleoredoxconditions during early diagenesis in the three environments which correlate with the density of population in the bioconstructions.^1";

5367 s[5364] = "STOLARSKI J., RUSSO A. (2001).- Evolution of the post-Triassic pachythecaliine corals.- Bulletin Biological Society of Washington 10: 242-256.- FC&P 30-2, p. 30, ID=1705^Topic(s): phylogeny; Scleractinia, Pachythecaliinae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Jurassic or younger; Geography: ^Triassic pachythecaliines, i.e., Zardinophyllids, and primitive amphistreids, differ from the coeval scleractinians in having pachythecal wall, septa developed deeply in the calice, smooth septal faces, and two-by-two manners of the protoseptal insertion. Among Jurassic and Cretaceous corals, only amphistreids have a thick, pachythecal wall (pachythecaliine apomorphy)., whereas other supposed post-Triassic pachythecaliines, i.e., carolastreaeids, donacosmiliids, intersmiliids, and heterocoeniids, share either only some morphological characters with pachythecaliines, or their coralla are too badly preserved and no diagnostic microstructural characters are recognizable. Review of various Mesozoic taxa that previously have been linked with the pachythecaliines, i.e., agatheliids (Agathelia, stylohelina, Bracthelina), Amphimeandra, Bodeurina, and Palaeohelia suggests that their alleged "pachythecaliine" characters are either shared with other scleractinians (trabecular peritheca of agatheliids) or not homologous with those in pachythecaliines (thick wall of Palaeohelia). Pseudoastraeopora, the only Cenozoic (Eocene) coral that originally was classified as pachythecaliid, represents, most likely some distinct acroporoid taxon. It is generally assumed that pachythecaliines become extinct at the end of the Mesozoic era, and our review based on presence/absence of apomorphous characters corroborate this hypothesis. However, we still need more arguments to falsify an alternative hypothesis that some, and a few apomorphous pachythecaliine characters could be lost in some lineages that members are thus no longer recognizable as pachythecaliine descendants.^1";

5368 s[5365] = "GEISTER J. (1986).- Reef formation during eustatic cycles - Bajocian and Quaternary reefs compared.- Biology and Geology of Coral Reefs (Int. Soc. Reef Studies, annual Meeting 1986, Marburg): 18-20.- FC&P 16-1, p. 69, ID=1987^Topic(s): eustatic, cycles; reefs; Systematics: ; Stratigraphy: Jurassic - Quaternary; Geography: ^^1";

5369 s[5366] = "LOSER H., BARATTOLO F., BADIA S.C., CHIKHI-AOIMEUR F., DHONDT A., ERLICH R.N., FOEZY I., GEISTER J., HISS M., KOLODZIEJ B., LELOUX J., LEWY Z., MINOR K.P., MITCHELL S., MOOSLEITNER G., PEZA L., REMANE J., ROMANA R., SIKHARULIDZE G.Y., SINNYOVSKI D., STEUBER T., TROEGER K.-A., TURNSEK D., VECCHIO E., VILELLA i PUIG J., ZITT J. (2002).- List of citations.- Catalogue of Cretaceous Corals 2, in 2 vols., 784 pp; Dresden (CPress Verlag).- FC&P 33-2, p. 33, ID=1165^Topic(s): list of citations; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography:

^The second volume contains practically the revision of the Fossilium Catalogus, partes 5-7, first edited in 1914 by J. Felix. This catalogue is a list of all Cretaceous coral taxa ever cited in the literature published between 1758 and 2001. The new edition encompasses 22,500 (= seven times more than in Felix) citations. The catalogue gives the type species of each genus and its stratigraphical range. Each species is provided with data on the type material and type locality, its stratigraphical range, all citations in the literature and all localities where it is indicated. The edition is fully indexed and supplemented with a reference list; Loeser]^1";

- 5370 s[5367] = "LOSER H., BARATTOLO F., BADIA S.C., CHIKHI-AOIMEUR F., DHONDT A., ERLICH R.N., FOEZY I., GEISTER J., HISS M., KOLODZIEJ B., LELOUX J., LEWY Z., MINOR K.P., MITCHELL S., MOOSLEITNER G., NIEBUHR B., PEZA L., REMANE J., ROMANA R., SIKHARULIDZE G.Y., SINNYOVSKI D., STEUBER T., TROEGER K.-A., TURNSEK D., VECCHIO E., VILELLA i PUIG J., ZITT J. (2005).- List of localities. Catalogue of Cretaceous Corals 3.- Catalogue of Cretaceous Corals 3, 366 pp; Dresden (CPress Verlag). ISBN 3-931689-11-5.- FC&P 34, p. 111, ID=1213^Topic(s): sampling sites; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: ^The volume contains a list of all 2,735 localities from which Cretaceous corals were reported. Each locality is provided with data on the stratigraphy, lithostratigraphy, additional literature, and often additional notes (exact positions are omitted on request by the majority of coauthors). Each locality is complemented by a list of indicated coral species. Many countries and regions are profoundly checked by 29 local specialists from all over the world. The Catalogue of Localities may be an interesting handbook for everybody who is working on the Cretaceous, because numerous localities are not only known to have yielded corals but also other fossil organism groups.^1";
- 5371 s[5368] = "BEAUVAIS L., FONTAINE H., GAFOER S., GEYSSANT J.R. (1989).- The Cretaceous Corals.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary fossils of Sumatra and their environment]: 313-314.- FC&P 19-1.1, p. 28, ID=2595^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: ^^1";
- 5372 s[5369] = "BUGROVA I.Yu. (1997).- The preservation of fossil corals and the palaeoenvironment.- Vestnik Sankt-Peterburgskogo universiteta 7, 2, 14: 85-89.- FC&P 27-2, p. 57, ID=3918^Topic(s): preservation, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous L; Geography: ^The lower Cretaceous corals show great variations in the style of preservation. The preservation was influenced by the arrangement of corals in palaeobasin, by the structure of matrix and the activity of boring organisms.^1";
- 5373 s[5370] = "LOSER H. (1998).- Cretaceous corals - state of knowledge and current research.- Zentralblatt für Geologie und Paläontologie 1 (for 1996) 11/12: 1475-1485.- FC&P 27-2, p. 59, ID=3923^Topic(s): state of research, distribution; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: ^A brief overview of the current state of research on Cretaceous corals is presented, including a discussion of major problems. Preliminary results on the stratigraphical and palaeobiogeographical distribution, and development of the Scleractinia during the Cretaceous are presented. This short study is supplemented by a comprehensive list of all Cretaceous coral families with their stratigraphical ranges and genera, together with a list of all regions from which more than five coral species are known.^1";
- 5374 s[5371] = "BEAUVAIS L., BEAUVAIS M. (1974).- Studies on the world distribution of Upper Cretaceous corals.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1:

- 475-494.- FC&P 4-1, p. 17, ID=5006^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous U; Geography: ^^1";
- 5375 s[5372] = "ZLATARSKI V., BEAUVAIS L. (1980).- Bibliographie des Madreporaires du Cretacee moyen.- FC&P 9, 1: 29-31.- FC&P 9-1, p. 29, ID=5789^Topic(s): bibliography; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous M; Geography: ^^1";
- 5376 s[5373] = "LOSER H. (2002).- Biostratigraphical dating of Cretaceous coral communities using large data sets.- Paläontologische Zeitschrift 76, 1: 75-81.- FC&P 33-2, p. 32, ID=1161^Topic(s): biostratigraphy, databases; stratigraphy, Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cretaceous; Geography: ^Habitats of hermatypic corals are shallow and turbulent marine environments that often lack biostratigraphic index fossils. For that reason many Cretaceous coral faunas are imprecisely dated or dated only on the basis of comparisons with other coral faunas. Using a large database on the taxonomy, stratigraphical and geographical distribution of corals in the Cretaceous, a method is proposed that will make it possible to specify the stratigraphical age of coral associations on the basis of their specific composition. In this process the stratigraphical range of the species (calculated before from well-dated faunas) is summarized and a probable age of the association proposed. The method does not only help to assess the biostratigraphical age of a fauna, but may also indicate whether a fauna represents an original composition or is a mixed association derived from reworked horizons or olistoliths. The method can be applied to any other organism group, provided that the essential data for a comparison are available.^1";
- 5377 s[5374] = "SKELTON P.W., GILI E., ROSEN B.R., VALLDEPERAS F.X. (1997).- Corals and rudists in the late Cretaceous: a critique of the hypothesis of competitive displacement.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 225-239.- FC&P 26-2, p. 29, ID=3715^Topic(s): corals, rudists; Systematics: Cnidaria Mollusca; Anthozoa Bivalvia; Stratigraphy: Cretaceous U; Geography: ^The late Cretaceous saw the sessile rudist bivalves reach maxima of adaptive diversity and abundance on Tethyan carbonate platforms, yielding extensive 'rudist formations'. Meanwhile, reef frameworks built by corals were of notably limited development, although diverse associations of corals in tabular bedded units may accompany the rudist formations. * The hypothesis of competitive displacement of reef-building corals by rudists has sometimes been invoked to explain these patterns. An alternative view is that they reflect passive faunal replacement mediated by environmentally triggered extinctions, perhaps together with changes in carbonate platform ecosystems. The hypothesis of competition between contemporaneous organisms cannot be tested by looking at patterns of biotic turnover alone, as such patterns are the effects of many factors. What is needed is detailed palaeoecological analysis of co-occurrences of the postulated competitors. * The Santonian carbonate platform deposits of Sant Corneli in the southern Central Pyrenees contain abundant and diverse corals, as well as rudists. A spectrum of biotic assemblages, from coral-dominated to rudist-dominated, is found to correspond with a sedimentary facies gradient expressed both in vertical successions and in a lateral zonation. The corals and rudists largely occupied different biotopes, and even in mixed assemblages no evidence for competitive interference between neighbors (e.g. overgrowth relationships) has been detected. These observations imply little, if any, mutual interference between members of the two groups, in the occupation of space, while inferred nutritional differences between them allow us to reject trophic overlap. * Similar distributional patterns reported for other Cretaceous assemblages lead us to conclude that there was probably little or no competition between rudists and corals, so undermining the

competitive displacement hypothesis. We further dispute the underlying assumption that the rudists were occupying broadly the same kinds of habitats that hosted coral reefs at other times; the rudists usually thrived on flat to gently inclined mobile sediment surfaces, which we argue would have been unfavourable sites for reef development.¹¹;

5378 s[5375] = "KLEEMANN K. (1994).- Associations of corals and boring bivalves since the Late Cretaceous.- Facies 31: 131-140.- FC&P 23-2.1, p. 32, ID=4225Topic(s): coral boring bivalves; Bivalvia boring Mytilids; Systematics: Mollusca Cnidaria; Anthozoa; Stratigraphy: Cretaceous U; Geography: ^The fossil record of in corals boring mytilid bivalves is reported from the Upper Cretaceous to the Middle Miocene. The boring bivalves were found in massive and branching corals, near the colony surface and deep in the colonies and represent successive generations in the same host coral.¹¹";

5379 s[5376] = "WOOD R.A., REITNER J. (1988).- The Upper Cretaceous "Chaetetid" demosponge Stromatoaxinella irregularis n.gen. (Michelin) and its systematic implications.- Neues Jahrbuch Geol. Palaeont. Abh. 177, 2: 213-224.- FC&P 18-1, p. 51, ID=2303Topic(s): ; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: Cretaceous U; Geography: ^The "chaetetid" Blastochaetetes irregularis (Michelin) is redescribed. The presence of calcite pseudomorphs of long, thin style spicules indicates poriferan affinities. Their type and arrangement is characteristic of the Order Axinellida (Class Demospongia), but the unique combination of spicule type and arrangement requires a new genus, Stromatoaxinella, and family, Stromatoaxinellidae. The distinction previously drawn between "stromatoporoids" and "chaetetids" is artificial.¹¹;

5380 s[5377] = "WILMSEN M. (2003).- Taxonomy, autecology and palaeobiogeography of the middle Cretaceous genus Parkeria Carpenter, 1870 (spherical hydrozoan).- Journal of Systematic Palaeontology 1, 3: 161-186.- FC&P 34, p. 107, ID=1379Topic(s): revision; Hydrozoa, Parkeria; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous Alb - Cen; Geography: ^A revision of the poorly known, colonial, spherical hydrozoan genus Parkeria Carpenter 1870 and its included species is presented. Corresponding skeletal architecture and mode of accretion confirm the suggestion that the genus belongs to the family Hydractiniidae Agassiz 1862. A previous classification of Parkeria and the Late Triassic spherical hydrozoan genus Heterastridium Reuss 1865 within the family Heterastridiidae Frech 1890 was based on external morphology only. Considering the similarities of Heterastridium with representatives of the family Milleporidae Fleming 1828, the Heterastridiidae may well be redundant. Parkeria sphaerica Carter 1877, from the Late Albian / Early Cenomanian mainly of Europe, is characterised by an originally aragonitic, spherical skeleton up to 70 mm in diameter formed by concentric laminae and radiating pillars interlaced by stolonal tubes. P. cf. sphaerica from Oman lacks the concentric internal fabric and shows irregularly-formed skeletons; therefore, it is placed in the species with reservation. P. provalei Parona 1909, from the Aptian of Italy, is smaller (~20 mm), has larger skeletal interspaces and lacks the strict incremental growth of P. sphaerica. The absence of external attachment areas in Parkeria suggests a free-living mode of life. The skeletons of P. sphaerica and P. provalei testify long-term uniform centrifugal skeletal accretion. Contrary to previous assumptions, they are not interpreted as floating (i.e. planktonic) colonies but as 'benthic drifters'; that were constantly carried and drifted across the sea-bottom by currents and/or waves. This mode of life, where the zooids fed on benthic microorganisms, was aided by the light-weight design of the skeletons, the cavities of which were presumably filled with gas. Estimates of skeletal interskeletal ratios and density calculations support the existence of weak buoyancy. The

- genus shows a rather disjunct palaeobiogeographical distribution in shallow seas of low to warm-temperate palaeolatitudes during the Aptian and Late Albian / Early Cenomanian.^1";
- 5381 s[5378] = "JARMS G., VOIGT E. (1994).- *Filelloides* cretacea n.g. n.sp., ein durch Bioimmuration Ueberlieferter Vertreter der Ordnung Hydroida (Hydrozoa) aus der Maastrichter Tuffkreide (Obermaastrichtium).- *Paläontologische Zeitschrift* 68: 211-221.- FC&P 23-1.1, p. 75, ID=4166^Topic(s): new taxa; Hydrozoa, Filelloides; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Cretaceous Maas; Geography: ^A new thecate hydroid from the Maastrichtian Chalk (Upper Maastrichtian) preserved by bioimmuration is described as *Filelloides* cretacea n.g. n.sp. It comprises five hydrothecae of a hydrozoan colony settling upon an algae sheet, which were overgrown by a disc-shaped cyclostome bryozoan colony of the genus *Actinopora*. Its basal face shows the negative relief of the throughout annulated hydrothecae which are extremely well molded in all details. Among Recent colonial Hydroida the genus *Filellum* Hincks of the family Lafoeidae is the nearest relative, our specimen differs from the latter in that the hydrothecae are not connated with the hydrocaulus or the hydrorhiza. *Filelloides* n.g. is one of the few non-mineralized Cretaceous hydrozoan genera. Their rare record in the Mesozoic contrasts with their fairly common occurrence in the Palaeozoic.^1";
- 5382 s[5379] = "LOSER H. (1993).- Morphologic und Taxonomie der Gattung *Pseudopolytremacis* Morycowa 1971 (Octocorallia; Kreide).- *Courier Forschungsinstitut Senckenberg* 164: 211-220. [P. Oekentorp-Kuster (ed.) *Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera*, Vol. 1].- FC&P 22-2, p. 17, ID=3456^Topic(s): revision; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: Cretaceous; Geography: ^The genus *Pseudopolytremacis* Morycowa, 1971 (Octocorallia) has been morphologically examined in greater detail and taxonomically revised on the basis of abundant samples from the Cenomanian layers of the Saxon Upper Cretaceous and reference material from westphalia (Germany). It differs from the otherwise very similar *Polytremacis* in that there are spiniform accretions on the inner edges of the septa. The genus *Proheliopora* Kuzmicheva 1975 is considered to be synonymous with *Pseudopolytremacis*. Four species occurring in the Cretaceous (Barremian - Cenomanian of Eurasia) are assigned to this genus, one of them being described as a new species.^1";
- 5383 s[5380] = "LOSER H. (2005).- Stratigraphy of Cretaceous coral genera.- *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 238: 231-277.- FC&P 34, p. 62, ID=1288^Topic(s): stratigraphy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^Post-Palaeozoic coral genera are known to be long-lived. Systematicmonographs define the stratigraphic distribution of the genera in general terms such as "Jurassic" or "Early Cretaceous". The usefulness of the coral genera as dating aids is restricted by imprecise data concerning their stratigraphic distribution. More precise data could make it easier to date sediments that contain only corals or other organisms not really suited as index fossils. To assess the stratigraphic distribution of Cretaceous coral genera, a computer database containing records of species taken from the literature was analysed and compared with available type material in museums and university collections worldwide. Cases where the specimen data did not agree with the stratigraphic distribution of a genus reported in the literature were examined in detail and are discussed here. According to the literature a total of 705 coral genera (subclass Hexacorallia with the order Scleractinia; subclass Octocorallia with the orders Alcyonacea, Coenothecalia, and Gorgonaceae) are known from the Cretaceous. Range data were determined for 394 of them. The remaining 311 genera were found to be synonyms, poorly defined, invalid, or they simply did not occur in the Cretaceous. The

results of this study are restricted by the poor definition of many genera so that it was not possible to indicate their distribution because their morphological characteristics were unknown and it was not clear what species had to be assigned to them.¹";

- 5384 s[5381] = "LOSER H. (2006).- Morphology, taxonomy and distribution of the Cretaceous coral genus *Paronastraea* (Barremian-Cenomanian; Scleractinia).- *Rivista Italiana di Paleontologia e Stratigrafia* 112, 1: 131-121.- FC&P 34, p. 64, ID=1289^Topic(s):revision; Scleractinia, *Paronastraea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr - Cen; Geography: ^The middle Cretaceous genus *Paronastraea* Beauvais 1977 is being revised on the basis of sample material available from Italy, France, Germany, and Greece. *Paronastraea*, a plocoid and cerioid coral similar to *Pachycoenia*, is characterised by regular secondary septal apophyses arranged in pairs. Six species are distinguished by their respective numbers of septal cycles and systems, two of them in open nomenclature and one, *Paronastraea occulta* from the Early Aptian of Greece, is newly described. The genus occurred from the Barremian to the basal Cenomanian in the central and eastern Tethys.¹";
- 5385 s[5382] = "LOSER H. (2000).- Additional remarks on "Astrea ramosa" (Scleractinia; Cretaceous).- *Abhandlungen und Berichte für Naturkunde und Vorgeschichte* 21: 73-74.- FC&P 29-1, p. ..., ID=1485^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^The nomenclatorial uncertainty of the taxon "Astrea ramosa" (Actinastreaidae; Scleractinia) is discussed and the creation of a new species name for *Astrea ramosa* Sowerby 1832 sensu Michelin 1846 proposed.¹";
- 5386 s[5383] = "LOSER H. (2000).- Korallen der Kreide - jede Menge Daten, aber keine Ergebnisse. Geschichte, Methodik und gegenwärtiger Stand der Forschung.- *Zentralblatt für Geologie und Paläontologie* II, 2000, 3/4: 251-290.- FC&P 29-1, p. ..., ID=1486^Topic(s):research problems; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^^^1";
- 5387 s[5384] = "LOSER H. (2000).- Catalogue of Cretaceous Corals I. Repertoire of Species.- *Catalogue of Cretaceous Corals* 1, 137 pp; Dresden (CPress Verlag).- FC&P 32-2, p. 56, ID=1487^Topic(s):species index; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^The Repertoire lists a total of 3,030 coral species whose type localities are - as far as is known - of a Cretaceous age and were established in the period between 1758 and 1999. The Repertoire of Species is designed on the basis of the valuable work published by Bernard Lathuilière on the Jurassic corals (1989), but some details have been modified (thus, the authors of genera are indicated, papers published by one and the same author in the same year are more clearly distinguished). The Repertoire lists all species under the current genus and under the genus under which the species was originally established (according to the literature published before January, 1, 2000). Synonyms, both objective and subjective ones, are generally not taken into account. All species are cited, whether they are synonymous or not. Species which are described in the sense of a subsequent author and used over a long time period are indicated. Invalid species are cited according to their low number but are indicated and invalid species names are cited without correction. Also homonyms (genera and species) are cited as they are. The type locality (or region, if no exact type locality is known), lithostratigraphy and chronostratigraphy are indicated under the original genus. It is indicated as correctly as possible. In some rare cases in which several localities in various countries are indicated, no locality is cited. Where the name of the locality (or of the formation) has changed since it was first used in the literature, the old name is indicated in brackets. An index is provided which cites the generic and specific

names; the specific name points to two entries when the original and current genus differ. The reference list indicates all authors of taxa cited; in a few cases where the exact source was not found, it has been omitted. ^1";

- 5388 s[5385] = "BARON-SZABO R.C. (2002).- Scleractinian corals of the Cretaceous. A compilation of Cretaceous forms with descriptions, illustrations and remarks on their taxonomic position.- published by the author: 539 pp., 142 pls., 86 text-figs; Knoxville, Tennessee. [review] - FC&P 32-1, p. 28, ID=1730^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^This study is a taxonomic review of the scleractinian coral genera of the Cretaceous period. It deals with over 600 taxa, of which nearly 300 are discussed in detail. It is the first extensive compilation of Cretaceous coral genera since the Treatise works of Alloiteau (1952a, 1957) and wells (1956). A diagnosis is provided for each genus, as well as for each higher levels taxonomic category, and issues concerning taxonomic assignments are discussed in detail. The descriptions are accompanied by illustrations (142 pls. And 86 text-figs.) of representatives of each genus and, in many cases, include illustrations of the holotype or a paratype of the type species. Also included is the first comprehensive overview of the stratigraphical and geographical ranges of each genus from Triassic to recent. A glossary and index to the genera and approximately 2200 species are provided, and the following new taxa are described: Columnocoenia elachia nom. nov., Turnsekophyllia cantabrica gen. nov., sp.nov., Rhipidastraea eliasovae sp.nov., Cycloseris (?) wellsii sp.nov., and Comoseris aptiensis sp.nov. A neotype is established for the type species of the genus Thecosmilia, Thecosmilia trichotoma (Goldfuss, 1826).^1";
- 5389 s[5386] = "BEAUVAIS L. (1981).- Microstructure, systematics and phylogeny of the genus Palaeohelia Alloiteau (Mid Cretaceous Scleractinia).- 4th Internat. Coral Reefs Symp., Abstract volume: 5.- FC&P 11-1, p. 27, ID=1744^Topic(s): taxonomy; Scleractinia, Palaeohelia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous M; Geography: ^^1";
- 5390 s[5387] = "LOSER H. (2007).- Morphology, taxonomy and distribution of the Cretaceous coral genus Preverastraea (Late Barremian-Cenomanian; Scleractinia).- Rivista Italiana di Paleontologia e Stratigrafia 113, 1: 3-19.- FC&P 35, p. 77, ID=2389^Topic(s): revision; Scleractinia, Preverastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr - Cen; Geography: ^The Cretaceous coral genus Preverastraea is being revised, mainly on the basis of sample material. This cerioid, occasionally astreoid or phaceloid, genus is characterised by round or polygonal calices, compact septa in a regular hexamerall symmetry and lonsdaleoid septa. The wall is of the same structure as the septa. The genera Bogdanovicoenia, Paraacanthogyra, and Saxuligyra are considered synonyms of Preverastraea. Related genera are Aulastraeopora and Apoplacophyllia, which only differ by their solitary or dendroid growth forms. There are altogether 13 species of Preverastraea. The genus, which occurred worldwide, is restricted to the period from the Late Barremian to the Late Cenomanian, being most common in the Aptian to Early Albian. Eighty-three samples are either known from the literature or have been to hand. This makes Preverastraea a rather rare genus.^1";
- 5391 s[5388] = "LOSER H. (2008).- Morphology, taxonomy and distribution of the Cretaceous coral genus Aulastraeopora (Late Barremian-Early Cenomanian; Scleractinia).- Rivista Italiana di Paleontologia e Stratigrafia 114, 1: 19-27.- FC&P 35, p. 77, ID=2391^Topic(s): revision; Scleractinia, Aulastraeopora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Barr - Cen; Geography: ^The Cretaceous coral genus Aulastraeopora is being revised, mainly on the basis of sampled material. This genus of solitary growth form is characterised by

medium-sized to large specimens, compact septa in a regular hexameral or tetrameral symmetry and lonsdaleoid septa. Related genera are *Preverastraea* and *Apoplacophyllia*, which only differ by their cerioid-astreoid and phaceloid growth forms. There are four species of *Aulastraeopora*. The genus, which occurred world-wide, is restricted to the period from the Late Barremian to the Late Cenomanian, being most common in the Aptian to Early Albian. Forty-one samples are either known from the literature or have been to hand. This makes *Aulastraeopora* a rare genus.¹";

- 5392 s[5389] = "STOLARSKI J., MEIBOM A., PRZENIOSLO R., MAZUR M. (2007).- A Cretaceous scleractinian coral with a calcitic skeleton.- *Science* 318, 5847: 92-94.- FC&P 35, p. 115, ID=2452Topic(s): calcitic skeleton; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography:^It has been generally thought that scleractinian corals form purely aragonitic skeletons. We show that a well-preserved fossil coral, *Coelosmilia* sp. from the Upper Cretaceous (about 70 million years ago), has preserved skeletal structural features identical to those observed in present-day scleractinians. However, the skeleton of *Coelosmilia* sp. is entirely calcitic. Its fine-scale structure and chemistry indicate that the calcite is primary and did not form from the diagenetic alteration of aragonite. This result implies that corals, like other groups of marine, calcium carbonate-producing organisms, can form skeletons of different carbonate polymorphs.¹";
- 5393 s[5390] = "REIG J.M. (1988).- Sobre la posicion sistematica del genero *Placogyropsis* Alloiteau 1957. (*Scleractinia* cretatica). [on systematic position of the genus *Placogyropsis*; in Spanish, with English summary] .- *Acta geologica Hispanica* 23: 299-302.- FC&P 19-1.1, p. 54, ID=2670Topic(s): systematics; Scleractinia, *Placogyropsis*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography:^The genus *Placogyropsis* Alloiteau 1957 was included by Alloiteau in the family *Dendrogyriidae*. After several topotypes of *P. corbariensis* (type-species) this genus is studied. A diagnosis is proposed: Colonial, pedunculate, plocoid with emerged poliperites, arranged in short series. Deep and narrow ambulacra. Laminae columella. Some septa and costae perforate. Synapticula between septa and very abundant in peritheca. The genus is suggested to be placed in the family *Latomeandriidae*.¹";
- 5394 s[5391] = "REIG ORIOL J.M. (1987).- Revision y validez del genero *Anisoria* (*Escleractinia* cretatica).- *Trab. Mus. geol. Seminario Barcelona* 222: 3-9. [in Spanish, with English summary].- FC&P 20-1.1, p. 63, ID=2834Topic(s): revision; Scleractinia, *Anisoria*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography:^The genus *Anisoria*, endemic from Catalanian Maastrichtian is revised. Its validity is proved and a new species, named *Anisoria batalleri* is erected. On the other hand the species *Anisoria linarii* having a columella, must be placed in *Dictyophyllia*.¹";
- 5395 s[5392] = "REIG ORIOL J.M. (1988).- Sobre la posicion sistematica del genero *Placogyropsis* Alloiteau 1957. (*Scleractinia* cretatica).- *Acta Geologica Hispanica* 23: 299-302.- FC&P 20-1.1, p. 63, ID=2836Topic(s): revision; Scleractinia, *Placogyropsis*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography:^The genus *Placogyropsis* Alloiteau 1957 was included by Alloiteau in the family *Dendrogyriidae*. After several topotypes of *P. corbariensis* (type-species) this genus is studied. A diagnosis is proposed: colonial, pedunculate, placoid with emerged poliperites, arranged in short series. Deep and narrow ambulacra. Laminae columella. Some septa and costae perforate. Synapticula between septa and very abundant in peritheca. The genus is suggested to be placed in the family *Latomeandriidae*.¹";
- 5396 s[5393] = "MORYCOWA E. (1997).- Some remarks on *Eugyra* de Fromentel 1857 (*Scleractinia*, Cretaceous).- *Boletin de la Real Sociedad Espanola*

de Historia Natural, Seccion Geologica 91, 1/4: 287-295.- FC&P 26-2, p. 17, ID=3691Topic(s): revision; Scleractinia, Eugyra; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^The morphological and microstructural characteristics of the type species of the genus Eugyra de Fromentel 1857, Eugyra cotteau de Fromentel 1857 have been examined. On the basis of these features it has been shown that this genus should be placed in the suborder Astreaoia and in the family Faviidae.^1";

5397 s[5394] = "REIG J.M. (1997).- Sobre el genero Meandrastrea y su especie Meandrastrea crassisepta (Madreporario cretacoico).- Battering: 7: 53-56.- FC&P 26-2, p. 73, ID=3757Topic(s): revision; Scleractinia, Meandrastrea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous Apt - Maas; Geography: ^An emended diagnosis of the genus Meandrastrea is given after the study of one species of this genus. A list of the included species in this genus is offered. The genus ranges from Upper Aptian until Maastrichtian.^1";

5398 s[5395] = "LOSER H. (2009).- Revision of the Scleractinian coral genus Diplocoenia and re-description of the Cretaceous species.- Rivista Italiana di Paleontologia e Stratigrafia 115, 1: 49-58. [revision] - FC&P 36, p. 95, ID=6511Topic(s): ; Scleractinia Diplocoenia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^The Cretaceous species of the coral genus Diplocoenia are revised, mainly on the basis of sample material. This genus is characterised by polygonal calices in a cerioid arrangement, compact septa in a regular symmetry and a dissepimental ring with the appearance of a second inner wall. Of the 18 Cretaceous species reported in the literature, five are confirmed, four are synonyms and nine do not belong to this genus. The species with the widest geographic and stratigraphic distribution is Diplocoenia dollfusi Prever, 1909, originally described from the Monti d'Ocre complex in the Abruzzan province. The genus occurs in the Cretaceous only in the central Tethys and in the Boreal, and ranges from the Middle Jurassic to the Aptian (?Early Albian). Only about 50 samples from the Cretaceous exist or are known from the literature, making Diplocoenia rather rare in the Cretaceous. [original abstract]^1";

5399 s[5396] = "LOSER H. (2010).- Revision of the Early Cretaceous coral genus Felixigyra and general remarks on the faviid hydnochoroid coral genera.- Rivista Italiana di Paleontologia e Stratigrafia 116, 2: 177-188. [revision] - FC&P 36, p. 97, ID=6515Topic(s): ; Scleractinia Felixigyra; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: ^The Early Cretaceous coral genus Felixigyra Prever 1909 is revised on the basis of type material from Italy. Felixigyra has a hydnochoroid-meandroid colony organisation with conical monticules attached to each other. The very thick monticules are arranged in a way that calicular centres become apparent. The septa are compact and rhopaloid. The genus can be related to other genera of the Eugyridae family, but differs from them by its particularly developed monticules. It also shows certain resemblance to meandroid genera of the family Trochoidomeandridae. Of the six species originally assigned to Felixigyra only five are recognized, since the type of Felixigyra crassa is too poorly preserved to give a diagnosis. The remaining five species have almost no significant difference in calicular dimensions. In addition to the Italian material, one sample from the Early Cenomanian of Greece and one sample from the Early Albian of Mexico are also assigned to the genus. Material assigned to Felixigyra after Prever (1909) needs to be entirely reclassified to the genus Eohydnochora. [original abstract]^1";

5400 s[5397] = "LOSER H. (2010).- Revision of the Cretaceous coral genus Tiarasmilia wells, 1932 (Scleractinia).- Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen 258, 2: 157-165. [revision] -

- FC&P 36, p. 97, ID=6516Topic(s): ; Scleractinia Tiarasmilia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^The Early to early Late Cretaceous coral genus Tiarasmilia Wells, 1932 is revised on the basis of the type species. The solitary coral is characterised by regular septal symmetry and the abundant apophysal septa that ornament the septa pairwise. The genus is re-assigned to the family Heterocoeniidae. The genus Budaia Wells, 1933 is considered to be a junior synonym of Tiarasmilia. Four Tiarasmilia species are recognised, the respective type species of Tiarasmilia and Budaia, and two as yet unnamed species for which not enough specimens were available to erect new taxa. [original abstract]^1";
- 5401 s[5398] = "HELM C., RICHTER H. (1999).- Onchotrochus minimus (Bölsche) - eine scolecoide, an Weichböden angepaßte Koralle (boreale Oberkreide).- Mitteilungen aus dem Geologischen-Paläontologischen Institut der Universität Hamburg 83: 191-202.- FC&P 29-1, p. 39, ID=7020Topic(s): taxonomy; Scleractinia Onchotrochus; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous U; Geography: ^^1";
- 5402 s[5399] = "LOSER H. (1998).- Remarks on the Aulastreaoporidae and the genus Aulastreaopon (Scleractinia; Cretaceous) with the description of a new species.- Abhandlungen und Berichte für Naturkunde und Vorgeschichte 20: 59-75.- FC&P 28-1, p. 42, ID=3974Topic(s): taxonomy; Scleractinia, Aulastreaoporidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous; Geography: ^On the base of type material and depicted specimens, features and genera of the family Aulastreaoporidae (Order Scleractinia, suborder Heterocoeniina) are discussed. The genus Aulastreaopora Prever 1909 is described in detail and is considered to be a senior synonym of Blothrocycathus Wells 1932. The known species of Aulastreaopora are briefly described. One species - A. schnauzeae from the Cenomanian of Greece - is newly described.^1";
- 5403 s[5400] = "FILKORN H.F., PANTOJA-ALOR J. (2004).- A new Early Cretaceous coral (Anthozoa; Scleractinia; Dendrophylliina) and its evolutionary significance.- Journal of Paleontology 78, 3: 501-512.- FC&P 33-1, p. 70, ID=1146Topic(s): taxonomy, phylogeny; Scleractinia, Dendrophylliina; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous L; Geography: ^A new coral, Blastozopsammia guerreroensis, from the Mid-Cretaceous (upper Albian-lower Cenomanian) Mal Paso Formation of southwestern Mexico is the earliest known and the first Mesozoic colonial member of the Dendrophylliidae, an extant worldwide group. Blastozopsammia is characterized by a ramose corallum produced by extratentacular budding, dimorphic corallites, and branches with a continuous axial corallite sheathed in an orderly arrangement of radially arrayed secondary corallites and a robust layer of reticulate coenosteum. This growth form is similar to that of many modern reef-building species of Acropora Oken, 1815 and species of a nonreefal Petrophyllia Conrad, 1855 (=Archohelia Vaughan, 1919). Based on corallite configuration, growth form and analogy with Acropora, Blastozopsammia had a relatively high degree of colony integration and may have been zooxanthellate. The combination of an axial corallite with radially arrayed secondary corallites has been regarded as one of the morphological and ecological pinnacles of coral evolution, yet it is rare among the Scleractinia. This growth form has not been recognized in any Cenozoic dendrophylliids. Blastozopsammia is an evolutionary enigma because no ancestral lineage or closely related taxon has been identified. However, the most likely origin of colonial Dendrophylliidae is Jurassic or Early Cretaceous Actinacididae. [original abstract]^1";
- 5404 s[5401] = "STUEBER T. (1996).- Stable Isotope Sclerochronology of Late Cretaceous Rudist Bivalves.- Goettinger Arbeiten zur Geologie und Paläontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation

I. Reef Evolution]: pp- **FC** P 26-1, p. 34, ID=3591**Topic(s):** stable isotopes; rudista; **Systematics:** Mollusca; **Stratigraphy:** Cretaceous U; **Geography:** Late Cretaceous hippuritid and radiolitid rudists have been analyzed in sclerochronological profiles for isotopic (^{13}C , ^{18}O) and chemical (Ca, Mg, Sr, Mn, Fe) compositions of calcitic outer shell layers. Seasonal temperature gradients of 9-12°C are recorded in shells from paleolatitudes of 20-30° N (Greece, Turkey), and no distinct annual temperature variations existed in the probably more saline surface waters of the equatorial Tethys (Oman). Annular growth rates are delineated by a distinct cyclicity in ^{18}O and Mg concentrations, and range from 6-10 mm in calm lagoonal settings to 40mm in habitats with rapidly accumulating or unstable substrata. Potential community CaCO_3 productions approach the upper limit of modern coral reefs, and occurred at similar levels in calcareous and siliciclastic environments. Sedimentation rates and rudist growth fabrics are constrained by different growth rates of coexisting species.¹;

- 5405 s[5402] = "JAHNKE H., GASSE W. (1993).- Bestandskatalog der Kreideschwamme. Originale im Institut und Museum fuer Geologie und Palaeontologie, Goettingen, und im Roemer-Museum, Hildesheim.- Mitteilungen aus dem Roemer-Museum Hildesheim NF4: XIV + 1-119.- **FC** P 22-2, p. 91, ID=3538**Topic(s):** collections of fossils; Porifera; **Systematics:** Porifera; **Stratigraphy:** Cretaceous; **Geography:** An extensive catalogue of Cretaceous sponges within the collections of the two museums in Goettingen and Hildesheim. It starts with a general introduction and provides examples of the handwritings of Schrammen, Zittel and Roemer, which has proven very useful for the identification of non-figured types. It also contains a biographical chapter of life and work of Anton Schrammen who wrote the main well-known monograph on Jurassic and Cretaceous siliceous sponges. The catalogue itself is very detailed. It is organized according to the lowermost taxonomic species or subspecies level and contains all data, when and where published, nomenclatorial status, as well as (according to the labels) locality source and stratigraphic position. On the plates a representative choice of the types are figured, and the main skeletal architectures are shown in very nice and instructive SEM-photos. A great help for everybody interested in Cretaceous siliceous sponges!¹;
- 5406 s[5403] = "HOFLING R., SCOTT R.W. (2002).- Early and mid-Cretaceous buildups.- SEPM Special Publications 72 [w. Kiessling, E. Flügel & J. Golonka(eds): Phanerozoic Reef Patterns; ISBN: 1-56576-081-6]: 521-548.- **FC** P 33-2, p. 29, ID=1153**Topic(s):** reefs; reefs; **Systematics:** ; **Stratigraphy:** Cretaceous L & M; **Geography:** Early and mid-Cretaceous buildups.¹;
- 5407 s[5404] = "KIESSLING W., BARON-SZABO R.C. (2004).- Extinction and recovery patterns of scleractinian corals at the Cretaceous-Tertiary boundary.- Palaeogeography, Palaeoclimatology, Palaeoecology 214, 3: 195-223.- **FC** P 33-2, p. 30, ID=1155**Topic(s):** extinctions K/Pg; Scleractinia; **Systematics:** Cnidaria; Scleractinia; **Stratigraphy:** Cretaceous & Paleocene; **Geography:** The extinction and recovery of scleractinian corals at the Cretaceous-Tertiary (K-T) boundary was analyzed based on a global database of taxonomically revised late Campanian to Paleocene coral collections. In contrast to earlier statements, our results indicate that extinction rates of corals were only moderate in comparison to other marine invertebrates. We have calculated a 30% extinction rate for Maastrichtian coral genera occurring in more than one stratigraphic stage and more than one geographic region. Reverse rarefaction suggests that some 45% of all coral species became extinct. Photosymbiotic (zooxanthellate) corals were significantly more affected by the extinction than azooxanthellate corals; colonial forms were hit harder than solitary forms, and among colonial forms an elevated

integration of corallites raised extinction risk. Abundance, as measured by the number of taxonomic occurrences, had apparently no influence on survivorship, but a wide geographic distribution significantly reduced extinction risk. As in bivalves and echinoids neither species richness within genera nor larval type had an effect on survivorship. An indistinct latitudinal gradient is visible in the extinction, but this is exclusively due to a higher proportion of extinction resistant azooxanthellate corals in higher-latitude assemblages. No significant geographic hotspot could be recognized, neither in overall extinction rates nor in the extinction of endemic clades. More clades than previously recognized passed through the K-T boundary only to become extinct within the Danian. These failed survivors were apparently limited to regions outside the Americas. Recovery as defined by the proportional increase of newly evolved genera, was more rapid for 31 zooxanthellate corals than previously assumed and less uniform geographically than the extinction. Although newly evolved Danian azooxanthellate genera were significantly more common than new zooxanthellate genera, the difference nearly disappeared by the late Paleocene suggesting a more rapid recovery of zooxanthellate corals in comparison to previous analyses. New Paleocene genera were apparently concentrated in low latitudes, suggesting that the tropics formed a source of evolutionary novelty in the recovery phase.¹¹;

5408 s[5405] = "BARON-SZABO R.C. (2006).- Corals of the K/T-boundary: Scleractinian corals of the Suborders Astrocoeniina, Faviina, Rhipidogyrina, and Amphistraeina.- Journal of Systematic Palaeontology 2006, 4: 1-108.- FC&P 34, p. 51, ID=1270^Topic(s): extinctions K/Pg; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous / Paleocene; Geography: ^This taxonomic review of the scleractinian corals of the Maastrichtian and Paleocene period focuses on the scleractinian suborders Astrocoeniina, Faviina, Rhipidogyrina and Amphistraeina. This, the first extensive compilation of coral species of the K/T (Cretaceous/Tertiary) boundary, deals with more than 2500 records of 550 nominal taxa. In addition to the re-examination and re-evaluation of described forms, this study also includes the first description of the largest Maastrichtian coral assemblage known (consisting of about 4000 specimens from Jamaica), as well as new material from the Campanian-Maastrichtian of Argentina, Lower Maastrichtian of Mexico (Cerralvo), and the Paleocene of Austria (Kambüchel-Kalke). A diagnosis is provided for each species, as well as for each higher-level taxonomic category and issues concerning taxonomic assignment are discussed in detail. The descriptions are accompanied by illustrations of representatives of each species and, in many cases, include illustrations of type or original material. Also included is the first comprehensive overview of the stratigraphical and geographical ranges of each taxon. In the four suborders evaluated in this paper, 123 valid species can be reliably documented as occurring in the Maastrichtian and/or the Paleocene. The largest number of species is in the suborders Faviina and Astrocoeniina. In the Faviina 62 valid species are known from the Maastrichtian, of which 35 (56.5%) crossed the K/T-boundary, while in the Paleocene 14 new species appeared. In the Astrocoeniina 18 valid species occurred in the Maastrichtian, eight of which (44.4%) crossed the K/T-boundary and 16 new species appeared in the Paleocene. Only eight species of Rhipidogyrina and five species of Amphistraeina occurred in the Maastrichtian and although two amphistraeininid made it into the Paleocene, only one of the rhipidogyrinids crossed the K/T boundary. No new species of Amphistraeina appeared in the Paleocene. According to this revision on the genus level 44 out of the 65 genera crossed the K/T-boundary, which is 67.7% (12 genera went extinct, 9 genera have their first occurrence in the Paleocene). In comparison to previous estimates this result (generic extinction of around 32%) represents the best estimation for scleractinian corals at present and

- corresponds to recently reported results of other macroinvertebrate groups after taxonomic revision (e.g. echinoids). ^1";
- 5409 s[5406] = "ROSEN B.R., TURNSEK D. (1989).- Extinction patterns and biogeography of scleractinian corals across the Cretaceous / Tertiary boundary.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 355-370.- FC&P 19-1.1, p. 14, ID=2555^Topic(s): extinctions K/Pg; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous / Paleocene; Geography: ^^1";
- 5410 s[5407] = "BARTA-CALMUS S. (1984).- Le passage Crétacé-Tertiaire chez les Scléractiniaux.- Comité des Travaux Hist. et Scientif., Bulletin de la Section des Sciences 6, Paléontologie [Le passage Mésozoïque-Cénozoïque. Point de vue paléontologique.]: 11-19, 3 pls.- FC&P 14-1, p. 17, ID=6604^Topic(s): extinctions K/Pg; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cretaceous / Paleogene; Geography: ^^1";
- 5411 s[5408] = "REITNER J., ENGESER T. (1987).- Skeletal structures and habitats of recent and fossil Acanthochaetetes (subclass Tetractinomorpha, Demospongiae, Porifera).- Coral Reefs 06: 13-18.- FC&P 16-2, p. 35, ID=1922^Topic(s): structures, ecology; Porifera, Demospongiae, Acanthochaetetes; Systematics: Porifera; Chaetetida; Stratigraphy: Cretaceous - Recent; Geography: ^[a late Albian specimen of the genus is remarkably similar to modern examples; the microstructure of the high-Mg calcite skeleton is irregular or microlaminar; the only difference between the fossil and recent species is the greater variability of microscleres in the living one]^1";
- 5412 s[5409] = "REITNER J. (1989).- Lower and Mid-Cretaceous Coralline Sponge Communities of the Boreal and Tethyan Realms in Comparison with the Modern Ones - Palaeoecological and Palaeogeographical Implications.- Proc. 3rd International Cretaceous Symposium Tuebingen 1987 [Wiedmann J. (ed.): Cretaceous of the western Tethys]: 851-878; Schweizerbart, Stuttgart.- FC&P 20-1.1, p. 73, ID=2860^Topic(s): ecological & geographical comparison; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: Cretaceous - Recent; Geography: ^The coralline sponges (chaetetids, stromatoporoids, sphinctozoans, pharetronids) are sponges with a rigid calcareous basal skeleton. Within modern oceans 3 communities are observed: 1. An Indopacific reef community characterized by calcified demosponges like Acanthochaetetes, Astrosclera, Stromatospongia, Merlia, and pharetronid calcarean sponges (Murrayonida, Minchinellia). 2. A Mediterranean non-reefal community characterized by pharetronids (e.g. Petrobiona) and the calcified demosponge Merlia normani. 3. A Caribbean reef community characterized by ceratoporellid / agelasid calcified demosponges. From the mid-Cretaceous comparable communities are known. Non-reefal subtropical pharetronid communities are known from the Aptian of Faringdon (England) and the Cenomanian of the Essener Gruensand (West Germany). These sponge communities are characterized by sycettid sphinctozoans (Barroisia, Thalamnopena), minchinellid pharetronids (Lymnorea), and rarely by the calcified demosponge Neuropora. The Barremian / Lower Aptian coralline sponge communities from the Tethyan Realm (e.g. Helvetic & Schrattenkalk&) are not comparable with the modern ones. After the Middle Aptian (Gargasian) events new coralline sponge communities occurred within the North Spanish Urgonian reef platforms, e.g. the Acanthochaetetes community which has close taxonomic and ecological relationship with the modern Pacific Acanthochaetetes community. The genus Acanthochaetetes is first reported from the Albian Mural Limestone in Arizona (USA). From a late Cenomanian hardground (Liencre, Northern Spain) a deeper water sphinctozoan demosponge community is described (Vaceletia / Acanthochaetetes community)

which has also a close correspondence to some modern occurrences of coralline sponges within deeper water environments of Indopacific reefs. The extant Indopacific *Acanthochaetetes* / *Vaceletia* community and the Mediterranean coralline *Calcarea* community are relict faunas ("living fossil communities") from the mid-Cretaceous Tethyan Ocean.^1";

5413 s[5410] = "PFISTER T. (1977).- Das Problem der Variationsbreite von Korallen am Beispiel der oligozanen *Antiguastrea lucasiana* (Defrance).- *Eclogae Geologicae Helvetiae* 70, 3: 825-843.- FC&P 6-1, p. 30, ID=0103^Topic(s): variability; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Oligocene; Geography: ^^1";

5414 s[5411] = "KUZMICHEVA E.I. (1975).- Early and Middle Paleogene corals of some districts.- In *Evolution and change of organic kingdom at the Mesozoic-Cenozoic Boundary*: 15-51; Nauka, Moskva.- FC&P 4-2, p. 52, ID=5242^Topic(s): ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Paleogene; Geography: ^^1";

5415 s[5412] = "BOSELINI F.R., RUSSO A. (1995).- The scleractinian genus *Actinacis*. Systematic revision and stratigraphic record of the Tertiary species with special regard to Italian occurrences.- *Rivista Italiana di Paleontologia e Stratigrafia* 101, 2: 215-230.- FC&P 25-1, p. 44, ID=3041^Topic(s): revision; Scleractinia, *Actinacis*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Paleogene; Geography: ^Twenty-seven Tertiary species belonging to the cosmopolitan reef-building scleractinian genus *Actinacis*, have been described in the literature. A detailed systematic revision has been carried out for Italian and European species by thin section measurements of material mostly sampled from several Italian localities, by observation of some holotypes and topotypes and accurate examination of the available literature. A combination of several measured corallite morphologic characters and diagnostic features is proposed as a reliable tool for species recognition. Results indicate that only three species, of the twelve described for the Italian Tertiary sites, actually belong to the genus *Actinacis*. Moreover, a list of synonyms and a stratigraphic range chart of the established species are proposed. An approximate taxonomic identification and stratigraphic distribution are given for those species not included in the systematic revision. Preliminary examination of the stratigraphic and geographic distribution of *Actinacis* species suggests that: 1) the Tertiary distribution of the genus ranges from the Late Paleocene to the Late Oligocene (from Late Cuisian to Middle Chatian as concerns Italy); 2) the highest species diversity occurred during the Middle Eocene, when the genus consisted of a relatively large number of geographically restricted species; 3) only two widespread species survived the Eocene/Oligocene turnover and reached the Late Oligocene, when the genus became globally extinct.^1";

5416 s[5413] = "GILL G.A., RUSSO A. (1973).- Présence d'une structure septale de type "Montlivaltia" chez *Trochosmilium*, *Madréporaire* Eocene.- *Annales de Paléontologie* 1973: 35-80.- FC&P 2-1, p. 20, ID=4733^Topic(s): septal structures; Scleractinia, *Trochosmilium*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: ^In the Jurassic genera *Montlivaltia*, *Stereophyllia* and *Thecosmilium* and in *Cyclastraea spinosa* of Cenomanian age, Gill (1970) and Gill and Lafuste (1971) have recognized a common structure to the septa. This structural pattern is characterized by trabeculae, rhombic in transverse section, which compose a median part often thickened by laminar layers. Described in the two above-mentioned works, this type of septa was proposed as a basis for the superfamily *Montlivaltioidae* All. 1952 emend. Gill and Lafuste, 1971. The authors suggested as well that such a septal scheme existed also from the Upper Cretaceous and onwards. A collection of Eocene corals from Northern Italy permits the time upper

Limit of this structure to be extended into the Tertiary due to its discovery in *Trochosmilium corniculum* (Mich.) and other genera still under study. The inventory of corals having a Montlivaltid septal type is for the time being rather small and an elaboration of a detailed classification within the superfamily is therefore premature. Nevertheless, a comparison of characters of the aforementioned genera emphasizes the distinction of two groups, one containing *Montlivaltia*, *Stereophyllia* and *Thecosmilium*, the other *Cyclastraea* and *Trochosmilium*. In the present work *Trochosmilium corniculum* (Mich.) from the Eocene of Capo Mortola, province of Imperia (Northern Italy) is described. The neotype, chosen by Alloiteau for the genus *Trochosmilium* is lost but a thin section of it still exists permitting the identity of *T. corniculum* from Italy to be confirmed. A complementary description of the genotype *Cyclastraea spinosa* is given in order to demonstrate its relationship with *Trochosmilium*.¹¹;

5417 s[5414] = "RUSSO A. (1974).- Il genere *Cyclolitopsis* Reuss (corallo eocenico): struttura settale e sua posizione sistematica [Le genre *Cyclolitopsis* Reuss (Madréporaire éocène): structure septale et sa position systématique].- Bolletino della Società Paleontologica Italiana 13, 1-2: 3-16.- FC&P 3-1, p. 33, ID=4905Topic(s): microstructures, systematics; Scleractinia, *Cyclolitopsis*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: ^Cette étude morphologique de *Cyclolitopsis patera* (d'Ach.), polypier solitaire de Cap Mortola, Imperia (Lutétien supérieur) et de Possagno, Treviso (Priabonien), conduit aux conclusions suivantes: la structure septale de type "montlivaltidé" place *Cyclolitopsis* dans la superfamille *Montlivaltioidea* All. emend. Gill & Lafuste 1971 et exclue son appartenance aux *Cyclolitidae* d'Orb. (*Cunolitidae* All.), qui ont une structure septale pennulaire telle qu'elle a été définie par les auteurs précédents. * Après *Trochosmilium corniculum* (Mich.), étudié précédemment, *Cyclolitopsis* représente le second polypier éocène à structure septale "montlivaltidé", trouvé en Italie du Nord.¹¹;

5418 s[5415] = "RUSSO A. (1976).- Microstructure septale de quelques genres de Madréporaires eocènes.- Bolletino della Società Paleontologica Italiana 15, 1: 73-84.- FC&P 5-2, p. 15, ID=5461Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: ^The comparative study of the Eocene Scleractinia with primary aragonitic structure and of some other specimens of the same species recrystallized in calcite is carried out. * The species are: *Patalophyllia subinflata* (Catullo), with dentate septal margins, "*Placosmilium*" *bilobata* d'Achiardi, with smooth septal margins and "*Parasmilium*" *exarata* (Michelin), the septal margin of which is always broken. * *Patalophyllia subinflata* (Catullo) show large trabeculae with elliptical sections, which remember the "montlivaltidé" type illustrated by Gill (1970) and Gill & Lafuste (1971). * "*Placosmilium*" *bilobata* d'Achiardi show a trabecular zone not much developed, perhaps dubious, and assial structures are little and close each-other, while the septum almost entirely is developed by concentric fibro-lamellae. * "*Parasmilium*" *exarata* (Michelin) show little trabeculae close each-other. * The same microstructure is preserved in the calcite recrystallized specimens also.¹¹;

5419 s[5416] = "WALLACE C., ROSEN B.R. (2006).- Diverse staghorn corals (*Acropora*) in high-latitude Eocene assemblages: implications for the evolution of modern diversity patterns of reef corals.- Proceedings of the Royal Society of London (B) 273, 1589: 975-982.- FC&P 36, p. 108, ID=6540Topic(s): history; Scleractinia *Acropora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Eocene; Geography: ^*Acropora* is the most diverse genus of reef-building corals in the world today. It occurs in all three major

oceans; it is restricted to latitudes 31°N–31°S, where most coral reefs occur, and reaches greatest diversity in the central Indo-Pacific. As an exemplary genus, the long-term history of *Acropora* has implications for the evolution and origins of present day biodiversity patterns of reef corals and for predicting their response to future climate change. Diversification of *Acropora* was thought to have occurred in the central Indo-Pacific within the previous two million years. We examined Eocene fossils from southern England and northern France and found evidence that precursors of up to nine of 20 currently recognized *Acropora* species groups existed 49–34 Myr, at palaeolatitudes far higher than current limits, to 51°N. We propose that pre-existing diversity contributed to later rapid speciation in this important functional group of corals. [original abstract]^1";

5420 s[5417] = "THOMSON E. (1983).- Relation between currents and the growth of Palaeocene reef-mounds.- *Lethaia* 16, 3: 165-184.- FC&P 13-1, p. 24, ID=0402^Topic(s): currents; reefs; Systematics: ; Stratigraphy: Paleocene; Geography: ^^1";

5421 s[5418] = "IVANOV Ch.P., STOYANOVA R.Zh., KRYSTOVA M.A. (1972).- On the amino acid content and composition in fossils of Tertiary corals.- *C. R. Acad. bulgare des Sciences* 25, 3: 341-344.- FC&P 4-1, p. 23, ID=5076^Topic(s): fossils, amino acids; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: ^^1";

5422 s[5419] = "anonymous (D.Hill ?) (1981).- A list of the Tertiary coral types in the National Museum of Victoria.- *FC&P* 10, 1: 9-11.- FC&P 10-1, p. 9, ID=5465^Topic(s): collections of fossils; corals collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cenozoic; Geography: ^[types of the National Museum of Victoria, listed by genera in order as in the Treatise Pt F of 1956, then by species in alphabetic order]^1";

5423 s[5420] = "ROSEN B.R. (1984).- Formation of a working Group on Cainozoic Coral Taxonomy.- *FC&P* 13, 2: 31-34.- FC&P 13-2, p. 31, ID=6372^Topic(s): systematics, working group; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cainozoic; Geography: ^At the fourth International Symposium on Fossil Cnidaria, held in Washington in August 1983, a small group of attendants met informally to discuss ways of encouraging and co-ordinating studies of Cainozoic (i.e. including Recent) corals. * At the moment, most Cainozoic coral work is concentrated on faunas of a particular region and/or age, but it is also necessary to balance this with more work on the taxonomy of whole systematic groups like genera and families, throughout their geographical and stratigraphical ranges. * It was agreed that the group would especially try to encourage and co-ordinate systematic work and that it should remain very informal. Initially at least, Fossil Cnidaria [FC&P] (and possibly other existing newsletters) will be used as means of circulating information to participants. * In due course it is aimed to devise and announce projects for participation by post, and perhaps, eventually, to hold workshops, e.g. in conjunction with the four-yearly Fossil Cnidarian Meetings. [first fragment of a note; presented is also a circular for gathering info on researchers and their study areas]^1";

5424 s[5421] = "ROSEN B. (1984).- Reef coral biogeography and climate through the late Cainozoic: just islands in the sun or a critical pattern of islands?.- *Geological Journal* special issue 11 [P.J. Brenchley (ed.): Fossils and climate]: 201-262.- FC&P 14-1, p. 29, ID=6617^Topic(s): reefs, biogeography, paleoclimates; reefs, climate, biogeography; Systematics: Cnidaria; Anthozoa; Stratigraphy: Cainozoic; Geography: ^^1";

5425 s[5422] = "PERRIN C., BOSENCE D.W., ROSEN B.R. (1995).- Quantitative approaches to palaeozonation and palaeobathymetry of corals and coralline algae in Cenozoic reefs.- *Geol. Soc. London Spec. Publ.* 83 [D.W. Bosence & P.A. Allison (eds): Marine Palaeoenvironmental

Analysis from Fossils]: 181-229.- FC&P 25-2, p. 72, ID=3178^Topic(s): ecology, reefs; corals, coralline algae; Systematics: Cnidaria algae; Anthozoa; Stratigraphy: Cenozoic; Geography: ^The value of quantitative surveys of ancient reef slopes for palaeobathymetrie analysis is reviewed. Reefs are selected for palaeobathymetrie analysis because they are characterized by in situ preservation of benthic communities which are often depth related. In addition, if the reef crest and slope are preserved then ancient water depths can be measured. The zonation of living reefs has been measured using semi-quantitative phytosociological methods as well as a range of plot and plotless techniques, but there is little agreement as to a single best method. For this study a modified line intercept transect method is selected as it may be used on both living reefs and on various types of outcrops of fossil reefs. This method minimizes problems arising from outcrop conditions, is faster than quadrat methods, can be used to assess different frame-building taxa, matrix, cement and porosity along ancient reef surfaces, and is also frequently used in studies of living reefs. [first part of extensive summary]^1";

5426 s[5423] = "CHAIX C., CAHUZAC B. (2005).- Le genre *Culicia* (Scléractiniaire): systématique, écologie et biogéographie au Cénozoïque.- *Eclogae Geologicae Helvetiae* 98, 2: 169-187.- FC&P 34, p. 53, ID=1273^Topic(s): history; Scleractinia, *Culicia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: ^Historically, the genus *Culicia* (Anthozoa Scleractinia) was known (until Chevalier 1961) as beginning in the Burdigalian of Basse-Provence (France). The study of new crops in Aquitaine Basin as well as works in varied collections, show that the species *Culicia parasita* (Michelin 1847) has been living in this region since the Oligocene (Chattian), which is a noticeable extension of the stratigraphical range of this genus. This species is here amply illustrated, with specimens from each concerned stage, and paleoecologic data are provided. Otherwise, a whole bibliographic review of references concerning the genus *Culicia*, added to the new collection made in the western France and Mediterranean Neogene, mainly fills the classical stratigraphic hiatus recorded in the distribution of this genus between the Middle Miocene of Eastern Atlantic and the Pliocene-Quaternary of Australia; the question of possible phyletic relations between fossil and extant *Culicia* species is set. A map of biogeographic migration is proposed, including all the taxa of this genus.^1";

5427 s[5424] = "BUDD A.F., JOHNSON K.G. (1996).- Recognizing species of Late Cenozoic Scleractinia and their evolutionary patterns.- *Paleontological Society Papers* 1 [Stanley G. D. jr (ed.): *Paleobiology and Biology of Corals*]: 59-80.- FC&P 25-2, p. 52, ID=3145^Topic(s): numerical taxonomy; scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic U; Geography: ^New morphometric methods for distinguishing morphologically similar species of Recent colonial scleractinian corals involve the analysis of three dimensional landmarks digitized on calical surfaces. Variables suitable for multivariate statistical analysis are derived from the landmark data by applying various geometrical techniques, including Bookstein size and shape coordinates and generalized resistant fitting. Cluster analyses of these variables and study of the relative positions of replicates from the same colony on the resulting dendrograms are used to recognize clusters of colonies representing morphospecies. Comparisons with the results of genetic analyses on the same specimens suggest that these morphospecies correspond closely with biological species. Although slightly less effective, similar analyses of two dimensional landmark data collected on thin sections of the same specimens also distinguish species, and suggest that biological species can be approximated in the fossil record. Multivariate statistical analyses show that variables derived from two dimensional landmarks can

be used to trace the stratigraphic ranges of these fossil species. The appropriate method for tracing ranges depends of the evenness of sampling in different geologic horizons. Preliminary comparisons of observed stratigraphic ranges determined by this approach with those determined by cladistic analysis suggest that overall patterns in evolutionary rates through geologic time are the same for both approaches. Thus, nontraditional morphologic characters determined by subsequent examination of morphometrically-defined species have potential for providing sufficient resolution for phylogenetic analysis.¹¹;

- 5428 s[5425] = "BUDD A.F., KENNETH G.J. (1996).- Recognizing species of Late Cenozoic scleractinia and their evolutionary patterns.- In: G.D.Jr. Stanley, ed.: Paleobiology and Biology of Corals. Papers Paleont. Soc. 1: 59-79.- FC&P 26-1, p. 67, ID=3637^Topic(s): species recognition; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic U; Geography: ^New morphometric methods for distinguishing morphologically similar species of recent colonial scleractinian corals involve the analysis of three dimensional landmarks digitized on calical surfaces. Variables suitable for multivariate statistical analysis are derived from the landmark data by applying various geometrical techniques, including Bookstein size and shape coordinates and generalized resistant fitting. Cluster analyses of these variables and study of the relative positions of replicates from the same colony on the resulting dendrograms are used to recognize clusters of colonies representing morphospecies. Comparisons with the results of genetic analyses on the same specimens suggest that these morphospecies correspond closely with biological species. Although slightly less effective, similar analyses of two dimensional landmark data collected on thin sections of the same specimens also distinguish species, and suggest that biological species can be approximated in the fossil record. Multivariate statistical analyses show that variables derived from two dimensional landmarks can be used to trace the stratigraphic ranges of these fossil species. The appropriate method for tracing ranges depends of the evenness of sampling in different geologic horizons. Preliminary comparisons of observed stratigraphic ranges determined by this approach with those determined by cladistic analysis suggest that overall patterns in evolutionary rates through geologic time are the same for both approaches. Thus, nontraditional morphologic characters determined by subsequent examination of morphometrically-defined species have potential for providing sufficient resolution for phylogenetic analysis.¹¹;
- 5429 s[5426] = "GLIBERT M. (1974).- Quelques Turbinolidae cénozoïques des collections de l'Institut royal des Sciences naturelles de Belgique. 1 Genre Turbinolia Lamarck 1816.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Sciences de la Terre 50, 1: 1-27.- FC&P 4-2, p. 52, ID=5239^Topic(s): taxonomy; Scleractinia, Turbinolia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: ^14 espèces du genre Turbinolia Lmk. sont décrites dont 1 est nouvelle: T. paniselensis. On s'attache à la description de la disposition des loges et des costoseptes.¹¹;
- 5430 s[5427] = "BOSSELINI F.R. (1999).- The Scleractinian genus Hydnohpora (revision of Tertiary species).- Paläontologische Zeitschrift 73, 3/4: 217-240.- FC&P 29-1, p. 62, ID=5462^Topic(s): revision; Scleractinia, Hydnohpora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: ^This report presents a systematic revision of the Tertiary species of the common reef-building coral Hydnohpora. Major diagnostic characters of various Tertiary genera that have been commonly confused with Hydnohpora (Leptoria, Monticulastraea, Staminocoenia, Michelottiphyllia and Angeliphyllia) are defined and subsequently compared in order to establish differences and synonymies. With the exception of Leptoria,

all other genera are considered synonyms of Hydnothophora. * Forty-five Tertiary species ascribed to Hydnothophora, or to synonymous genera, have been revised and type material analyzed. Collected material from Oligocene Italian localities and Miocene localities from Somalia and Pakistan has been also analyzed in order to provide a consistent taxonomy for distinguishing species within the genus, especially for the Mediterranean Tertiary. * According to this report, of the forty-five species of Hydnothophora previously described, only twenty-one to be distinct. The Tertiary distribution of the genus, which started in the Late Paleocene, clearly shows that species richness increased significantly from Paleocene to Miocene. Originations of species were mostly concentrated during two time intervals, respectively the Chattian for the Mediterranean and the Burdigalian for the Eastern Tethys. As regards the Mediterranean, the genus developed only during Chattian time with five fully described species. The genus became extinct in both Caribbean and western-central Mediterranean regions at the end of the Oligocene and subsequently developed in eastern Tethys regions during the Miocene. * A new name is proposed for the only Paleocene species: Hydnothophora gregoryi. [original abstract]^1";

5431 s[5428] = "BUDD A.F. (1990).- A List of Tertiary Hermatypic Corals in the U.S. National Museum.- FC&P 19, 1.1: 79-87. [list of genera] - FC&P 19-1.1, p. 79, ID=6786^Topic(s): collection of fossils; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Cenozoic; Geography: ^During summer 1989, approximately 300 type specimens (primary types and hypotypes) were verified in the Tertiary hermatypic coral collections at the U.S. National Museum. The material included holotypes, lectotypes, and syntypes for 111 species in eight publications (below). Only two primary types in these publications could not be located which are: Maeandra antiquensis Vaughan 1919, 325003, 2 syntypes. Labels for all types were updated to include recent synonyms, more accurate stratigraphic age determination, and published figure numbers. [original introduction]^1";

5432 s[5429] = "PERRIN C. (1992).- Signification écologique des Foraminifères Acervulinidés et leur rôle dans la formation de faciès récifaux et organogènes depuis le Paléocène.- Géobios 25, 6: 725-751.- FC&P 23-1.1, p. 11, ID=4054^Topic(s): rock-forming; forams; Systematics: Foraminifera; Stratigraphy: Cenozoic; Geography: ^^1";

5433 s[5430] = "CRAME J.A., ROSEN B.R. (2002).- Cenozoic palaeogeography and the rise of modern biodiversity patterns.- Geological Society of London, Special Publications 194: 153-168. ISBN 1-86239-106-8. [book chapter] - FC&P 33-2, p. 10, ID=1099^Topic(s): biogeography biodiversity; geography; Systematics: ; Stratigraphy: Cenozoic; Geography: ^^1";

5434 s[5431] = "NEBELSICK J.H. (1996).- Encrustation of Small Substrates in Tertiary Limestones and Their Importance for Carbonate Sedimentation.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 32, ID=3585^Topic(s): encrusters; encrusters; Systematics: ; Stratigraphy: Cenozoic; Geography: ^Encrusting organisms play key roles in the development of reefs and carbonate sedimentation. In this study two small scaled encrustation phenomena consisting of encrusted echinoids and macroid formation from the lower Miocene are investigated quantitatively and compared with other examples including those from the Recent. The dominating encrusters are bryozoans followed by balanids, serpulids and coralline algae. The methods used were image analysis programs assessing percentage of encruster coverage as well as sphericity determination of the macroids. The results point to the complexity of encrustation sequences, the importance of growth form strategies, the interpretation of encrusted macrofossils and macroids

- as carbonate factories as well as the possible influence of soft-bodied organisms.^{^1}";
- 5435 s[5432] = "CHEVALIER J.P. (1977).- Apercu sur la faune corallienne recifale du Neogene.- Bureau Recherches Geologiques et Minieres Memoir 89: 062-064 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975]. see ID 55.- FC&P 6-1, p. 28, ID=0085Topic(s): reefs; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Neogene; Geography: ^^1";
- 5436 s[5433] = "HUSSEINI S.I. (1974).- Temporal and diagenetic modifications of the amino-acid composition of Pleistocene coral skeletons.- Dissert. Abstr. Internation. B 34, 9, p. 4452; Thesis (Ph. D.), Brown University, 151 pp.- FC&P 4-1, p. 15, ID=4992Topic(s): amino acids, phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Pleistocene; Geography: ^^1";
- 5437 s[5434] = "MORI K., MINOURA K. (1983).- Genetic control of septal numbers and the species problem in a fossil solitary scleractinian coral.- Lethaia 16, 3: 185-191.- FC&P 13-1, p. 46, ID=0502Topic(s): population, analysis; Scleractinia, Cyndrophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: ^Intraspecific morphological variations of a Pleistocene scleractinian coral, Cyndrophullia orientalis (Yabe & Eguchi), have been examined based on 792 specimens. The specimens are discoidal to short cylindrical in shape, with no significant change in their diameter during skeletal growth. Septal arrangements of the coralla are observed on upper and basal surfaces. Septal numbers do not change through the ontogeny of each corallum, even when the last cycle of septa is incomplete. Septal arrangements and numbers are controlled by intrinsic genetic factors. Heights of the coralla are controlled by environmental factors where they lived. If growth rates are presumed to be constant, heights can be regarded as indicating age of specimen. Assuming that this is the case, the survivorship curve shows that this fossil population had a constant death rate. Two varieties exist in this population: one has 20-28 septa, the other 30-40 septa, showing a dimorphic feature.^{^1}";
- 5438 s[5435] = "MORI K. (1987).- Intraspecific morphological variations in a Pleistocene solitary coral, Caryophyllia (Premocyathus) compressa Yabe & Eguchi.- Journal of Paleontology 61, 1: 21-31.- FC&P 16-1, p. 68, ID=1981Topic(s): variation intraspecific; Scleractinia, Caryophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pleistocene; Geography: ^Intraspecific morphological variations have been investigated based on 1.090 specimens of a Pleistocene solitary scleractinian coral, Caryophyllia (Premocyathus) compressa Yabe & Eguchi. Special attention has been paid to variations in special arrangements, septal numbers, insertion patterns of third cycle septa, and pali. The specimens contain nine different septal plans from hexamerall to decatetramerall, among which those having a decamerall plan are the most common. There is a clear regularity in number and position of the third-cycle septa. Specimens in which the third cycle is incomplete are also considered to be mature forms. Number and position of pali are intimately related to the number and insertion pattern of the third-cycle septa. In extreme cases, there exist specimens having only two cycles of septa and lacking pali. Ninety-nine varieties in septal arrangements are considered to be present in the fossil population, although only 57 have been found in the collection. The present species includes many specimens which do not show bilateral symmetry.^{^1}";
- 5439 s[5436] = "FOSTER A.B. (1979).- Environmental variation in a fossil scleractinian coral.- Lethaia 12, 3: 245-264.- FC&P 10-1, p. 57, ID=6005Topic(s): environmental variation; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Pliocene; Geography: ^[environmental variation in

- Solenastrea fairbanksi from Pliocene Imperial Formation]^1";
- 5440 s[5437] = "HERB R. (1984).- Récifs à huîtres actuels et miocènes.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 22.1-22.12.- FC&P 13-1, p. 11, ID=6335^Topic(s): reefs; oyster buildups; Systematics: Mollusca; Stratigraphy: Miocene Recent; Geography: ^Les huîtres se distinguent des autres groupes de pélecypodes par leur morphologie et par leur mode de vie. Contrairement à la plupart des bivalves, elles montrent une dissymétrie des deux valves par rapport au plan passant entre elles, ceci en rapport avec leur mode de vie généralement sessile: elles sont attachées au substratum par la valve gauche, qui est convexe, plus grande et plus lourde que la valve droite. [fragment of an introductory chapter]^1";
- 5441 s[5438] = "CHAPPELL J., BROECKER W.S., POLACH H.A. THOM B.G. (1974).- Problems of dating Upper Pleistocene sea levels from coral reef areas.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 563-571.- FC&P 4-1, p. 19, ID=5048^Topic(s): eustacy, stratigraphy; reefs; Systematics: ; Stratigraphy: Pleistocene; Geography: ^^1";
- 5442 s[5439] = "KAUFMANN L. (1981).- There was a biological disturbance on Pleistocene coral reefs.- Paleobiology 7, 4: 527-532.- FC&P 11-1, p. 58, ID=6134^Topic(s): reefs, coral reefs, bioerosion; reefs, bioerosion; Systematics: ; Stratigraphy: Pleistocene; Geography: ^^1";
- 5443 s[5440] = "SANTISTEBAN C., TABERNER C. (1983).- Coral reef derived conglomerates deposited in shallow marine and continental environments after a dessicated deep basin.- Jour. of the Geol. Soc. of London 140, 3: 401-411.- FC&P 13-2, p. 20, ID=6367^Topic(s): reefs, reef-derived pebbles; reef; Systematics: ; Stratigraphy: Miocene U; Geography: ^^1";
- 5444 s[5441] = "BUDD A.F. (1990).- Longtemp Patterns of Morphological Variation within and among Species of Reef-corals and their Relationship to Sexual Reproduction.- Systematic Botany 15, 1: 150-165.- FC&P 22-1, p. 41, ID=3405^Topic(s): variation; Anthozoa variation; Systematics: Cnidaria; Anthozoa; Stratigraphy: Neogene Recent; Geography: ^Recent and fossil (Neogene) scleractinian corals of the genera Montastraea, Porites and Siderastrea have been compared in view of their morphological variation and discreteness.^1";
- 5445 s[5442] = "KUHLMANN D.H.H. (1982).- Zusammensetzung und Oekologie von Tiefwasser-Korallen- assoziationen.- Wissenschaftlicher Zeitschrift Humboldt-Universitaet Berlin XXXI/3: 233-244.- FC&P 13-1, p. 13, ID=0387^Topic(s): deep marine; Anthozoa ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Composition and ecology of deep-water coral associations.^1";
- 5446 s[5443] = "KUHLMANN D.H.H. (1983).- Composition and ecology of deep-water coral associations.- Helgoländer Meeresuntersuchungen 36: 183-204.- FC&P 13-1, p. 13, ID=0388^Topic(s): deep marine; Anthozoa ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5447 s[5444] = "ZHOU RENLING (1983).- Corals and their natural products.- Journal of marine Drugs 1983, 3: 125-129.- FC&P 13-1, p. 29, ID=0420^Topic(s): natural products; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5448 s[5445] = "GENIN A., DAYTON F.N., LONSDALE P.F., SPIESS F.N. (1986).- Corals on sea-mount peaks provide evidence of current acceleration over deep-sea topography.- Nature 322: 59-60.- FC&P 15-2, p. 38, ID=0725^Topic(s): eustacy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";

- 5449 s[5446] = "RISK M., GLYNN P., CORTEZ O. (1985).- Coral reefs in a race for survival.- Geotimes 30, 9: 13-14.- FC&P 15-1.2, p. 43, ID=0773^Topic(s): reefs; reefs extinctions; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Crime scene: Eastern Pacific; Time of death: December 1982; Weapon: warm sea water; Accused: El Nino; Victim: More than 3.000 km of coral reefs.^1";
- 5450 s[5447] = "DORNELAS M., CONNOLLY S.R., HUGHES T.P. (2006).- Coral reef diversity refutes the neutral theory of biodiversity.- Nature 440, 2: 80-82. [letter to Nature]10.1038/nature04534.- FC&P 34, p. 77, ID=1317^Topic(s): coral reefs, theory of diversity; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^The global decline of coral reefs highlights the need to understand the mechanisms that regulate community structure and sustain biodiversity in these systems. The neutral theory, which assumes that individuals are demographically identical regardless of species, seeks to explain ubiquitous features of community structure and biodiversity patterns. Here we present a test of neutral-theory predictions with the use of an extensive species-level data set of Indo-Pacific coral communities. We show that coral assemblages differ markedly from neutral-model predictions for patterns of community similarity and the relative abundance of species. Within local communities, neutral models do not fit relative abundance distributions as well as the classical log-normal distribution. Relative abundances of species across local communities also differ markedly from neutral-theory predictions: coral communities exhibit community similarity values that are far more variable, and lower on average, than the neutral theory can produce. Empirical community similarities deviate from the neutral model in a direction opposite to that predicted in previous critiques of the neutral theory. Instead, our results support spatio-temporal environmental stochasticity as a major driver of diversity patterns on coral reefs. [supplementary info to this paper is linked to the online version of this paper; printed in Nature 443: 598]^1";
- 5451 s[5448] = "KARLSON R.H., CORNELL H.V., HUGHES T.P. (2004).- Coral communities are regionally enriched along an oceanic biodiversity gradient.- Nature 429: 867-870. [Letters to Nature]10.1038/nature02685.- FC&P 33-1, p. 45, ID=1323^Topic(s): biodiversity; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Ecological communities are influenced by processes operating at multiple scales. Thus, a better understanding of how broad- as well as local-scale processes affect species diversity and richness is increasingly becoming a central focus in modern community ecology. Here, in a study of unprecedented geographical scope, we show significant regional and local variation in the species richness of coral assemblages across an oceanic biodiversity gradient. The gradient that we sampled extends 10.000 km eastwards from the world's richest coral biodiversity hotspot in the central Indo-Pacific. Local richness and the size of regional species pools decline significantly across 15 islands spanning the gradient. In addition, richness declines across three adjacent habitats (reef slopes, crests and flats). In each habitat, a highly consistent linear relationship between local and regional species richness indicates strong regional enrichment. Thus, even on the most diverse coral reefs in the world, local coral assemblages are profoundly affected by regional-scale processes. Understanding these historical and biogeographical influences is essential for the effective management and preservation of these endangered communities.^1";
- 5452 s[5449] = "KUHLMANN D.H.H. (2005).- Die Steinkorallensammlung im Naturhistorischen Museum in Rudolstadt (Thüringen) nebst ökologischen Bemerkungen.- Rudolstädtische naturhistorische Schriften 13: 37-113.- FC&P 34, p. 110, ID=1381^Topic(s): collections of

- fossils; Anthozoa collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^In the Naturhistorisches Museum of the Thüringer Landesmuseum Heidecksburg at Rudolstadt (Thuringian State Museum Heidecksburg) there is with 271 species a rich collection of stony corals. The earliest specimens of it are older than 200 years. In former times they were belonging to the royal natural cabinet, but nearly than 400 specimens were collected recently by diving in the Caribbean Sea, the Mediterranean Sea, the Red Sea, the Indian Ocean, the Pacific and adjacent waters. Among them are rare and fragile corals, i.e. Leptoseris papyracea (Dana 1846), Acropora scabra Vaughan 1907, and Galaxea horrescens (Dana 1846) from the deeper water of the reef front. Two paratypes of Stylophora kuehlmanni Scheer & Pillai 1983 and Stylophora mamillata Scheer & Pillai 1983 were collected in the Red Sea. Some new discoveries, shore, geographical and ecological information are given.^1";
- 5453 s[5450] = "SMITH J.E., SCHWARZ H.P., RISK M.J., MCCONNAUGHEY T.A., KELLER N. (2000).- Paleotemperatures from deep-sea corals: Overcoming 'vital effects'.- Palaios 15, 5: 25-32.- FC&P 29-1, p. 54, ID=1500^Topic(s): paleotemperatures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Thirty-five azooxanthellate (non-photosynthetic) corals belonging to 18 species were collected at sites ranging from the Norwegian Sea to the Antarctic and of depths ranging from 10 to 5220m. All specimens showed distinct, well-defined linear correlations between carbonate oxygen and carbon isotopic composition, with slopes ranging from 0,23 to 0,67 (mean 0,45 ± 0,9) and linear correlation r2 values that averaged 0,89. These pronounced isotopic disequilibria have, to date, rendered azooxanthellate corals unsuitable for use in paleothermometry. Most, but not all, of the heaviest skeletal δ180 values reached or approached equilibrium. If the isotopically-heavy ends of the δ180 vs δ13C regression lines reliably approximated isotopic equilibrium with seawater, these values could be used to estimate the temperature of the water in which the coral grew. The δ13C values of the heavy ends of each line, however, were always depleted compared to carbon isotopic equilibrium with ambient bicarbonate by varying amounts. * Despite the disequilibria, a reliable method for obtaining paleotemperature data was obtained. It was found that, if a δ180 vs δ13C regression line from an individual coral could be generated, the δ180arag value corresponding to δ13Carag = δ13Cwater and corrected for δ180water was a linear function of temperature: δ180 = 0,25 T(°C) + 4.97. [original abstract]^1";
- 5454 s[5451] = "FREIWALD A. (2003).- Korallengärten in kalten Tiefen.- Spektrum der Wissenschaften 2003, 2: 56-63 [German version of Scientific American].- FC&P 32-1, p. 30, ID=1735^Topic(s): deep marine; Anthozoa ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5455 s[5452] = "KUHLMANN D.H.H. (1985).- The protection role of coastal forests on coral reefs.- Proc. Fifth Intern. Coral Reef Congr., Tahiti, 6: 503-508.- FC&P 16-1, p. 14, ID=1924^Topic(s): coral reefs, ecology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5456 s[5453] = "KUHLMANN D.H.H. (1987).- Wald schützt Korallenriffe.- Naturwiss. Rundschau, 40: 29-30.- FC&P 16-1, p. 14, ID=1925^Topic(s): coral reefs, ecology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5457 s[5454] = "PATZOLD J. (1985).- Coral growth history revealed by x-radiographic studies.- Philippine Scientist 22: 67-77.- FC&P 16-1, p. 70, ID=1993^Topic(s): growth mode, x-radiometry; Anthozoa growth; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";

- 5458 s[5455] = "PATZOLD J. (1986).- Temperatur- und CO2-Aenderungen im tropischen Oberflaechenwasser der Philippinen waehrend der letzten 120 Jahre: Speicherung in stabilen Isotopen hermatyper Korallen.- Berichte Geol.-Palaeont. Inst. Univ. Kiel 12: 1-92.- FC&P 16-1, p. 70, ID=1994^Topic(s): ecology, stable isotopes, ; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^1";
- 5459 s[5456] = "CAMPRASSE G., CAMPRASSE S., GILL G.A. (1988).- Substitution de la racine dentaire par des squelettes d''invert'ebres aquatiques chez l''animal et l''homme [substitution of dental roots by aquatic invertebrate skeletons in animals and humans].- C. R. Acad. Sc. Paris 307, III, Medecine et Therapeutique: 485-491.- FC&P 18-1, p. 23, ID=2219^Topic(s): stomatology; Anthozoa mineralogy; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^The biocompatibility of mammal bone with aragonite and calcite skeletons of aquatic invertebrates (Corals, Molluscs) led us, after animal experimentation, to implant in humans artificial dental roots derived from such invertebrates. These roots, incorporated but not resorbed, serve as supports for a prosthetic crown; they are equipped to isolate the root from the buccal cavity and to ensure shock absorbtion during mastication. The greater ease of implanting artificial teeth and their excellent acceptance will in many cases modify the strategy of current dental treatment.^1";
- 5460 s[5457] = "BAK R.P.M., TERMAAT R.M., DEKKER R. (1982).- Complexity of Coral Interactions: Influence of Time, Location of Interaction and Epifauna.- Marine Biology 69: 215-222.- FC&P 18-1, p. 45, ID=2283^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^The potential role of competition for space in a community depends on the arrangement of interaction relationship. A survey (255 m2) of the interactions between corals (Scleractinia) on a Caribbean reef (depth 10-30 m) indicated the outcome of 17-35% of the aggressive and defensive interactions to be unpredictable. Experiments on the reef (depth 7-13 m) with pairs of interacting corals - Madracis mirabilis (Duchassing et Michelotti), Agaricia agaricites (L.), Montastrea annularis (Ellis et Solander), Eusmilia fastigiata (Pallas) - showed that, after the initial contest through extracoelenteric digestion, there are at least two additional processes which can result in a reversal of dominance: interference by epifauna and sweeper tentacle development. Moreover, the impact of extracoelenteric digestion and the extent of sweeper tentacle development varied over the surface of the corals. Employing laboratory and field experiments to distinguish between the impact of extracoelenteric digestion, epifauna behaviour and sweeper tentacles, we show the three processes combined to explain the coral interaction process in toto. The outcome of the interaction process on the reef depends on numerous, partly unpredictable, variables, including mode of contact and effects of position. Consequently, patterns of community organization resulting from spatial competition will be slow to emerge and easily erased prematurely by disturbances.^1";
- 5461 s[5458] = "GROTTOLI A.G., EAKIN C.M. (2007).- A review of modern coral δ180 and δ14C proxy records.- Earth-Science Reviews 81, 1-2: 67-91.- FC&P 35, p. 106, ID=2437^Topic(s): stable isotopes, O, C; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^This paper is a review of published modern coral δ180 and δ14C isotopic records that are at least 30 and 20 years long, respectively. The data are presented to show basin-scale trends in both of these proxy records on decadal-to-centennial timescales. The goal was to qualitatively integrate the general inter-annual-to-centennial timescale variability revealed in these data, as well as the statistical and modeling output results that have been produced using these coral records. While many review papers typically include a representative subset of the data

available, this review aims to include as much of the available data as possible. In general, coral ^{18}O records show a long-term warming and/or freshening throughout the tropical oceans, and agree with the NOAA Extended Reconstruction Sea Surface Temperature 2 (ERSST) on decadal timescales. In the western Pacific, it is most likely a freshening of the seawater ^{18}O that dominates the signal. El Niño Southern Oscillation (ENSO) variability dominates most ^{18}O records either by varying local seawater temperature or salinity, depending on the regional oceanography/climatology. Outside of the Pacific, ENSO affects seawater temperature and salinity via atmospheric or oceanic teleconnections. Post-bomb coral ^{14}C records collectively show that the uptake of ^{14}C has been greatest in gyre-water fed sites, followed in descending order by western boundary current areas, equatorial upwelling regions, and eastern tropical Pacific upwelling sites. These surface water ^{14}C values indicate the proportion of surface water and/or the residence time of water at the surface at a given location, and can be used to model water mass mixing rates. Such models have only begun to be run and show that the amount of eastern Pacific water entering the central South Pacific increases during El Niños and that the Indonesian throughflow is supplied year-round by the North Pacific. Comparing ocean circulation models with coral ^{14}C -modelled circulation enables researchers to explore the mechanisms that drive seawater ^{14}C variability and fine-tune their models. In addition, our comparison between the rate of coral ^{14}C increase between 1960 and 1970 and total anthropogenic CO_2 uptake rates show general agreement, demonstrating the value of coral records in understanding past carbon fluxes. Overall, coral ^{18}O and ^{14}C proxy records represent natural archives of seawater conditions and are critical for studying the natural variability in local and regional patterns within, and teleconnection patterns between, the tropics, extra-tropics, temperate, and Polar Regions on intra-annual-to-centennial timescales. [original abstract]¹¹;

5462 s[5459] = "DUNNE R.P., GLEASON D.F., WELLINGTON G.M. (1994).- Radiation and coral bleaching.- Nature 368: 697.- FC#038;P 23-1.1, p. 59, ID=4125^Topic(s): bleaching; coral bleaching; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";

5463 s[5460] = "PONT-KINGDON G.A., OKADA N.A., MACFARLANE J.L., BEAGLEY C.T., WOLSTENHOLME D.R., CAVALIER-SMITH T., CLARK-WALKER G.D., (1995).- A coral mitochondrial mutS gene.- Nature 375: 109-111.- FC#038;P 24-2, p. 80, ID=4559^Topic(s): mutS mitochondrial gen; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";

5464 s[5461] = "TRIBBLE G.W., SANSONE F.J., BUDDEMEER R.W., LI YUAN-HUI (1992).- Hydraulic exchange between a coral reef and surface sea water.- Geological Society of America Bulletin 104: 1280-1291.- FC#038;P 24-2, p. 108, ID=4622^Topic(s): coral reefs, hydraulic exchange; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Hydraulic exchange between overlying sea water and the internal structure of a patch reef in Kaneohe Bay, Oahu, Hawaii, was studied with an array of wells 1, 2, and 4m deep. Two natural chemical tracers, radon, and salinity, were used to calculate the exchange rate between surface sea water and reef interstitial waters. Dissolved radon concentrations are substantially higher in interstitial waters than in surface water. The degree of radon enrichment is quantitatively related to the time elapsed since interstitial water had equilibrated with the atmosphere. Residence time estimates are 1-40 days, with deeper wells having slower exchange. The average residence time for 1-m-deep wells was 2.1 days. A rainstorm-induced dilution of the salinity of Kaneohe Bay provides the second tracer. Samples of surface and reef interstitial waters following this salinity perturbation are used to calculate an average residence time of 2.6 days at a depth of 1m and 42 days at a depth of

2m. Three types of physical forces thought to cause exchange between surface and interstitial water are considered by measurement of the forcing functions and reef permeability. Hydraulic conductivities are about 50 m/d, with lower values near the seaward side of the reef. Most exchange seems to be caused by high-frequency, wave-driven oscillatory pumping and by unidirectional hydraulic head gradients (of uncertain origin) that are stable for at least 3-4 days. Wave-driven mixing is probably more important shallower in the reef, whereas head-driven flow may dominate deeper in the reef. Tidal pumping does not seem to contribute to exchange. All methods indicate that exchange in the upper part of Checker Reef is primarily through vertical exchange. The best estimate for the residence time of water at a depth of 1m is 2 days. Water at depths of 2-4m probably has a residence time of weeks to months. ^1";

5465 s[5462] = "STODDART D.R. (1972).- Field methods in the study of Coral Reefs.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 71-80.- FC&P 2-2, p. 12, ID=4762^Topic(s): coral reefs, research methods; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^1";

5466 s[5463] = "HUBBARD J.A.E.B. (1973).- Sediment-Shifting Experiments: A Guide to Functional Behavior in Colonial Corals.- In Boardman, Cheetham, and Oliver (eds): Animal colonies (Dowden, Hutchinson & Ross, Inc., Stroudsburg, Pa.): 31-42.- FC&P 3-1, p. 18, ID=4856^Topic(s): functional behavior; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Four species of Porites were selected from the Florida reef tract for experimental studies designed to determine the functional relationship of the polyp to the calcareous skeleton. Each species was subjected to systematic sediment-shedding and cursory feeding and calibrated current-flow experiments, crude lethal-limit studies of their temperature and salinity tolerances, and time-marked growth studies under laboratory conditions. At the end of these experiments branches of Porites furcata Lamarck and P. divaricata Lesueur were prepared for standard histological and petrographical observations. An analysis of these results shows that Porites is neither truly colonial nor truly polystomous; it possesses diagnostic characteristics of both these types of organization and is therefore designated quasi-polystomous. It is a colonial coral in which the polyps comprise incomplete individuals with a common enteron; but they also have distinct stomodea and tentacular rings which are capable of independent action. Porites also possesses unique regenerative properties which probably help it to survive adverse conditions. * Examples are given from other Floridian reef corals from known environments of the gradations in coloniality indicated by wells (this volume). Thus structurally linked colonial corals show behavioral responses which range from solitary reactions in *Mussa angulosa* (Pallas) through partial coordination in *Porites* to complete coordination in *Diploria* and "brain" corals. Complete confidence as to the behavioral nature of coloniality can only be ascertained from combining histological and behavioral techniques with observations on skeletal anatomy.^1";

5467 s[5464] = "WEBER J.N. (1973).- Incorporation of strontium into reef coral skeletal carbonate.- *Geochimica et Cosmochimica Acta* 37, 9: 2173-2190.- FC&P 3-1, p. 19, ID=4858^Topic(s): hermatypic, Sr incorporation; reef corals, carbonates; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^220 well-characterized coral specimens from 17 localities have been analysed for Sr. 73 genera and subgenera, mostly hermatypic scleractinians, are represented. For some genera, specimens living in surface reef environments are compared with those from 18,3m

depth on the same reefs. Growth rates for some species have also been measured at these depths at one of the sampling sites. Skeletal Sr for a given genus decreases with increasing water temperature, a relationship which previously eluded detection. Aragonite deposited by corals living in the reef at depth of 18,3m contains more strontium than the skeletal aragonite of the same coral genera from shallow-water, surface environments. * Quantitative treatment of the data for Acropora, one of the most abundant and widely distributed of the reef-building corals, suggests that the observed Sr variations may reflect variations in the rate of skeletal calcification, rather than direct dependence upon temperature or water depth. There is evidence for species effect, apparently unrelated to growth rate differences, in that certain coral genera are consistently enriched or depleted in skeletal Sr content relative to other genera living in the same reef environments under identical ambient conditions. Temperature, salinity, water depth, sea-water composition and/or other such parameters may in part determine the levels of trace element concentration in carbonate deposited by corals and other marine invertebrates, but it would appear that these variables more directly affect physiological processes which in turn control skeletal chemistry.¹;

- 5468 s[5465] = "WEBER J.N. (1974).- Skeletal chemistry of scleractinian reef corals uptake of magnesium from sea-water.- American Journal of Sci. 274, 1: 84-93. title?.- FC&P 3-1, p. 20, ID=4859^Topic(s): hermatypic, Mg uptake; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Little is known about the magnesium content of the skeletal aragonite deposited by the hermatypic reef-building, scleractinian corals. Over 2000 corals specimens were analysed in an attempt to determine the extent to which environmental and genetic factors control magnesium uptake during skeletogenesis. Only three of the 49 genera investigated show any evidence that skeletal magnesium levels are temperature dependent, and even in these 3 cases, the relationship is poorly defined. Calcification rate and water depth also appear to exert no detectable influence. There is considerable variability in skeletal magnesium content, even within a given genus, but patterns linking Mg concentrations to taxonomic affinity suggest that physiologic controls predominate in determining the quantity of this element that can enter the aragonitic skeleton.¹;
- 5469 s[5466] = "GRASSLE J.F. (1973).- Variety in Coral Reef Communities.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 247-270.- FC&P 3-2, p. 36, ID=4935^Topic(s): reef biocoenoses, geohistory; reefs communities; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5470 s[5467] = "GLYNN P.W. (1973).- Aspects of the Ecology of Coral Reefs in the Western Atlantic Region.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 271-324.- FC&P 3-2, p. 36, ID=4936^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5471 s[5468] = "YAMAGUCHI M. (1973).- Early Life Histories of Coral Reef Asteroids, with Special Reference to Acanthaster planci (L.).- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 369-387.- FC&P 3-2, p. 36, ID=4938^Topic(s): coral reefs, Acanthaster; coral reef asteroids, Acanthaster; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5472 s[5469] = "BUDEMEIER R.W. (1974).- Environmental controls over annual and lunar monthly cycles in hermatypic coral.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July

1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 259-268.- FC&P 4-1, p. 18, ID=5023^Topic(s):hermatypic, growth cyclicality; reef corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:Recent; Geography:^^1";

5473 s[5470] = "WEBER J.N. (1974).- ¹³C ¹²C ratios as natural isotopic tracers elucidating calcification processes in reef-building and non-reef-building corals.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 289-298.- FC&P 4-1, p. 18, ID=5026^Topic(s):stable isotopes, C; corals, calcification; Systematics:Cnidaria; Anthozoa; Stratigraphy:Recent; Geography:^^1";

5474 s[5471] = "WEBER J.N. (1974).- Basis for skeletal plasticity among reef-building Corals.- Geology 1974, 2, 3: 153-154.- FC&P 4-1, p. 25, ID=5082^Topic(s):hermatypic, skeletal plasticity; reef corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:Recent; Geography:^Reef corals are remarkably variable in growth form and skeletal configuration. This high degree of phenetic diversity has contributed greatly to the success of the hermatypic scleractinians as widespread reef builders in tropical oceans. Although phenetic variability or "plasticity" is common, its cause remains obscure, because the species are genetically stable. The extent of phenetic variability is surprising in view of the morphologic simplicity of the animal itself. Carbon isotope ratios have been used to determine changes in the relative proportions of skeletal carbon in the form of carbonate derived from sea-water bicarbonate and metabolic carbon dioxide sources. Increasing amounts of respiratory CO₂ incorporated into skeletal aragonite are attributed to decreasing efficiency of metabolite excretion. Isotope data indicate that zooxanthellae are effectively removing metabolic waste products from the tissues of hermatypic scleractinians, and that, for these corals, diffusion is not an important excretion mechanism. Ahermatypic corals, however, depend on diffusion processes to eliminate metabolic waste products. ¹³C/¹²C ratios indicate that, among the ahermatypes, small changes in corallum geometry that result in greater coarctation [?] of the polyps and (or) a decrease in the size of the polyp surface exposed to sea water have a large effect on the isotopic composition of the skeletal carbonate. These findings suggest that corals that do not build reefs are restricted to small and relatively simple forms because of serious difficulties in the metabolite excretion they would encounter in more complex corallum geometries. In the case of the hermatypes, however, the metabolite excretion problems that would limit the range of possible skeletal configurations have been resolved by zooxanthellae. The spectacular phenetic variability in reef corals is thus achieved through a symbiotic association of the hermatypic corals with zooxanthellae.^1";

5475 s[5472] = "RANDALL R.H. (1973).- Coral reef recovery following extensive damage by the "crown of thorns" starfish, *Acanthaster planci* (L.).- In T. Tokioka & S. Nishimura (eds): Recent Trends in research in Coelenterate Biology. Proceedings of the Second International Symposium on Cnidaria (held in Kushimoto, Japan, 16-19 October 1972): 469-489.- FC&P 4-2, p. 40, ID=5200^Topic(s):coral reefs, *Acanthaster* damage; coral reefs; Systematics:Cnidaria; Anthozoa; Stratigraphy:Recent; Geography:^^1";

5476 s[5473] = "AMIEL A.J., FRIEDMAN G.M., MILLER D.S. (1973).- Distribution and nature of incorporation of trace elements in modern aragonite corals.- Sedimentology 20: 47-64.- FC&P 4-2, p. 43, ID=5203^Topic(s):aragonite, trace elements; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:Recent; Geography:^The objective of this study is to locate as closely as possible the sites of strontium, magnesium, sodium, and potassium in

modern aragonitic corals, specifically whether these cations are adsorbed, or are substituted in the carbonate lattice or are incorporated in organic components. In addition to locating the sites of each of these four elements we wanted to find out quantitatively how much of each element occurs at each site. The experiments in this study are based on the dissolution rate of aragonite in distilled water and on the substitution of strontium and magnesium by calcium and sodium. Special attention has been given to the occurrence of strontium, magnesium, sodium and potassium in the organic components of the corals. * The main site for strontium in the corals is in the aragonite lattice. Twenty-five per cent of the total magnesium occurs in adsorbed sites and in organic compounds. The rest of the magnesium may be located in the aragonite lattice, but it is easily removed by repeated leaching or by replacement with calcium ions. Another possibility is that magnesium may occur in a dispersed mineral phase more soluble than aragonite because magnesium was released at a higher Mg to Ca ratio than is found in the solid coral; also because no local concentration of magnesium could be detected with an electron microprobe. About 12% of the total sodium is in adsorbed sites and is included in the organic compounds. The rest of the sodium might be in the lattice replacing calcium, but the low total exchange capacity is not enough to provide the needed charge balance. Another possibility is that sodium is located in a proposed mineral phase. Potassium is in adsorbed sites and incorporated in the organic compounds to an extent greater than all the other elements studied (30% of the total potassium), but again the evidence suggests that the remaining potassium is in a proposed mineral phase. * Calcite is detected on the surfaces of aragonite corals after 5 months in the substitution experiment. The change of aragonite to calcite took place after the inhibitor magnesium was exchanged from the surface sites and replaced by calcium. * The organic compounds in corals contain small amounts of strontium, magnesium, sodium and potassium. Strontium is preferentially enriched in the organic compounds over magnesium.^1";

5477 s[5474] = "HUBBARD J.A.E.B. (1974).- Coral colonies as microenvironmental indicators.- Annales de la Societe geologique de Belgique 97, 1: 145-152.- FC&P 4-2, p. 46, ID=5213^Topic(s): ecology, microenvironments; Anthozoa colonial; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Des observations réalisées sur des coraux vivants, tant sur le récif qu'en aquarium, ont permis d'intégrer les caractéristiques de leur distribution zonéographique aux propriétés fonctionnelles de leur morphologie squelettique. Les relations existant entre la nature et le taux d'activité des polypes, d'une part, et la morphologie du squelette, d'autre part, sont d'abord discutées: la micromorphologie des septes ainsi que leur angle de divergence, la forme des calices et l'orientation des corallites sont mises en relation avec la paramètres physiques du milieu. De là, l'auteur tire des arguments rendant compte de la distribution spatiale des espèces considérées. * Ces observations sont ensuite transposées dans le passé et servent de fil conducteur à l'interprétation des relations existant entre la distribution de Rugueux paléozoïques et les caractères des sédiments associés.^1";

5478 s[5475] = "SCHERER M. (1974).- The influence of two endolithic microorganisms on the diagenesis of recent coral skeletons.- Neues Jb. Geol. Palaeontol. Monatsh. 1974, 9: 557-566.- FC&P 4-2, p. 49, ID=5221^Topic(s): endobionts, diagenesis; endolithic organisms, diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Description of an endolithic siphonous (?) alga and a partly endolithic fungus living in scleractinian corals from the Bahamas. In addition to changing the ultrastructure and porosity the borers probably influence coral diagenesis by altering the pore solution chemistry through chemical boring and provision of organic compounds.^1";

- 5479 s[5476] = "WEBER J.N., WHITE E.W., WEBER P.H. (1975).- Correlation of density banding in reef coral skeletons with environmental parameters: the basis of interpretation of chronological records preserved in the Coralla of Corals.- Paleobiology 01, 2: 137-149.- FC&P 4-2, p. 49, ID=5227^Topic(s): hermatypic, sclerochronology; reef corals, density banding; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5480 s[5477] = "GEISTER J. (1977).- Book review: H. Schuhmacher - Korallenriffe.- FC&P 6, 2: 31-32.- FC&P 6-2, p. 31, ID=5552^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^[book review]^1";
- 5481 s[5478] = "ORME G.R. (1977).- Aspects of sedimentation in the coral reef environment.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 05.- FC&P 7-1, p. 32, ID=5595^Topic(s): reefs sedimentology; reefs, sedimentology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5482 s[5479] = "KINCHINGTON D. (1980).- Localization of intracellular calcium within the epidermis of a cool temperate coral.- Developmental and Cellular Biology of Coelenterates [proceedings of 4th Coel. Con. Interlaken 1979]; Elsevier.- FC&P 9-2, p. 17, ID=5867^Topic(s): Ca metabolism; corals Ca; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: cool waters^^1";
- 5483 s[5480] = "HUGHES T.P., JACKSON J.B.C. (1980).- Do corals lie about their age? Some demographic consequences of partial mortality, fission, and fusion.- Science 209: 713-715.- FC&P 10-1, p. 58, ID=6011^Topic(s): coral growth, fusion, fission; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^^1";
- 5484 s[5481] = "IVANOV N.A. (1980).- The apparatus for the study of space distribution of light brightness on the coral reefs.- Biologiya korallyovykh rifov [B.V. Preobrazhenskiy & E.V. Krasnov (eds)]: 218-224, 6 figs.- FC&P 10-1, p. 63, ID=6038^Topic(s): coral reefs, research methods; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^A certain "space bright distribution body" for a study of an effect of anisotropic light flow on the coral colony habit is suggested. An apparatus is developed and the results from the Timor Sea reefs are obtained with this.^1";
- 5485 s[5482] = "SCHUHMACHER H. (1978).- Korallenriff als Lebensraum.- Lichtbildreihe D 22155, 15 diapositives, explanation booklet of 16 pp; V-Dia-Verlag, Heidelberg.- FC&P 10-2, p. 4, ID=6041^Topic(s): coral reefs; coral reefs, ecology; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^[diapositives]^1";
- 5486 s[5483] = "GEISTER J. (1982).- Collections of corals: Naturwissenschaftliche Sammlungen Winterthur, Switzerland.- FC&P 11, 1: 18.- FC&P 11-1, p. 18, ID=6114^Topic(s): collections of fossils; corals collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Korallen (vor allem Scleractinia und Oktokorallen) aus dem Besitz von Dr. H.C. Carl Weber-Sulzer (1845-1915) ausgestellt. Diese Sammlung zeigt einen recht guten Querschnitt durch die Formenvielfalt der Korallenfaunen des Roten Meeres, Indischen Ozeans und des Pazifiks sowie z.T. auch von Bermuda und den Antillen. Verschiedene der Korallenkolonien besitzen ungewöhnlich grosse Ausmasse, wie sie nur selten in europaeischen Museen aufbewahrt werden. Obwohl die wissenschaftlichen Namen auf den Etiketten meist nicht der modernen Korallen-Taxonomie entsprechen, kann die Sammlung doch fuer Spezialisten der weiteren Region bei vergleichenden Untersuchungen von grossem Nutzen sein, vor allem, da derartig grosse Kolonien auch heute nicht ohne betraechtlichen

- technischen und finanziellen Aufwand gesammelt und bis nach Europa transportiert werden koennen. [original note]^1";
- 5487 s[5484] = "ROSEN B.R. (1982).- Darwin, coral reefs and global geology.- Bioscience 32, 6: 519-525.- FC&P 11-2, p. 24, ID=6150^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Darwin's coral reef subsidence theory derived from his broader interests in vulcanicity and global tectonics. His reef observations were implicitly aimed to demonstrate ocean floor subsidence. Although in retrospect his evidence for subsidence of atolls and barrier reefs and of ocean floors was insufficient, both ideas have survived the modern tests of boreholes and sea floor spreading. [abstract; presented in FC&P 11, 1: 35]^1";
- 5488 s[5485] = "JOHNSTON J.S. (1980).- The ultrastructure of skeletogenesis in hermatypic corals.- International Review of Cytology 67, 171-214.- FC&P 12-1, p. 43, ID=6183^Topic(s): skeletogenesis; corals skeletogenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^A structural organic matrix is present in the adult skeleton of Pocillopora damicornis. One component of this structural matrix is present transiently at the growth surface of the skeleton, and it consists of individual sheaths enveloping each forming aragonite crystals. These crystal sheaths, plus some small extracellular vesicles that are presumed to represent a precursor for the sheaths, are together implicated in the following hypotheses for coral calcification. * 1. The precipitation of calcium carbonate, and thereby skeletal accretion, occurs only within the crystal sheaths, i.e. within the terminal matrix compartments. * 2. The crystal sheaths have a role in crystal nucleation. * 3. The sheaths isolate and actively modify the space within these compartments, thereby controlling the rate of epitactic crystal growth subsequent to nucleation. * 4. The movement of calcium ions from seawater toward the skeleton is principally via a paracellular route. * 5. The matrix precursor vesicles, by analogy with vertebrate matrix vesicles, have a role in the transport of calcium and/or carbonate ions from the lateral extracellular spaces of the calicoblastic ectoderm to the growth surface of the skeleton. * 6. The synthesis of matrix precursor material by the calicoblast cells is enhanced in the presence of photosynthetic products translocated to the coral tissues from the zooxanthellae. [original summary]^1";
- 5489 s[5486] = "SHEPPARD C.R.C., DAVY S.K, PILLING G.M. (2009).- The Biology of Coral Reefs.- Oxford University Press, 352 pp. ISBN 978-0-19-856635-9.- FC&P 36, p. 122, ID=6565^Topic(s): coral reefs, biology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^Coral reefs represent the most spectacular and diverse marine ecosystem on the planet as well as a critical source of income for millions of people. However, the combined effects of human activity have led to a rapid decline in the health of reefs worldwide, with many now facing complete destruction. * This timely book provides an integrated overview of the function, physiology, ecology, and behaviour of coral reef organisms. Each chapter is enriched with a selection of 'boxes' on specific aspects written by internationally recognised experts. As with other books in the Biology of Habitats Series, the emphasis in this book is on the organisms that dominate this marine environment although pollution, conservation, climate change, and experimental aspects are also included. Indeed, particular emphasis is placed on conservation and management due to the habitat's critically endangered status. A global range of examples is employed which gives the book international relevance.^1";
- 5490 s[5487] = "STANLEY G.D.jr (2009).- Corals and ocean acidification.- McGraw-Hill Yearbook of Science and Technology 2009: 66-69; McGraw-Hill Companies, Inc., New York.- FC&P 36, p. 133, ID=6592^Topic(s): ecology; corals; Systematics: Cnidaria;

- 5491 Anthozoa; Stratigraphy: Recent; Geography: ^^1";
s[5488] = "KUHLMANN D.H.H. (1985).- Walder schutzen Korallenriffe.-
Biologische Rundschau 23: 367-370.- FC&P 15-2, p. 7,
ID=6739^Topic(s): reefs ecology; reefs ecology; Systematics:
Cnidaria; Anthozoa; Stratigraphy: Recent; Geography:
^^1";
- 5492 s[5489] = "LOPEZ E., GILL G.A., CAMPRASSE G., CAMPRASSE S. LALLIER F.,
FONTAINE M. (1989).- Soudure sans transition (osteoassimilation) entre
l'os maxillaire humain et un implant dentaire en calcite naturelle
d'invertibrés marins. [union without transition
(osteoaassimilation) between human maxillary bone and a dental implant
of marine invertebrate natural calcite].- C. R. Acad. Sc. Paris, ser.
3, Sciences de la vie 309, 6, 203-210.- FC&P 18-1, p. 25,
ID=6775^Topic(s): stomatology; stomatology, corals;
Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent;
Geography: ^We present evidence for the formation of woven bone
between human maxillary lamellar bone (the target site), and a coral
implant (Corallium johnsoni Gray). This newly formed bone is
characterized by numerous osteocytes located in spherical lacunae and
having many ramified processes directed towards the coral; some of
these processes continue into the implant surface. Healthy osteocytes
were detected within the superficial part of the coral, next to the
newly formed bone. Neither osteoclast nor surface of resorption has
been noticed.^1";
- 5493 s[5490] = "CUIF J.-P., DAUPHIN Y., GAUTRET P. (1999).- Compositional
diversity of soluble mineralizing matrices in some recent coral
skeletons compared with fine-scale growth structures of fibres.
Discussion of consequences for biomineralization and diagenesis.-
International Journal of Earth Sciences [Geol. Rundsch.] 88, 3:
582-592.- FC&P 28-1, p. 46, ID=6926^Topic(s): coral
growth; corals; Systematics: Cnidaria; Anthozoa;
Stratigraphy: Recent; Geography: ^In contrast to the
purely crystalline model of the coral fibre, a transversal zonation is
made visible within fibres by specific preparations (enzymatic or light
acidic etchings). This growth zonation that corresponds to the
successive positions of the secretory ectoderm during septal
development shows that crystallization of coral fibre is controlled not
only by an external organic coating of fibres, but also includes
intra-fibrous organic components. This results in a micron-scaled
internal structure of fibres, with a noticeable diversity depending on
species. In parallel, soluble matrices also exhibit significant
differences, although the global high content in acidic amino acids is
always observed. Gathering these two sets of data allows the current
ideas concerning structures and growth modalities of coral septa to be
discussed. Basically, the respective role of centres of calcification
and fibres during septal development appears clearly different from the
current ideas, resulting in significant change in interpretation of
coral structures, with concerns in both skeleton formation and
understanding of diagenetic processes. [original abstract]^1";
- 5494 s[5491] = "VERON J.E.N. (2000).- Corals of the world.- Australian
Institute of Marine Science; 463 pp. + 429 pp. + 490 pp. [book, in 3
volumes] - FC&P 29-1, p. 14, ID=7010^Topic(s): ;
corals; Systematics: Cnidaria; Anthozoa; Stratigraphy:
Recent; Geography: ^Verons's award winning "Corals
of Australia and the Indo-Pacific", first published in 1986 and
now considered a 'classic', is completely eclipsed by
'Corals of the world'. The book is one of the most
comprehensive, authoritative and spectacular productions ever given to
a group of marine organisms, the reef-building corals worldwide. *
Brief characteristics: (1) an extravaganza of colour and art - a
portrayal of the variety and the beauty of corals as never before -
over 3.000 underwater photographs including hundreds taken by the best
underwater photographers from around the world; (2) from reefs to

aquaria - a history of discovery - which comes first - the reefs or the corals? - corals in aquaria: a path of interest and discovery; (3) 900 distribution maps - an atlas of information and explanation - one hundred superb works of art reveal the beauty of microscopic detail; (4) what are species - the nature of species, how they vary according to environment and how they change geographically; (5) encyclopaedic information - one in ten species is new to science; there are several new genera and a new family; this book is the outcome of comprehensive taxonomic revisions of all reef-building corals - non-technical summaries of the distinguishing features of all species, genera and families - information about the colours, habitats and abundances of all species - references to taxonomic detail and regional field guides - chapters on 'what are species?', evolution, biogeography, the fossil record, coral reefs, the structure of corals, reproduction and the history of coral studies; (6) reproduction and dispersal - the reproduction and dispersal mechanisms of corals - how reproduction and dispersal relate to biogeographic and evolutionary issues; (7) structure - a non-technical account of coral morphology - a glossary explains all terminology; (8) geological history - an account of the 'big picture' of evolutionary change; (9) evolution - the mechanisms which control the origin and evolutionary change in species - an original concept of 'reticulate' evolution which integrates the information and observations presented throughout the book.^1";

- 5495 s[5492] = "FEINSTEIN N., CAIRNS S.D. (1998).- Learning from the collector: a survey of azooxanthellate corals affixed by Xenophora (Gastropoda: Xenophoridae), with an analysis and discussion of attachment patterns.- *Nautilus* 112, 3: 73-83.- FC#038;P 29-1, p. 39, ID=7017^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^All species of the gastropod family Xenophoridae affix foreign objects to the upper shell surface. Affixed objects may include bivalve shells, smaller gastropod shells, shell fragments, and coral skeletons, as well as a wide array of inorganic material. In deep water, Xenophora may serve as useful proxy collectors of benthic organisms. Since 1842, coral skeletons have been noted among the attached objects, but this association has never been studied in detail. This paper surveys 227 Xenophora shells, comprising 8 species from 69 stations, for affixed azooxanthellate corals. Five hundred and eighty-one coralla were found, representing 74 coral species, 2 of which remain undescribed. Twenty-four of the affixed coralla were alive at the time the Xenophora hosts were collected; Xenophora not only collect the corals, but corals can remain alive long after being affixed. Corals were found at 6 sites where they had previously been unknown, and the geographic ranges of 29 species of coral were expanded as a result of specimens found on Xenophora. * This paper has two sections. In the first, quantitative observations were made on the orientation of affixed corals; statistical analysis of these observations revealed non-random patterns of attachment, based on orientation of both the long axis of the coral and the coral calice. Qualitative observations suggest that species of Xenophora favor corals of particular shapes. In the second section, the speculations of previous authors regarding the ecological basis for attachment behavior are summarized and new theories are discussed. Four of these explanations suggest defensive adaptations, and the remaining 3 are functional support adaptations. Three of these hypotheses (armor, tactile camouflage, and snow-shoeing) are proposed for the first time in this paper. [original abstract]^1";
- 5496 s[5493] = "VERON J.E.N. (2000).- Identification Key to Reef-building Corals Worldwide on CD-ROM.- Australian Institute of Marine Science.http:////www.aims.gov.au/coralidcd/CoralID_Overview.htm.- FC#038;P 31-2, p. 35, ID=7132^Topic(s): reef-building, identification key; corals, reef-building; Systematics: Cnidaria; Anthozoa;

- 5497 **s**[5494] = "WILD C., HUETTEL M., KLUETER A., KREMB S.G., RASHEED M.Y.M., JORGENSEN B.B. (2004).- Coral mucus functions as an energy carrier and particle trap in the reef ecosystem.- *Nature* 428: 66-70. [letter to *Nature*]10.1038/nature02344.- **FC**038;P 33-1, p. 101, ID=7244**Topic(s):** mucus, energy carrier; corals; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Recent; **Geography:** Zooxanthellae, endosymbiotic algae of reef-building corals, substantially contribute to the high gross primary production of coral reefs, but corals exude up to half of the carbon assimilated by their zooxanthellae as mucus. Here we show that released coral mucus efficiently traps organic matter from the water column and rapidly carries energy and nutrients to the reef lagoon sediment, which acts as a biocatalytic mineralizing filter. In the Great Barrier Reef, the dominant genus of hard corals, *Acropora*, exudes up to 4.8 litres of mucus per square metre of reef area per day. Between 56% and 80% of this mucus dissolves in the reef water, which is filtered through the lagoon sands. Here, coral mucus is degraded at a turnover rate of at least 7% per hour. Detached undissolved mucus traps suspended particles, increasing its initial organic carbon and nitrogen content by three orders of magnitude within 2 h. Tidal currents concentrate these mucus aggregates into lagoon, where they rapidly settle. Coral mucus provides light energy harvested by zooxanthellae and trapped particles to the heterotrophic reef community, thereby establishing a recycling loop that supports benthic life, while reducing loss of energy and nutrients from the reef ecosystem. [original abstract]¹";
- 5498 **s**[5495] = "OPRESKO D.M. (2004).- Revision of the Antipatharia (Cnidaria: Anthozoa). Part IV. Aphanipathidae.- *Zoologische Mededelingen* 78: 209-240.- **FC**038;P 33-2, p. 40, ID=1184**Topic(s):** systematics; Antipatharia; **Systematics:** Cnidaria; Anthozoa; **Stratigraphy:** Recent; **Geography:** A new family of antipatharian corals, Aphanipathidae (Cnidaria: Anthozoa: Antipatharia), is established for *Aphanipathes sarothamnoides* Brook and related species. The family is characterized by tall, conical to acicular to cylindrical spines, which can be smooth, papillose or covered with small, conical tubercles, and by polyps that are 0.5-2.5 mm in transverse diameter and have small, subequal tentacles. The family is divided into two subfamilies based on differences in the development of the polypar spines. In the Aphanipathinae the polypar spines are subequal. Genera are recognized on the basis of morphological features of the corallum. *Aphanipathes* Brook (type species *A. sarothamnoides* Brook) has a sparsely to densely branched corallum with straight, usually ascending, branchlets. *Phanopathes* gen. nov. (type species *Antipathes expansa* Opreko & Cairns) forms fan-shaped colonies with short, bilateral branchlets. *Pteridopathes*, gen. nov. (type species *P. pinnata* sp.nov.) has simple pinnules arranged in two rows. *Tetrapathes* gen. nov. (type species *Aphanipathes alata* Brook) has simple pinnules arranged in four rows, and *Asteriopathes* gen. nov. (type species *A. arachniformis* sp.nov.) has simple pinnules arranged in six or more rows. In the Acanthopathinae the circumpolypar spines are considerably enlarged and the hypostomal spines are usually reduced or absent. As in the Aphanipathinae, genera are recognized on the basis of morphological features of the corallum. *Acanthopathes* gen. nov. (type species *Antipathes humilis* Pourtales) forms candelabra and flabellate colonies and has reduced hypostomal spines. *Rhipidopathes* Milne Edwards and Haime (type species *Antipathes reticulata* Esper), forms flabellate colonies and has hypostomal spines that are not always reduced in size. *Distichopathes* gen. nov. (type species *D. disticha* sp.nov.) has simple, straight pinnules arranged in two rows, and *Elatopathes* gen. nov. (type species *Antipathes abietina* Pourtales) has simple pinnules arranged in four or more rows.¹";

- 5499 s[5496] = "OPRESKO D.M. (2001).- Revision of the Antipatharia (Cnidaria: Anthozoa). Part I. Establishment of a new family, Myriopathidae.- Zoologische Mededelingen 75: 147-174.- FC&P 32-2, p. 67, ID=1406^Topic(s): systematics; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^A new family of antipatharian corals, Myriopathidae (Cnidaria: Anthozoa: Antipatharia), is established for Antipathes myriophylla Pallas and related species. The family is characterized by polyps 0.5 to 1.0 mm in transverse diameter; short tentacles with a rounded tip; acute, conical to blade-like spines up to 0.3 mm tall on the smallest branchlets or pinnules; and cylindrical, simple, forked or antler-like spines on the larger branches and stem. Genera are differentiated on the basis of morphological features of the corallum. Myriopathes gen. nov., type species Antipathes myriophylla Pallas, has two rows of primary pinnules, and uniserially arranged secondary pinnules. Tanacetipathes Opresko, type species T. tanacetum (Pourtalès), has bottle-brush pinnulation with four to six rows of primary pinnules and one or more orders of uniserial (sometimes biserial) subpinnules. Cupressopathes gen. nov., type species Gorgonia abies Linnaeus, has bottle-brush pinnulation with four very irregular, or quasi-spiral rows of primary pinnules and uniserial, bilateral, or irregularly arranged higher order pinnules. Plumapathes gen. nov., type species Antipathes pennacea Pallas, has simple pinnules arranged regularly in two rows. Antipathella Brook, type species Antipathes subpinnata Ellis and Solander, has simple branchlets/pinnules arranged irregularly in one to four rows.^1";
- 5500 s[5497] = "OPRESKO D.M. (2002).- Revision of the Antipatharia (Cnidaria: Anthozoa). Part II. Schizopathidae.- Zoologische Mededelingen 76: 411-442.- FC&P 32-2, p. 68, ID=1407^Topic(s): systematics; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^The family of antipatharian corals, Schizopathidae (Cnidaria: Anthozoa: Antipatharia), is revised. The family is characterized by polyps elongated in the direction of the axis and having a transverse diameter of 2 mm or more. Genera are recognized on the basis of morphological features of the corallum. Schizopathes Brook (type species S. crassa Brook) has a simple, pinnate corallum with a hook-like holdfast for support in soft sediments. Bathypathes Brook (type species B. patula Brook) is characterized by a simple pinnate corallum and a flat discoidal basal plate for attaching to a solid substrate. Parantipathes Brook (type species Antipathes larix Esper) has a largely monopodial corallum with simple pinnules in six or more rows. Taxipathes Brook (type species T. recta Brook) has a branched corallum and simple pinnules in four to eight rows. Lillipathes gen. nov. (type species Antipathes lillieii Totton) has simple pinnules in four rows. Stauropathes, gen. nov. (type species S. staurocrada spec. nov.) is branched with simple, bilateral, subopposite pinnules. Abyssopathes, gen. nov. (type species Bathypathes lyra Brook) is monopodial with two rows of simple, lateral pinnules and one (sometimes multiple) row of simple or branched anterior pinnules. Dendrobathypathes gen. nov. (type species D. grandis spec. nov.) has a branched, planar corallum with two rows of subpinnulated primary pinnules. Saropathes gen. nov. (type species Bathypathes scoparia Totton) is monopodial to sparsely branched, with four rows of subpinnulated primary pinnules.^1";
- 5501 s[5498] = "OPRESKO D.M. (2003).- Revision of the Antipatharia (Cnidaria: Anthozoa). Part III. Cladopathidae.- Zoologische Mededelingen 77: 495-536.http://www.repository.naturalis.nl/record/216169.- FC&P 32-2, p. 68, ID=1408^Topic(s): systematics; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^The family of antipatharian corals Cladopathidae (Cnidaria: Anthozoa: Antipatharia) is revised. The family is characterized by

- polyps 2mm or more in transverse diameter, six primary mesenteries, and no secondary mesenteries. The family is divided into three subfamilies: Cladopathinae Kinoshita, Hexapathinae subfam. nov. and Sibopathinae subfam. nov. The subfamily Cladopathinae is characterized by a branched pinnulate corallum with three or more rows of primary pinnules, some of which are subpinnulate. Included in the subfamily are the genera Cladopathes Brook (C. plumosa Brook, 1889), Chrysopathes gen. nov. (C. formosa spec. nov. and C. speciosa spec. nov.) and Trissopathes gen. nov. [T. pseudotristicha spec. nov., T. tetracrada spec. nov., and T. tristicha (van Pesch, 1914)]. The subfamily Hexapathinae is characterized by a monopodial or sparsely branched pinnulate corallum, with two rows of simple lateral primary pinnules and one or more rows of simple or subpinnulate anterior primary pinnules. Included in the subfamily are the genera Hexapathes Kinoshita, 1910 and Heliopathes gen. nov. Hexapathes contains the type species H. heterosticha Kinoshita, 1910, as well as H. australiensis spec. nov. Heliopathes contains the type species H. americana, spec. nov. and Antipathes heterorhodzos Cooper, 1909. The subfamily Sibopathinae van Pesch is defined by the absence of an actinopharynx. Species in the single genus Sibopathes [type species S. gephura van Pesch, 1914, and including S. macrospina Opresko, 1993] possess a branched corallum with four to six rows of simple pinnules. [original abstract]^1";
- 5502 s[5499] = "OPRESKO D.M., BARON-SZABO R.C. (2001).- Redescriptions of the antipatharian corals described by E.J.C. Esper with selected English translations of the original German text (Cnidaria, Anthozoa, Antipatharia).- Senckenbergiana biologica 81, 1/2; 1-21.- FC&P 30-2, p. 31, ID=1587^Topic(s): revision; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^1";
- 5503 s[5500] = "OPRESKO D.M. (2006).- Revision of the Antipatharia (Cnidaria: Anthozoa). Part V. Establishment of a new family, Stylopathidae.- Zoologische Mededelingen 80, 4: 109-138.http://www.repository.naturalis.nl/record/198496.- FC&P 35, p. 89, ID=2409^Topic(s): systematics; Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^A new family of antipatharian corals, Stylopathidae (Cnidaria: Anthozoa: Antipatharia), is established for Arachnopathes columnaris Duchassaing 1870, and related species. The family is characterized by small polyps, 1.5 mm or less in transverse diameter; small, conical, smooth spines, often distally directed (especially at the tips of the branchlets and/or pinnules); and by the tendency for the pinnules and branchlets to occur in subopposite pairs or to be arranged in verticils of three or four (rarely five) pinnules. In many species adjacent pinnules or branchlets fuse together or anastomose, resulting in the formation of cylindrical, reticulated worm runs along the stem or branches. Genera are established on the basis of morphological features of the corallum. Stylopathes gen. nov., includes the type species, Arachnopathes columnaris Duchassaing, and is characterized by a monopodial or very sparsely branched corallum. Triadopathes gen. nov. contains only the type species Parantipathes triadocrada Opresko, and has multiple, vertically directed, stem-like primary branches, arising primarily from the lower parts of the corallum. Tylopathes Brook contains the type species T. crispa Brook, and is characterized by a flagellate corallum with short, mostly bilateral branchlets.^1";
- 5504 s[5501] = "SOULE J.D., SOULE D.F. (1974).- The bryozoan-coral interface on coral and coral reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 335-340.- FC&P 4-1, p. 17, ID=5000^Topic(s): bryozoan-coral interface; bryozoan-coral interface; Systematics: Bryozoa Cnidaria; Anthozoa; Stratigraphy: Recent; Geography: ^1";
- 5505 s[5502] = "HANSKE H., LOSER H. (2006).- Annotated Bibliography on Extant Corals (1758-2002).- Coral Research Bulletin 8, 35 pp. +

- CD-ROM.- FC&P 35, p. 74, ID=2383^Topic(s):
 bibliography, extant corals; Anthozoa, Hydrozoa; Systematics:
 Cnidaria; Anthozoa Hydrozoa; Stratigraphy: Recent;
 Geography: ^This bibliography contains 9,132 references to
 literature on all aspects of extant corals (Anthozoa: Scleractinia,
 Helioporidae, Tubiporidae; Hydrozoa: Milleporidae). All entries have
 been very carefully checked and supplemented with information on the
 subject matter, and the origin of the material reviewed. The
 accompanying CD ROM contains the bibliography in the form of a database
 as well as a menu-driven search program for Windows-compatible
 computers.^1";
- 5506 s[5503] = "GALLISSIAN M.F., VACELET J. (1990).- Fertilization and
 nutrition of the oocyte in the calcified sponge *Petrobiona massiliana*
 (Calcarea, Calcaronea).- Proceedings IIIrd International Conference on
 the Biology of Sponges, Woods Hole.- FC&P 15-1.2, p. 17,
 ID=0902^Topic(s): biology; Porifera calcarea; Systematics:
 Porifera; Calcarea; Stratigraphy: Recent; Geography:
 ^1";
- 5507 s[5504] = "VACELET J. (1980).- Squelette calcaire facultatif et corps de
 regeneration dans le genre *Merlia*, Eponges apparentees aux *Chaetetides*
 fossiles.- C.R. Acad. Sci. Paris 290D: 227-230.- FC&P 9-1,
 p. 56, ID=0378^Topic(s): stromatoporoid affinities; Chaetetida
Merlia; Systematics: Porifera; Chaetetida; Stratigraphy:
 Recent; Geography: ^The non-spicular skeleton of the genus
Merlia may be absent and a new species, *M. deficiens*, is described. A
 part of the recent Porifera may be the descendent of fossil calcified
 organisms (Stromatoporoids, Chaetetids) which have lost their
 calcareous skeleton. The cells packed in cavities of the skeleton are
 similar to gemmular cells, a fact which may explain the occurrence of
 discontinuities in the skeleton of some Stromatoporoid fossils.
 [original abstract]^1";
- 5508 s[5505] = "BERGBAUER M., LANGE R., REITNER J. (1996).- Characterization
 of Organic Matrix Proteins Enclosed in High Mg-Calcite Crystals of the
 Coralline Sponge *Spirastrella* (*Acanthochaetetes*) *wellsi*.- Goettinger
 Arbeiten zur Geologie und Palaontologie, Special Volume 2 [Reitner J.,
 Neuwiller F. & Gunke F. (eds): Global and Regional Controls on
 Biogenic Sedimentation I. Reef Evolution]: pp- FC&P
 26-1, p. 22, ID=3562^Topic(s): organic matrix; Porifera,,
Acanthochaetetes; Systematics: Porifera; Chaetetida;
 Stratigraphy: Recent; Geography: ^Protein components
 found in freeze-dried specimens of the coralline sponge *Spirastrella*
 (*Acanthochaetetes*) *wellsi* were separated and characterized. Proteins
 extracted from skeleton crystals (matrix proteins) contained high
 concentrations of glycin (16%) as well as enhanced amounts of
 asparagin/aspartic acid (11%) and glutamin/glutamic acid (10%). At
 least 10 proteins could be separated by SDS-PAGE. Six of them, with
 molecular weights between 30 and 45 kDa, may be considered as distinct
 matrix proteins. The bulk of total soluble proteins as well as all
 soluble matrix proteins are acidic with pH values below 5. Our results
 indicate that at least in one stage crystal growth is matrix mediated,
 i.e. controlled by the sponge.^1";
- 5509 s[5506] = "STEARN C.W. (1984).- Growth forms and macrostructural
 elements of the coralline sponges.- *Palaeontographica Americana* 54:
 315-325 [Oliver W. A. Jr et al. (eds): Recent advances in the
 paleobiology and geology of the Cnidaria: Proceedings of the 4th
 International Symposium on Fossil Cnidaria].- FC&P 14-1, p.
 57, ID=1057^Topic(s): growth forms, structures; Porifera
 coralline sponges; Systematics: Porifera; Corallina;
 Stratigraphy: Recent; Geography: ^The morphologic
 gradients that exist between the sclerosponges, Stromatoporoids,
 chaetetids, tabulate corals, scleractinian corals, heliolitids and
 hydrozoans are discussed and illustrated. The Stromatoporoids are
 closer to the morphologic field of the poriferan members of these

- gradients than to the cnidarian elements.¹¹;
- 5510 s[5507] = "WENDT J. (1984).- Skeletal and spicular mineralogy, microstructure and diagenesis of coralline calcareous sponges.- *Palaeontographica Americana* 54: 326-336 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 58, ID=1062^Topic(s): mineralogy; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: Recent; Geography: ^The aspicular skeleton is massive aragonite or Mg-calcite constructed of acicular crystals in irregular, spherulitic, clinogonal, and orthogonal patterns. Diagenetic alteration includes micritization and recrystallization and cementation of intercrystalline voids.¹¹;
- 5511 s[5508] = "BOHM F., JOACHIMSKI M.M., DULLO W.-C., EISENHAUER A., LEHNERT H., REITNER J., WORHEIDE G. (2000).- Oxygen isotope fractionation in marine aragonite of coralline sponges.- *Geochimica et Cosmochimica Acta* 64, 10: 1695-1703.- FC&P 31-1, p. 70, ID=1646^Topic(s): oxygen isotopes; Porifera coralline sponges; Systematics: Porifera; Corallina; Stratigraphy: Recent; Geography: ^Oxygen isotope values of the extant Caribbean coralline sponge *Ceratoporella nicholsoni* are compared with published temperatures and $\delta^{18}O$ of water calculated from salinities. The measured values from aragonitic sponge skeletons have a mean offset of $1.0 \pm 0.1\%$ from calculated calcite equilibrium values ($\delta^{18}O_{\text{aragonite-calcite}} = 1.0010$). This is in good agreement with published values from synthetic aragonite. They further agree with published near-equilibrium oxygen isotope values of temperate and cold water molluscs and foraminifera extrapolated to the temperature range of the coralline sponges. These results and the mode of skeleton formation of *Ceratoporella nicholsoni* suggest that these sponges precipitate aragonite close to isotopic equilibrium. * The temperature dependence of oxygen isotopic fractionation between the aragonite of *Ceratoporella nicholsoni* and water is only roughly constrained by the available data, due to the narrow temperature range of the Caribbean reef sites. However, as the data suggest oxygen isotopic equilibrium, we can calculate a well constrained temperature equation combining temperate and cold water equilibrium values from molluscs and foraminifera with our sponge data: $103 \ln \delta^{18}O_{\text{aragonite-water}} = (18.45 \pm 0.4) * 103/T(K) - (32.54 \pm 1.5)$ and $T (^{\circ}C) = (20.0 \pm 0.2) - (4.42 \pm 0.10) * (\delta^{18}O_{\text{a}} - \delta^{18}O_{\text{w}})$; for $3^{\circ} < T < 28^{\circ}$. [original abstract]¹¹;
- 5512 s[5509] = "REITNER J., GAUTRET P. (1996).- Skeletal Formation in the Modern but Ultraconservative Chaetetid Sponge *Spirastrella* (*Acanthochaetetes*) *wellsi* (*Demospongiae*, *Porifera*).- *Facies* 34, 1: 193-208.- FC&P 25-1, p. 46, ID=3055^Topic(s): skeletogenesis; Porifera, *Demospongiae*, *Spirastrella*; Systematics: Porifera; *Demospongiae*; Stratigraphy: Recent; Geography: ^The modern hadromerid coralline sponge *Spirastrella* (*Acanthochaetetes*) *wellsi* exhibits a unique secondary high-Mg calcite ($\delta^{60} = 19 \text{ mol } \% \text{ MgCO}_3$) basal skeleton. The basal skeleton is constructed of bundles of elongated crystals more or less tangentially orientated. The initial formation of these crystals is controlled by soluble highly acidic aspartic and glutamic-rich (40%) macromolecules. The skeletal mineralization occurs in four different loci: in the top of the calicles, at the tabulae, on collagenous anchor fibres, and within closed spaces between the tabulae. The calicle walls are formed on the uppermost top of the basal skeleton as a continuous process. Based on long term stainings with Ca^{2+} -chelating fluorochroms (calein, chlorotetracyclines) the growth rate of this sponge is extremely low with ca. $50\text{-}100 \mu\text{m/a}$. The skeletal formation takes place outside the sponge, within a narrow zone (300-500 mm) between the basopinacoderm and the mature basal skeleton. The sponge produces thread-like folded templates ($\text{\'spaghetti fibres\'}$) of $0,5\text{-}2 \mu\text{m}$

size, the shape controlling insoluble organic matrix. These templates become mineralized in a first step as MgCO₃, then are stretched. A soluble organic matrix is also secreted, and remains are included inside the mineralized skeleton. This organic matrix consists of in a complex mixture containing small very acidic proteins (5, 13, 31 kD; 40% Asp and Glu and therefore most probably Ca²⁺-binding) and high molecular weight glycoproteins among several other organic compounds. The mature crystals are high-Mg calcites. During calcification large cells with large reserve granules (LCG) are always present in a tight connection with the basopinacoderm. These cells form also the collagenous anchor fibres. Primary tabulae are formed by a non-collagenous organic sheet. Calcification happens only when LCG cells are enriched on the organic sheet. Randomly oriented high-Mg calcite crystals are growing on the collagenous anchor fibres. The same type of the mineralization is observed within the spaces of the tabulae. This particular case of mineralization is controlled by decaying sponge tissue (ammonification). The δ¹³C values are in equilibrium with the ambient sea water and vary between +3.2 and +2.8‰. The mode of mineralization of the basal skeleton can be described as biologically induced resp. matrix mediated.¹¹;

- 5513 s[5510] = "SOEST R.W.M.van (1997).- Biogeographic Scenarios of Marine Demospongiae.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6889^Topic(s): biogeography; Porifera, Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: ^^1";
- 5514 s[5511] = "NISHIYAMA G.K., BAKUS G.J. (1999).- Release of allelochemicals by three tropical sponges (Demospongiae) and their toxic effects on coral substrate competitors.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 411-418.- FC&P 28-2, p. 9, ID=6971^Topic(s): substrate competition; Porifera; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: ^^1";
- 5515 s[5512] = "TURON X., URIZ M.J., WILLENZ P. (1999).- Cuticular linings and remodelisation processes in Crambe crambe (Demospongiae: Poecilosclerida).- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 617-626.- FC&P 28-2, p. 10, ID=6993^Topic(s): physiology; Porifera, Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: ^^1";
- 5516 s[5513] = "ZEA S., PARRA F.J., MARTINEZ A., DUQUE C. (1999).- Production of bioactive furanosesterterpene tetronic acids as possible internal chemical defense mechanism in the sponge *Ircinia felix* (Porifera: Demospongiae).- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 687-696.- FC&P 28-2, p. 10, ID=7000^Topic(s): chemical defense; Porifera, Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: Recent; Geography: ^^1";
- 5517 s[5514] = "REISWIG H.M., MEHL D. (1991).- Tissue organization of *Farrea occa* (Porifera, Hexactinellida).- Zoomorphology 110: 301-311.- FC&P 20-2, p. 70, ID=2973^Topic(s): tissue organization; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: ^The tissue organization of *Farrea occa* has been examined by light microscopy, transmission electron microscopy (TEM), and scanning electron microscopy (SEM). It was found to agree closely with the hexactinellid model established for *Rhabdocalyptus dawsoni* by Mackie and Singla (1983) in consisting of a thin general syncytium incorporating few discrete cellular components, several of which share membrane continuity with the general syncytium by distinctive plug junctions. The general syncytium, supported by a thin collagenous

mesolamella, is specialized regionally as dermal membrane, gastral membrane, peripheral trabecular strands, and primary reticulum (R1) of flagellated chambers. Extensions of the syncytium, which lack mesolamella support, form the distinctive secondary reticulum (R2) inside chambers and a newly discovered structure, the "inner membrane", which occupies the central region of flagellated chambers. The choanosyncytia are enucleate networks of collar bodies and stolons embedded in R1 and plugged into R1 and choanoblasts. The discrete cell population consists of choanoblasts and archeocytes located in the thin mesohyle space and plugged to syncytial elements, cystocytes and vacuolar cells also located in the mesohyle but lacking plug connections, and granular cell emergent on R1 and apparently not bearing plug connections. The status of scleroblast syncytia has not been solved. Large populations of rod-shaped bacteria occupy the mesohyle space; intracellular ovoid bodies, possible symbiotic prokaryotes, are common in R1 and R2. The previously unknown inner membrane probably functions to control flagellar activity on a very localized scale and to accumulate and release egesta in packages.

5518 s[5515] = "REISWIG H.M. (1996).- Redescription and placement of the rossellid genus *Vazella* Gray (Hexactinellida: Lyssacinosida).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 135-141.- FC&P 25-2, p. 30, ID=3103Topic(s): systematics; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: ^Two hexactinellid sponges from the Florida Keys, *Holtenia pourtalesii* and *H. saccus*, described by O. Schmidt in 1870, were re-examined to determine their taxonomic status. Both belong to a single species which is redescribed here. The species belongs to the subfamily Rossellinae (Hexasterophora, Lyssacinosida) but cannot be included in any of the recognized genera. The genus *Vazella*, Gray, 1870, is reinstated to accommodate the single species, *Vazella pourtalesii* (Schmidt, 1870). [original abstract]^1";

5519 s[5516] = "TABACHNICK K.R. (1999).- Abolishment of the family Caulophacidae (Porifera: Hexactinellida).- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 603-606.- FC&P 28-2, p. 10, ID=6991Topic(s): Caulophacidae; Porifera; Systematics: Porifera; Hexactinellida; Stratigraphy: Recent; Geography: ^^1";

5520 s[5517] = "OPRESKO D.M., BARON-SZABO R.C. (2001).- Reevaluation of *Tropidopathes saliciformis* Silberfeld: a hydroid originally identified as an antipatharian coral.- Proceedings of the Biological Society of Washington 114, 4: 1-20.- FC&P 30-2, p. 31, ID=1588Topic(s): ; Hydrozoa, Tropidopathes; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: ^^1";

5521 s[5518] = "ZIBROWIUS H., VERWOORT W. (1981).- Annotations on H. Boschma's work on Hydrocorals (Milleporina, Axoporina, Stylasterina), with additions to his list of the described species of Stylasterina.- Zoologische Mededelingen 181: 1-40.- FC&P 11-1, p. 27, ID=1752Topic(s): ; Hydrozoa, Hydrocorallina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Recent; Geography: ^^1";

5522 s[5519] = "MCINERNEY J.O., ADAMS C.L., KELLY M. (1999).- Phylogenetic resolution potential of 18s and 28s rRNA genes within the lithistid Astrophorida.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 343-352.- FC&P 28-2, p. 9, ID=6965Topic(s): phylogeny, molecular data; Porifera; Systematics: Porifera; Lithistida; Stratigraphy: Recent; Geography: ^^1";

5523 s[5520] = "SCHLICHTER D. (1982).- Nutritional strategies of cnidarians: The absorption, translocation and utilization of dissolved nutrients by

- Heteroxenia fuscescens.- American Zool. 22: 659-669. title?.-
 FC&P 16-1, p. 70, ID=1998^Topic(s): feeding
 strategies; Octocorallia; Systematics: Cnidaria; Octocorallia;
 Stratigraphy: Recent; Geography: ^^1";
- 5524 s[5521] = "SCHLICHTER D. (1982).- Epidermal nutrition of the
 Alcyonarian Heteroxenia fuscescens (Ehrb.): Absorption of dissolved
 organic material and lost endogenous photosynthates.- Oecologia 53:
 40-49.- FC&P 16-1, p. 70, ID=1999^Topic(s): feeding
 by absorption; Octocorallia, feeding; Systematics: Cnidaria;
 Octocorallia; Stratigraphy: Recent; Geography: ^^1";
- 5525 s[5522] = "SCHLICHTER D., SVOBODA A., KREMER B.P. (1983).- Functional
 autotrophy of Heteroxenia fuscescens (Anthozoa, Alcyonaria): carbon
 assimilation and translocation of photosynthates from symbionts to
 host.- Marine Biol. 78: 29-38.- FC&P 16-1, p. 71,
 ID=2001^Topic(s): functional autotrophy; Octocorallia, feeding;
 Systematics: Cnidaria; Octocorallia; Stratigraphy:
 Recent; Geography: ^^1";
- 5526 s[5523] = "LAWNICZAK A. (1987).- Les modalités de croissance de
 l'axe calcaire chez Corallium johnsoni (Cnidaria, Gorgonaria,
 Scleraxonia).- Senckenbergiana maritima 19, 3/4: 149-161 [in French,
 with English summary].- FC&P 16-2, p. 31,
 ID=2078^Topic(s): growth modes; Octocorallia, Gorgonaria;
 Systematics: Cnidaria; Octocorallia; Stratigraphy:
 Recent; Geography: ^The current data concerning Corallium
 rubrum Linne 1758 allowed to identify a skeletal mineralization mode by
 ectodermal secretion of independent units. These elements later
 amalgamate by adjunction of calcitic cement. This growth process
 extended to all Corallidae contrasts with the regular secretion of
 fibro-crystals observed among the other Cnidarians. The analysis of
 Corallium johnsoni Gray 1860 proves that this interpretation can not be
 applied in every case. Indeed, the axial skeleton of this less common
 Corallidae shows two successive mineralization stages: the first one,
 brief and fibrous and the second one, most important, composed of
 radial cylindrical units associated with groups of lamellar elements.^1";
- 5527 s[5524] = "SATO T. (1977).- The calcified tissue and ultrastructure of
 the axial skeleton of Corallium (Octocorallia). [in Japanese, with
 English abstract].- Jour. Fac. Liberal Arts, Shinshu Univ., pt II,
 Natural Sci. 11: 1-41.- FC&P 7-1, p. 11,
 ID=5565^Topic(s): ; Octocorallia, Corallium; Systematics:
 Cnidaria; Octocorallia; Stratigraphy: Recent; Geography:
 ^ [monograph]^1";
- 5528 s[5525] = "HOSKIN C.M., GEIER J., REED J.K. (1983).- Sediment produced
 from abrasion of the branching stony coral Oculina vericosa.- Journal
 of sedimentary Petrology 53, 3: 779-786.- FC&P 13-1, p. 20,
 ID=0394^Topic(s): taphonomy, abrasion; taphonomy, Scleractinia;
 Systematics: Cnidaria; Scleractinia; Stratigraphy:
 Recent; Geography: ^Soft rubber tumbling barrels, some with
 screen windows, were used to simulate natural abrasion of coral
 branches. Tumbled for equal times, sealed barrels produced more
 sediment from coral branches than barrels with windows, and dead coral
 produced more sediment than live coral. Tumbled dead coral produced a
 gravel mode (2-4 mm) of fragmented barnacles and a sand mode (0.2 mm)
 of coral. Tumbled live coral produced similar results but lacked
 barnacles. Time series tests of 1-1000 min. showed that closed barrels
 produced uncreasingly greater percentages of carbonate mud and
 increasingly finer sand grain-size modes. Tumbling barrels with screen
 windows yielded particles of unchanging size through the same
 intervals. Natural sediment with broken coral branches contained coral
 sand most abundantly between 0.125-0.250 mm, which is the same as
 produce: by tumbling dead coral in barrels with screen windows. Strong
 grain -size modes at 0.2 mm produced by sonification and tumbling of
 live and dead coral and sealed and screen-window barrels support the
 sorby Principle of skeletal breakdown. (Original abstract)^1";

- 5529 s[5526] = "SWART P.K. (1983).- Carbon and oxygen isotope fractionations in Scleractinian corals.- Earth Science Reviews 19: 51-80.- FC&P 13-1, p. 23, ID=0400Topic(s): stable isotopes, C 0; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The present theories on the fractionation of stable isotopes in scleractinian corals are critically discussed in the light of data available on primary productivity, respiration and stable isotope chemistry. These data support a model of fractionation in which the carbon and oxygen isotopes are decoupled. Calcification occurs from a reservoir of carbon dioxide derived from both organic and inorganic sources. Photosynthesis preferentially fixes ¹²C and thereby leaves behind ¹³C. Increases in the rate of photosynthesis therefore also enrich the carbon isotope ratio of the skeleton. From theoretical considerations, photosynthesis has little effect on the oxygen isotope ratio of the skeleton, a fact confirmed by available data. The process of respiration adds depleted carbon and oxygen to the calcification reservoirs. The varying correlations between carbon and oxygen isotopes seen in hermatypic corals are caused by changes in the relationship between photosynthesis and respiration at different geographical localities. The isotopic compositions in the skeletons of non-zooxanthellate corals, which show a consistent positive correlation, can also be explained by the above scenario. (Original summary)^1";
- 5530 s[5527] = "CHENG Y.-M. (1977).- Notes on Flabellum apertum Moseley 1876 dredged by R.V. Chulien on September 13, 1975.- Acta Geologica Taiwanica 19: 135-138.- FC&P 15-1.2, p. 37, ID=0831Topic(s): ; Scleractinia, Flabellum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5531 s[5528] = "SCHUHMACHER H. (1984).- Reef-building properties of Tubastraea micranthus (Scleractinia, Dendrophylliidae), a coral without zooxanthellae.- Mar. Ecol. Prog. Ser. 20: 93-99.- FC&P 14-1, p. 61, ID=1071Topic(s): reef-builders, azooxanthellate; Scleractinia, Tubastraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^One characteristic of reef-building corals is a skeletal strength sufficient to endure hydrodynamic stress. Porosity, compressive and bending strength, elastic modulus and resistance to abrasion were measured in the reef-inhabiting colonial dendrophylliids Tubastraea micranthus and T. aurea and in the acroporids Acropora palmata and A. cervicornis. Dendrophylliids are devoid of zooxanthellae, acroporids possess zooxanthellae and are well recognized reef-builders. The mechanical properties of T. micranthus colonies, collected in Philippine reefs, equal or even surpass those of the acroporids, which rank at the high-strength end of the porosity/strength continuum. Skeletal strength and colony form set out T. micranthus as a primary framework-builder (sensu Goreau 1963), corroborating field observations on Philippine reefs. Therefore the conventional affiliation of T. micranthus to the 'ahermatypic' category (sensu Wells 1933) is not functionally correct. The respective data of T. aurea, however, show that this species has little significance as a reef-builder.^1";
- 5532 s[5529] = "CAIRNS S.D. (1999).- Species richness of Recent Scleractinia.- Atoll Research Bulletin 459: 1-46.- FC&P 29-1, p. ..., ID=1476Topic(s): biodiversity; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5533 s[5530] = "GAUTRET P., CUIF J.-P., STOLARSKI J. (2000).- Organic components of the skeleton of scleractinian corals - evidence from in situ acridine orange staining.- Acta Palaeontologica Polonica 45, 2: 107-118.- FC&P 29-1, p. ..., ID=1478Topic(s): organic matrices; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5534 s[5531] = "HUBMANN B., PILLER W.E., RIEGL B. (2002).- Functional

morphology of coral shape and passive hydrodynamic self-righting in recent *Manicina areolata*.- *Senckenbergiana lethaea* 82, 1: 125-130.- FC&P 31-2, p. 48, ID=1701^Topic(s): physiology; Scleractinia, *Manicina*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The scleractinian *Manicina areolata* is a common coral on Caribbean hard and soft substrata and was studied at Lee Stocking Island (Exuma Cays, Bahamas). It is not only found in reefal areas but also in bioclastic sand with seagrasses. The meandroid coralla typically grow to sizes of 2 to 10 cm and are morphological variable. Growth form can vary from conical with round to oval cross-section to turbinate forms with few meanders and flat oval cross-section. The conical morphotype is usually attached to hard substratum, while the turbinate morphotype tends to live unattached, usually upright, in soft substratum. In infratidal areas, both attached and unattached turbinate forms were found in close vicinity, however, conical attached forms were rare. Habitats with sandy softgrounds, where free-living turbinate morphotypes were common, were influenced by strong tidal currents with concurrent danger of burial or 'disorientation' of the coralla. Therefore, strategies are necessary for the coral to remain in the upright position. Besides a high self-cleaning potential (Fabricius 1964), the colony shape itself leads to passive cleaning and self-righting, which is achieved by the flat-turbinate morphology of the corallum, with a concave side and a flat to slightly convex opposite side, under high current speeds. The concave side, and particularly the median lobes formed by many meandroid coralla, are the critical morphological factors. Particularly the grooves formed in between the lobes channel currents in a way that scour underneath the coral and drag produced by the lobes act together to allow passive self-righting.^1";

- 5535 s[5532] = "PAUSTIAN P. (1985).- Computergestuetzte roentgendensitometrische Analyse hermatyper Korallen.- Kiel University; unpublished Diplomarbeit, 81pp [unpublished].- FC&P 16-1, p. 70, ID=1995^Topic(s): x-ray densitometry; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5536 s[5533] = "DODGE R.E., KNAP A.H., WYERS S.C., FRITH H.R., SLEETER T.D., SMITH S.R. (1985).- The effect of dispersed oil on the calcification rate of the reef building coral *Diploria strigosa* (Dana).- Proc. V Int. Coral Reef Congr. 4: 453-457.- FC&P 18-1, p. 28, ID=2225^Topic(s): mineralization, pollution; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5537 s[5534] = "WYERS S.C., FRITH H.R., DODGE R.E., SMITH S.R., KNAP A.H., SLEETER T.D. (1986).- Behavioural effects of chemically dispersed oil and subsequent recovery in *Diploria strigosa* (Dana).- P.S.Z.N.I. Marine Ecology 7: 23-42.- FC&P 18-1, p. 28, ID=2227^Topic(s): pollution effects; Scleractinia, *Diploria*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5538 s[5535] = "BENZONI F., STEFANI F., STOLARSKI J., PICHON M., MITTA G., GALLI P. (2007).- Debating phylogenetic relationships of the scleractinian *Psammocora*: molecular and morphological evidences.- Contributions to Zoology 76, 1: 35-54.http://www.repository.naturalis.nl/record/217424.- FC&P 35, p. 69, ID=2376^Topic(s): phylogeny; Scleractinia, *Psammocora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The phylogenetic relationships of the scleractinian genus *Psammocora* with the other genera traditionally included in the family Siderastreidae and some Fungiidae are assessed based on combined skeletal and molecular data. *P. explanulata* differs from the other examined congeneric species (*P. contigua*, *P. digitata*, *P. nierstraszi*, *P. profundacella*, *P. superficialis*, and *P. stellata*) in possessing interstomatous septa between adult corallites, costae, and

in having continuous buttress-like structures joining septal faces (i.e., fulturae) which typically occur in fungiids. These characters are shared with *Coscinaraea wellsi* but not with the remainder of the examined siderastreids (the congeneric *C. columna*, and *Anomastraea irregularis*, *Horastrea indica*, *Pseudosiderastrea tayamai*, *Siderastrea savignyana*) whose septa are interconnected by typical synapticulae. Most of the examined species form septa with distinct transverse groups of centers of calcification, a biomineralization pattern typical of the Robusta clade. The observations on skeletal structures corroborate the results of the ITS2 and 5.8S molecular phylogeny. *C. wellsi* and *P. explanulata* are phylogenetically very close to each other and show closer genetic affinity with the examined Fungiidae (*Halomitra pileus*, *Herpolitha limax*, *Fungia paumotensis*, and *Podabacia crustacea*) than with the other species in the genera *Psammocora* and *Coscinaraea*, or with any other siderastreid. Our results show that neither *Psammocora* nor *Coscinaraea* are monophyletic genera. The high genetic distances between the species of Siderastreidae, especially between *Pseudosiderastrea tayamai* and *Siderastrea savignyana* on one side and the other genera on the other, suggest a deep divergence in the phylogenetic structure of the family.¹¹;

- 5539 s[5536] = "KLAUS J.S., BUDD A.F., HEIKOOP J.M., FOUKE B.W. (2007).- Environmental controls on corallite morphology in the reef coral *Montastraea annularis*.- Bulletin of Marine Science 80, 135/75 : 233-260.- FC&P 35, p. 75, ID=2386Topic(s):variability; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy:Recent; Geography:^Scleractinian reef-coral species display high phenotypic plasticity in skeletal morphology. Understanding environmental and physiologic controls on this variation is essential to explaining the distribution and abundance of coral species as well as understanding their susceptibility to pollution and global climate change. Here we assess phenotypic plasticity in the corallite morphology of genetically determined colonies of *Montastraea annularis* s.s. (Ellis and Solander, 1786) by analyzing the three-dimensional morphology of calical surfaces and the two-dimensional corallite morphology represented in transverse thin sections. Samples were collected along gradients of seawater depth and coastal influence on the island of Curacao, Netherlands Antilles, and additionally compared to *M. annularis* and two closely related species, *M. franksi* (Gregory, 1895), and *M. faveolata* (Ellis and Solander, 1786), collected from Panama. Significant phenotypic plasticity was found between seawater depths and localities of Curacao, as well as between the two geographic regions. Morphologic characters associated with calical surfaces were significantly more plastic than characters preserved in transverse thin sections. While characters preserved in thin section were more successful at classifying the three closely related species, characters associated with calical surfaces provide a basis for interpreting the adaptive significance of the observed differences between these three species. [original abstract]¹¹;
- 5540 s[5537] = "STOLARSKI J., PRZENIOSLO R., MAZUR M., BRUNELLI M. (2007).- High resolution synchrotron radiation studies on natural and thermally annealed scleractinian coral biominerals.- Journal of Applied Crystallography 40, 1: 2-9.- FC&P 35, p. 116, ID=2453Topic(s):aragonite, calcite; Scleractinia, mineralogy; Systematics: Cnidaria; Scleractinia; Stratigraphy:Recent; Geography:^The structural phase transition from aragonite to calcite in biogenic samples extracted from the skeletons of selected scleractinian corals has been studied by synchrotron radiation diffraction. Biogenic aragonite samples were extracted en bloc without pulverization from two ecologically different scleractinian taxa: *Desmophyllum* (deep-water, solitary and azooxanthellate) and *Favia* (shallow water, colonial, zooxanthellate). It was found that natural (not pulverized) samples contribute to narrow Bragg peaks with d/d values as low as 1×10^{-3} which allows the

exploitation of the high resolution of synchrotron radiation diffraction. A precise determination of the lattice parameters of biogenic scleractinian coral aragonite shows the same type of changes of the a, b, c lattice parameter ratios as that reported for aragonite extracted from other invertebrates [Pokroy, Quintana, Caspi, Berner & Zolotoyabko (2004). Nat. Mater. 3, 900-902]. It is believed that the crystal structure of biogenic samples is influenced by interactions with organic molecules that are initially present in the biomineralization hydrogel. The calcite phase obtained by annealing the coral samples has a considerably different unit-cell volume and lattice parameter ratio c/a as compared with reference geological calcite and annealed synthetic aragonite. The internal strain in the calcite structure obtained by thermal annealing of the biomineral samples is about two times larger than that found in the natural aragonite structure. This effect is observed despite slow heating and cooling of the sample.^1";

5541 s[5538] = "SCHEER G. (1991).- Die von E.J.C. Esper 1788-1809 beschriebenen Anthozoa (Cnidaria). IV. Scleractinia. V. Espers Leben und werk.- Senckenbergiana biologica 71, 4/6: 369-429. [in German].- FC&P 20-2, p. 65, ID=2960^Topic(s): collection Esper; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^In Espers werk "Die Pflanzenthiere" (Bibliographie s. Grasshoff & Scheer, 1991) stellen die Steinkorallen mit 74 abgehandelten Arten einen gewichtigen Teil dar. In Verbindung mit der Sammlung, die jetzt im Senckenberg-Museum aufbewahrt wird, wurden diese Arten kritisch ueberpruft. Zum grossen Teil waren sie anhand der guten Abbildungen schon in der bisherigen Literatur unstrittig und klar identifiziert, fur eine ganze Reihe jedoch erbrachte die jetzige Ueberpruefung erst eine Klarung. Nur wenige, namlich 8 Arten, müssen auch heute noch als nicht gedeudet oder aus anderen Grunden als nomina dubia gelten. Esper stellte alle Steinkorallen zu der Gattung Madrepora. wegen der durch die septen sternformig gekammerten kelchoffnungen nannte er sie "sternkorallen"; ein Name, der spaeter kaum mehr benutzt und ganzlich durch "Steinkorallen" ersetzt wurde. wie auch bei anderen der damaligen Gattungen (Esper nannte sie "Geschlecht"; die Art nannte er "Gattung") waren die Zuordnungen nicht immer klar, zwei Steinkorallen-Arten behandelte Esper unter Millepora, und 5 von ihm zu Madrepora gestellten Arten sind keine Steinkorallen. Esper hat in der Gattung Madrepora 72 Arten beschrieben und auf 100 Tafeln abgebildet, zwei weitere Steinkorallen-Arten behandelt er unter Millepora, namlich Millepora Nr. 5 und 11, hier im systematischen Teil die Nr. [73] und [74]. Von diesen 74 Arten sind 25 Erstbeschreibungen, davon sind nach heutiger Kenntniss neun Arten Synonyme und drei nomina dubia. Fünf Arten sind keine Steinkorallen, Espers Nummern 15, 30, 34, 45, und eine bei Esper ohne Nummer, hier Nr. [72]; insgesamt sind somit in Espers werk 69 Steinkorallen Arten (darunter eine fossile) behandelt und auf 97 Tafeln in 121 Exemplaren abgebildet. [part of original introduction]^1";

5542 s[5539] = "WALLACE C.C., WILLIS B.L. (1994).- Systematics of the Coral Genus Acropora: Implications of New Biological Findings for Species Concepts.- Annu. Rev. Ecol. Syst. 25: 237-262.- FC&P 25-1, p. 43, ID=3040^Topic(s): systematics; Scleractinia, Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The large coral genus Acropora occurs throughout the world's reefs and is potentially a model for evolution and development of modern reef faunas. New research including breeding trials and genetic analyses of sympatric populations of Acropora and other corals is suggesting misalignments of breeding, morphological and genetic boundaries such that species limits may be sometimes narrower, sometimes broader, than presently perceived. Ongoing biogeographic and phylogenetic analyses are reexamining coral species in space and time and generating hypotheses about the

origination of species. Synthesis of new findings from these research areas with preliminary insights from molecular data on species boundaries and phylogenies is allowing assessment of the current taxonomic framework of *Acropora* and of the order Scleractinia. The tacit assumption that currently defined coral species encompass biological, evolutionary, and phylogenetic species concepts may be unfounded.¹";

- 5543 s[5540] = "LOGAN A. (1988).- Budding and Fusion in the Scleractinian Coral *Scolymia cubensis* (Milne-Edwards & Haime) from Bermuda.- Bulletin of Marine Science 42, 1: 145-149.- FC&P 22-1, p. 42, ID=3409Topic(s): fusion budding; Scleractinia, Scolymia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Several forms of budding and fusion in the above mentioned species of the genus *Scolymia* (Miocene-Recent) are explained and figured.¹";
- 5544 s[5541] = "WILLIS B.L. (1990).- Species Concepts in Extant Scleractinian Corals: Considerations Based on Reproductive Biology and Genotypic Population Structures.- Systematic Botany 15, 1: 136-149.- FC&P 22-1, p. 43, ID=3411Topic(s): species concept; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^A review of techniques used to define species limits in scleractinian corals indicates that a phenetic species concept is generally adhered to, but that there is also a tacit acceptance of the biological species concept. The available information on asexual reproduction, breeding systems, and dispersal, relevant to discussions of interbreeding barriers and gene flow, is discussed to assess the applicability of the biological species concept for extant scleractinian corals. [shortened abstract]¹";
- 5545 s[5542] = "BUDD A.F. (1993).- Variation within and among morphospecies of *Montastraea*.- Courier Forschungsinstitut Senckenberg 164: 241-254. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 18, ID=3459Topic(s): variation; Scleractinia, *Montastraea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Morphometric data for two commonly known living "species" of *Montastraea* are reanalyzed using cluster and canonical discriminant analysis to search for morphologic discontinuities that could correspond with morphotypes recently recognized by neontologists on the basis of behavioral and electrophoretic evidence. The samples were collected at four environmentally distinct reef habitats near Discovery Bay, Jamaica. The characters consist of linear distances and counts made on several corallites within each colony. Despite the lack of polymodality in univariate histograms, the multivariate results show two distinct morphs in *M. "annularis"*; and three in *M. "cavernosa"*. The character complexes which best distinguish these morphs are closely associated with corallite size and spacing and with number of septa, and are also found to vary among "species" and among habitats within morphs. When environmental variation is examined separately within each morph, patterns emerge which are more consistent with variation in environmental factors than those found in previous research, and thus offer added promise for the use of skeletal morphology in interpreting past environments. Patterns of environmental variation within morphs of the same "species" are similar, although different complexes may be involved within morphs of different "species", due to differences in nutritional energetics. As shown using the Neogene species *M. limbata* as an example, similar patterns can be used to detect relative differences in sedimentation and light intensity among habitats.¹";
- 5546 s[5543] = "HOEKSEMA B.W. (1993).- Phenotypic corallum variability in Recent mobile reef corals.- Courier Forschungsinstitut Senckenberg 164: 263-272. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].-

- FC&P 22-2, p. 19, ID=3461^Topic(s): variability, mobile forms; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Among free-living reef corals a distinction is made between those that are loose and potentially mobile, and those that live partly buried in soft substratum, here defined as "semi-buried". A coral may become loose by (1) detachment from its substratum or by clonopary; (2) fragmentation by autotomy or traumatic breakage; (3) overgrowing its substratum. Most reef corals programmed to become loose are able to exhume and to right themselves, and to disperse over the bottom. The phenotypic corallum variability of mobile species is related to their (1) developmental history, (2) fission and fusion, and (3) habitat. Environmental parameters that may affect corallum shape are (1) light intensity, (2) sedimentation, and (3) turbulence; this may be reflected in (1) corallum convexity, (2) thickness, (3) number of mouths, and (4) coarseness of septocostal ornamentation. Some ecophenotypes may have adaptive significance with regard to sediment-shedding and mobility.^1";
- 5547 s[5544] = "SCHLICHTER D. (1991).- A perforated gastrovascular cavity in *Leptoseris fragilis*. A new strategy to improve heterotrophic nutrition in corals.- *Naturwissenschaften* 78: 467-469.- FC&P 22-2, p. 26, ID=3481^Topic(s): feeding strategies; Scleractinia, *Leptoseris*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5548 s[5545] = "SCHLICHTER D. (1992).- A perforated gastrovascular cavity in the symbiotic deep-water coral *Leptoseris fragilis*: a new strategy to optimize heterotrophic nutrition.- *Helgolaender Meeresunters* 45: 423-443.- FC&P 22-2, p. 26, ID=3482^Topic(s): feeding strategies; Scleractinia, *Leptoseris*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The organization of the zooxantellate scleractinian coral *Leptoseris fragilis* was studied. The architecture of the corallite and the histology of the polyparium were analysed for adaptations that enable efficient capture and retention of suspended particles which would increase energy supply. The data indicate that the gastrovascular system of *L. fragilis* is not a blind but a flow-through system. Water entering the coelenteron through the mouth leaves the body not only through the mouth but also through microscopic pores (D 1-2 gm) which are located near the crest of the sclerosepta in the oral epithelia. Irrigation is achieved by flagellar and probably also by muscular activity. This type of filtration enables *L. fragilis*, which lacks tentacles, to utilize suspended organic material including bacteria. The supposed suspension feeding in combination with effective photoadaptations (presented in former communications) seems to be the basis for the survival of *L. fragilis* in an extreme habitat (between -95 and -145m) and for its successful competition with other scleractinian species provided with larger catching surfaces, and with other invertebrates depending on filter feeding.^1";
- 5549 s[5546] = "ZAHN M., HEBBINGHAUS R. (1992).- Wachstum und selbstaendige vegetative Vermehrung von Steinkorallen im Aquarium am Beispiel von *Acropora* und *Favites*.- *Lobbecke Museum und Aquazoo, Jahresbericht* 91: 45-57.- FC&P 22-2, p. 90, ID=3533^Topic(s): growth in aquaria; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5550 s[5547] = "STOLARSKI J. (1996).- *Gardineria* - a scleractinian living fossil.- *Acta Palaeontologica Polonica* 41, 4: 339-367.- FC&P 26-1, p. 72, ID=3559^Topic(s): living fossil; Scleractinia, *Gardineria*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The basic architecture (Bauplan) and microstructure of the skeleton of Recent *Gardineria* are noticeably different from those of most other modern scleractinians. The wall of the *Gardineria* skeleton is entirely epithecate (non-trabecular), while in the majority of modern Scleractinia the epitheca is either absent or added to the main wall which usually is of

trabecular nature. These different patterns of theca formation reflect significant anatomical differences in the peripheral parts of the polyp. The Bauplan of Gardineria pattern, exceptional in the modern scleractinian fauna, was widespread among early Mesozoic corals, particularly among the Triassic protoheterastraeids. Similar skeletons also occur in some late Palaeozoic rugosans (e.g., polycoeliids). Zardinophyllum zardini, an aberrant Triassic scleractinian coral, with a supposed rugosan septal insertion, supports the hypothesis of the rugosan origin of the Scleractinia. [original abstract]^1";

5551 s[5548] = "SCHLICHTER D., CONRADY S., KAMPMANN H., KLUTER A., KRISCH H., KUHRAU M.L., ZSCHARNACK B., (1996).- Carbonate Production of Scleractinians in Dependence upon the Availability of Food and the Trophic Potential of Endolithic Algae.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 28, ID=3576^Topic(s): carbonate production; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The nutrition and the growth of zooxanthellate, hermatypic scleractinians in the Gulf of Aqaba was studied. Growth rates of entire colonies are species-specific and depend upon water depth. Annual skeletal mass increment correlates best with the seasonally changing light regime (photosynthesis by the zooxanthellae). The supply with particulate food (seston, sediment) during the year has no marked effect on carbonate production. Zooxanthellae of different origin (various species, different depths) showed photoadaptations toward light limitation. However, the zooxanthellae of two species studied showed no genetic heterogeneity (enzyme electrophoresis). Thus the different photosynthetic features base on phenotypic plasticity. Adaptations improving phototrophic and heterotrophic food supply were detected. The biomass, the pigmentation, the spectrum of assimilates and the productivity of endolithic green algae was studied. The productivity is low and reaches 3-8% of that of the zooxanthellae under corresponding light conditions. The utilization of endolithic photoassimilates by the coral's metabolism could be proven. Endolithic algae are - like zooxanthellae - involved in recycling processes within the reefal food web. Although the annual availability of light for scleractinians in the Gulf of Aqaba is considerably reduced in comparison to low latitude reefs, the corals show luxurious growth. Besides a multitude of other factors, the luxurious growth could speculatively be due to a lack of temperature stress.^1";

5552 s[5549] = "GAUTRET P., CUIF J.-P., FREIWALD A. (1997).- Composition of Soluble Mineralizing Matrices in Zooxanthellate and Non-zooxanthellate Scleractinian Corals: Biochemical Assessment of Photosynthetic Metabolism through the Study of a Skeletal Feature.- Facies 36, 1: 189-194.- FC&P 26-1, p. 84, ID=3656^Topic(s): mineralizing matrices; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Soluble organic matrices extracted from aragonitic skeletons produced by recent zooxanthellate and non-zooxanthellate scleractinian corals were studied after suitable hydrolyses, by FIPLC chromatographies allowing characterization of their amino acid and monosaccharide compositions. Clear compositional differences can be correlated with the symbiotic or non-symbiotic character in both proteic (via Asp, Glu, Ala and Ser) and glucidic phases of soluble matrices (via GalN, GlcN and Gal), providing new criteria to assess the impact of photosynthetic metabolism on skeletal features of scleractinian corals.^1";

5553 s[5550] = "SCHLICHTER D., BRENDENBERGER H. (1998).- Plasticity of the Scleractinian Body Plan: Functional Morphology and Trophic Specialization of Mycedium elephantotus (Pallas, 1766).- Facies 39, 1: 227-241.- FC&P 27-2, p. 47, ID=3903^Topic(s): feeding strategies; Scleractinia, Mycedium; Systematics:

Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Morphological, histological and behavioral features indicate that *Mycedium elephantotus*, a zooxanthellate scleractinian species without tentacles, is well adapted for utilizing suspended organic matter for nutrition. The colonies are composed of vertically growing fan-like plates and can reach diameters of more than 1 m in depths below 20 m. The external body surface is coated with a mucus layer (cuticle) which enables the acquisition and accumulation of suspended organic material. The mucus-entangled particles pass to the mouth openings by gravitational transport assisted by water movement. In experiments the corals were able to discriminate between suspended food and mineral particles. Both types of particles were rapidly entangled in fine mucus nets or filaments. Mineral particles were never ingested and instead tumbled down the inclined skeletal plates. In contrast, food particles were actively incorporated when the mucus filaments accidentally touched the stomodaea during the downward gliding. The food-enriched mucus filaments were either transported by ciliary activity into the coelenteron or were sucked into the body cavities by decreasing pressure in the coelenteron caused by contraction of longitudinal, mesenterial muscles. The discriminative reactions to mineral or food particles are probably based on the release of different types of mucus. Nematocysts are infrequent in the oral epidermis, indicating that the capture of living prey plays a subordinate role in nutrition. The mesenterial filaments, in contrast, are densely packed with large nematocysts. Storage products were piled up within the tissues of gastral pockets. The adaptations of *Mycedium elephantotus* for using suspended food particles may explain the particularly high abundance of this species between ca. 20 and 40 m depth on a steeply inclined fore-reef slope in the Gulf of Aqaba (Red Sea). The evidence indicating the importance of heterotrophic fueling to *M. elephantotus* is supported by carbonate production rates which are, in contrast to that of many other zooxanthellate scleractinian species, almost constant at depths between 5 and 40 m and which are unaffected by varying light regimes over the year, suggesting that the reduced phototrophic contribution by the zooxanthellae is compensated by mucus suspension feeding.^1";

5554 s[5551] = "ZIBROWIUS H. (1998).- A new type of symbiosis: *Heterocyathus japonicus* (Cnidaria: Scleractinia) living on *Fissidentalium vernedei* (Mollusca: Scaphopoda).- *Zoologische verhandelingen* 323: 319-340.- FC&P 28-1, p. 46, ID=3980^Topic(s): scleractinian, scaphopod symbiosis; scleractinian, scaphopod symbiosis; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^After introductory remarks on the solitary coral genera *Heterocyathus* and *Heteropsammia*, commonly known to be symbiotic with a sipunculan inhabiting a gastropod shell, *Heterocyathus japonicus* is redescribed in detail. It occurs from Taiwan to northern Honshu, Japan. It is the first of these symbiotic corals to be found in association with an alternative partner, living specimens of the large scaphopod *Fissidentalium vernedei*. The coral always occupies the apical end of the shell, the part that protrudes from the sediment. It is thus preserved from being buried and is maintained in an upright position (the same advantages it also gets when its partner is a sipunculan). On live *F. vernedei*, *H. japonicus* incrusts a manganese rich black mineral coating that characterizes the exposed, apical part of the shell. It is speculated about which factors may cause coral larvae to associate with the partner (sipunculan squatting a shell, scaphopod in its own shell).^1";

5555 s[5552] = "CUIF J.-P., DAUPHIN Y. (1998).- Microstructural and physico-chemical characterization of "centers of calcification" in septa of some Recent scleractinian dorals .- *Pal. Zeitschr.* 72, 3/4: 257-270.- FC&P 28-1, p. 46, ID=3981^Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^In order to define the value of the concept of "center of

- calcification; an attempt has been made to collect microstructural, physical, and chemical data from these particular structures. In each of the fifteen species studied, these data are compared with similar characteristics observed in the surrounding fibrous tissue. Results lead to a paradoxical conclusion. Although the existence of centers of calcification is sometimes denied, they have been evidenced by various techniques in septa of all the studied species, that belong to various families. Thus, centers of calcification appear to be a basic component in the development of corallian septal architecture. But taking into account their microstructural and chemical peculiarities allows to introduce some changes in the currently admitted view concerning their role in skeletogenesis of Scleractinia.¹;
- 5556 s[5553] = "CUIF J.-P., PERRIN C. (1999).- Micromorphology and microstructure as expressions of scleractinian skeletogenesis in *Favia fragum* (Esper 1795) (Faviidae, Scleractinia).- *Zoosystema* 21, 2: 1-20.- FC;P 28-2, p. 16, ID=4012Topic(s): microstructures; Scleractinia, *Favia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ¹";
- 5557 s[5554] = "CUIF J.-P., DAUPHIN Y., FREIWALD A., GAUTRET P., ZIBROWIUS H. (1999).- Biochemical markers of zooxanthellae symbiosis in soluble matrices of skeleton of 24 Scleractinia species.- *Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology* 123, 3: 269-278.- FC;P 28-1, p. 47, ID=4013Topic(s): biochemical markers; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ¹Soluble skeletal organic components were isolated from coral skeletons belonging to 24 species, both zooxanthellate (13 species) and non-zooxanthellate (11 species). Statistical study of analytical data shows that four amino-acids and five monosaccharides show distinct differences between species. Using this method of analysis, it [is] possible to discriminate between symbiotic or non-symbiotic coral metabolism through the biochemical compositions of their mineralizing matrices. [original abstract]¹;
- 5558 s[5555] = "CONSTANZ B.R., MEIKE A. (1995).- Calcite centers of calcification in *Mussa angulosa* (Scleractinia).- *Origin, Evolution, and Modern Aspects of Biomineralization in Plants and Animals* [R.E. Crick (ed.)]: 201-207; Plenum Press, New York.- FC;P 24-2, p. 89, ID=4587Topic(s): microstructure, SEM study; Scleractinia, *Mussa*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ¹Transmission electron microscope (TEM) analysis demonstrates that centers of calcification in the exoskeleton of the Scleractinian coral *Mussa angulosa* are composed of submicron sized crystals of calcite, the rhombohedral polymorph of calcium carbonate.¹;
- 5559 s[5556] = "SORAUF J.E. (1972).- Skeletal Microstructure and Microarchitecture in Scleractinia (Coelenterata).- *Palaeontology* 15, 1: 88-107.- FC;P 1-2, p. 11, ID=4625Topic(s): microstructures, SEM study; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ¹This paper is based on a survey of modern corals with the scanning electron microscope and synthesises new data thus obtained. Attention is paid to the main categories of skeletal elements and fits data to a biocrystallization model where possible.¹;
- 5560 s[5557] = "GILL G.A. (1970).- La structure et la microstructure septale de *Montlivaltia* Lmx.; critères nouveaux pour la systématique des Hexacoralliaires.- *C. R. Acad. Sci. Paris* 270: 294-297, sér. D.- FC;P 1-2, p. 21, ID=4679Topic(s): structures; Scleractinia, *Montlivaltia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ¹L'étude de nombreuses *Montlivaltia* provenant de différentes régions du globe permet de préciser la constitution de leurs septes: ceux-ci présentent une structure axiale formée par la soudure de trabecules fibreuses,

uniaxiales et de couches laminaires latérales. La même composition septale est reconnue chez *Stereophyllia* All. (Bathonien) et chez *Cyclastraea* All. (Cénomanién). La permanence d'une telle constitution durant le Jurassique et le Crétacé fait croire à l'existence d'un groupe naturel qui devrait être introduit dans la systématique. La structure septale de *Fungia* actuelle se révèle semblable à celle des genres cités ci-dessus. ^1";

5561 s[5558] = "FOIDART J. (1972).- Révision de l'holotype de *Goniastrea parvistella* (Dana).- *Annales de la Soc. Roy. Zool. de Belgique* 102: 35-46.- FC&P 2-1, p. 12, ID=4709^Topic(s):revision; Scleractinia, *Goniastrea*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The detailed revision of holotype of *Goniastrea parvistella* (= *Astrea parvistella* Dana 1846) shows that this specimen is included into the species *Goniastrea retiformis* (Lam.). Owing to the priority law, *parvistella* is junior synonym of *retiformis*. Consequently, a new denomination has to be given to specimens previously named *Goniastrea parvistella* (Foidart 1970). The name proposed, *Goniastrea edwardsii* Chevalier 1971, is used by the author for the definition of the second species of *Goniastrea* with small calyx, beside *Goniastrea retiformis* (Lam.)^1";

5562 s[5559] = "HUBBARD J.A.E.B., POCKOCK Y.P. (1972).- Sediment rejection by recent scleractinian corals: a key to palaeoenvironmental reconstruction.- *Geol. Rundschau* 61, 2: 598-626.- FC&P 2-1, p. 14, ID=4712^Topic(s): sediment rejection; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^26 of the 59 living species of scleractinian corals found in Western Atlantic and Caribbean waters, less than 68 meters deep, and two fungiid genera from the Pacific, are analysed in terms of their behaviour, sediment rejecting properties, functional, morphology and distribution patterns. The contrasting behaviour and skeletal structure of the two solitary fungiids provides evidence for the construction of a theoretical mechanical model which is applied to the subsequent interpretation of the more complex colonial reef corals from the Atlantic province. Regional distribution patterns, growth forms and calical orientations of the Atlantic species and their associated sediment types were noted in dives across transects in extreme environments in the Caribbean. Representative samples were then selected from the five functional ecological niches in the Florida keys, and subjected to inundations of sized and painted carbonate sand particles in the laboratory. The coral was filmed before the sedimentary influx, on impact and during rejection. The skeletons were then extracted and dissected to construct a mechanical model compatible with their behavioural functions. There are four means of sediment rejection: distension by the stomodeal up-take of water, tentacular action, ciliary beat, and mucus entanglement. Differences in sediment rejection are ascribed to two factors (1) variations in the polyps distensional capacity, and (2) the geometry of the calice. A theoretical model of characteristic scleractinian distribution patterns on an Atlantic patch reef mirrors regional distribution patterns. The sediment rejecting experiments are used as additional evidence for interpreting other behavioural activities of greater consequence e.g. food gathering and the removal of excrement. Theoretical models are described for the relationship of calical form to polypal function and calical orientation to distribution patterns on the corallum; and also variations in growth form. Ecological distributions, in local patch reef and regional occurrences, are outlined in terms of the recent scleractinian corals of the Atlantic province. These models are tested against some rugose and tabulate coral distributions in the Irish Carboniferous.^1";

5563 s[5560] = "KELLER N.B. (1974).- Nouvelles données sur certaines espèces de Madréporaires du genre *Flabellum*.- *Trudy Inst. Okeanologii AN SSSR* 98: 199-212.- FC&P 3-2, p. 34, ID=4920^Topic(s):

- taxonomy; Scleractinia, Flabellum; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The composition of the genus and three of its species *F. thouarsii* M. E. & H., *F. antarcticum* (Gravier), *F. apertum* Moseley are revised. *F. marcusii* sp.nov. is described. Some biological peculiarities and geographical and bathymetrical distribution of the species studied are discussed.^1";
- 5564 s[5561] = "HUBBARD J.A.E.B. (1974).- Scleractinian coral behaviour in calibrated current experiments - an index to their distribution patterns.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 107-126.- FC&P 4-1, p. 17, ID=5013^Topic(s): current flow experiments; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5565 s[5562] = "CHEVALIER J.P. (1974).- On some aspects of the microstructure of Recent Scleractinia.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 345-351.- FC&P 4-1, p. 18, ID=5029^Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5566 s[5563] = "WALLACE C.C. (1974).- A numerical study of a small group of *Acropora* specimens (Scleractinia: Acroporidae).- Mem. Queensland Museum 17, 1: 55-61.- FC&P 4-1, p. 25, ID=5081^Topic(s): numerical classification; Scleractinia, *Acropora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^A small group of museum (skeletal) specimens belonging to four recognised species of *Acropora* with suggested affinities was subjected to a simple taxonomic analysis, using an information theory model. The results suggested distinct species groupings, with growth-form in one case influencing subgroupings. Implications were taken on the role and suitability of the various morphological attributes.^1";
- 5567 s[5564] = "SWART P.K. (1979).- The effect of seawater calcium concentrations in the growth and skeletal composition of a scleractinian coral *Acropora squamosa*.- Journ. Sed. Pet. 49, 3: 15-18.- FC&P 8-2, p. 35, ID=5708^Topic(s): biomineralization; Scleractinia, mineralogy; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5568 s[5565] = "FOSTER A.B. (1979).- Phenotypic plasticity in the reef corals *Montastrea annularis* (Ellis & Solander) and *Siderastrea siderea* (Ellis & Solander).- J. Exp. Mar. Biol. Ecol. 39: 25-54.- FC&P 10-1, p. 57, ID=6004^Topic(s): phenotypic plasticity; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^[…] although *M. annularis* shows more plasticity than *S. siderea*. both species have highly plastic phenotypes. A large number of characters describing the architecture of corallites respond to environmental factors such as light intensity, sedimentation rate, water activity, and food availability. The most plastic characters in *M. annularis* describe coenosteal features and the thickness of thecae. The most plastic characters in *S. siderea* describe the thicknesses of thecae, septa, and columellae. * This study suggests that phenotypic plasticity is an important species attribute in scleractinians and may be a significant mechanism in controlling the distribution and abundance of scleractinians on reefs. [last part of extensive summary]^1";
- 5569 s[5566] = "KINCHINGTON D. (1981).- Organic matrix synthesis by Scleractinian coral larval and post-larval stages during skeletogenesis.- Proc. 4th Internat. Coral Reef Sympos. Manila 1981, 2: 107-113.- FC&P 12-2, p. 45, ID=6243^Topic(s): organic matrix; skeletal matrix, Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography:

^The calcification processes of the cool temperate coral *Balanophyllia regia* have been studied during the settlement and metamorphosis of planulae larvae into polyps. Ultrastructural studies of the fully developed and settled post-larval stages have implicated one of the gland cell types in the secretion of an organic matrix prior to skeletal growth. Qualitative X-ray analytical studies using the scanning transmission electron microscope (STEM) have supported these observations: calcium was detected in this organic substance after it had been secreted into the 1-3µm wide space between the skeletogenic epithelium and the substrate. Thirty-six hours later X-ray mapping of this matrix showed that high levels of calcium were more easily detected within crystal-like profiles than in the surrounding areas. [original abstract]^1";

5570 s[5567] = "SWART P.K., HUBBARD J.A.E.B. (1982).- Uranium in Scleractinian coral skeletons.- *Coral Reefs ...*, 1: 13-19.- FC&P 12-2, p. 46, ID=6246^Topic(s): U; Scleractinia, uranium; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Accurate determinations have been made of the distribution of uranium in fresh and diagenetically altered coral skeletons occurring both naturally and grown under a variety of experimental conditions. Whereas live coral skeletons are homogeneous in uranium distribution, dead skeletons show homogeneities relating to lithothamnioid algal encrustations and endolithic sponges. In the analyses of over 100 live coral skeletons, no zonal uranium distributions, described by previous workers, were found. In skeletons, free from organic material, uranium was found to exchange readily with the coral skeleton and/or to be precipitated along trabeculae axes and skeletal margins. Bioeroded specimens contained higher uranium concentrations than freshly formed aragonite; they were similar to fossil coral skeletons used by previous researchers for uranium series dating. [original abstract]^1";

5571 s[5568] = "BENZONI F., STEFANI F., PICHON M., GALLI P. (2010).- The name game: morpho-molecular boundaries in the genus *Psammocora* (Cnidaria, Scleractinia).- *Zoological Journal of the Linnean Society* 160: 421-456.- FC&P 36, p. 84, ID=6491^Topic(s): taxonomy morphometry; Scleractinia *Psammocora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The morphometric and molecular boundaries between twelve *Psammocora* (Cnidaria, Scleractinia) nominal species were addressed. The type specimens of *Psammocora haimiana* Milne-Edwards & Haime 1851, *P. togianensis* Umbgrove 1940, *P. folium* Umbgrove 1939, *P. digitata* Milne-Edwards & Haime 1851, *Maeandroseris australiae* Rousseau 1854, *P. samoensis* Hoffmeister 1925, *P. superficialis* Gardiner 1898, *P. profundacella* Gardiner 1898, *P. nierstraszi* van der Horst 1921, *P. verrilli* Vaughan 1907, and *P. albopicta* Benzioni 2006, were analysed together with specimens from museum collections, including those depicted in widely cited taxonomic descriptions, and material collected for this study in different parts of the Indo-Pacific. Morphometric analyses of the dimensions of skeletal structures allowed the identification of groups of specimens with similar morphologies. Congruency between these groups and current species whose synonymies and descriptions were found in recent taxonomic references was, hence, investigated and the species revised. Finally, the phylogenetic relationships of a representative subset of specimens were reconstructed based on rDNA and COI, thus allowing a direct link between morphologic and genetic information. Incongruence between type of morphology and literature descriptions was evidenced for some widely recognised species. Based on this integrated approach, five species were unambiguously identified. [original abstract]^1";

5572 s[5569] = "BRAHMI C., MEIBOM A., SMITH D.C., STOLARSKI J., AUZOUX-BORDENAVE S., NOUET J., DOUMENC D., DJEDIAT C., DOMART-COULON I. (2010).- Skeletal growth, ultrastructure and composition of the azooxanthellate scleractinian coral *Balanophyllia regia*.- *Coral Reefs*

29, 1: 175-189.- FC&P 36, p. 84, ID=6492Topic(s): skeletal growth; Scleractinia Balanophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The biomineralization process and skeletal growth dynamics of azooxanthellate corals are poorly known. Here, the growth rate of the shallow-water dendrophyllid scleractinian coral Balanophyllia regia was evaluated with calcein-labeling experiments that showed higher lateral than vertical extension. The structure, mineralogy and trace element composition of the skeleton were characterized at high spatial resolution. The epitheca and basal floor had the same ultrastructural organization as septa, indicating a common biological control over their formation. In all of these aragonitic skeletal structures, two main ultrastructural components were present: "centers of calcification" (COC) also called rapid accretion deposits (RAD) and "fibers" (thickening deposits, TD). Heterogeneity in the trace element composition, i.e., the Sr/Ca and Mg/Ca ratios, was correlated with the ultrastructural organization: magnesium was enriched by a factor three in the rapid accretion deposits compared with the thickening deposits. At the interface with the skeleton, the skeletogenic tissue (calicoblastic epithelium) was characterized by heterogeneity of cell types, with chromophile cells distributed in clusters regularly spaced between calicoblasts. Cytoplasmic extensions at the apical surface of the calicoblastic epithelium created a three-dimensional organization that could be related to the skeletal surface microarchitecture. Combined measurements of growth rate and skeletal ultrastructural increments suggest that azooxanthellate shallow-water corals produce well-defined daily growth steps. [original abstract]^1";

5573 s[5570] = "HOULBREQUE F., MEIBOM A., CUIF J.-P., STOLARSKI J., MARROCCHI Y., FERRIER-PAGES C., DOMART-COULON I., DUNBAR R.B. (2009).- Strontium-86 labeling experiments show spatially heterogeneous skeletal formation in the scleractinian coral Porites porites.- Geophysical Research Letters 36, L04604.- FC&P 36, p. 127, ID=6581Topic(s): skeletal growth, Sr labeling; Scleractinia, skeletal growth; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^This paper presents the results of an effort to label calcium carbonates formed by marine organisms with stable isotopes to obtain information about the biomineralization processes. The growing skeleton of the scleractinian coral Porites porites was labeled three times with enhanced abundances of ⁸⁶Sr. The distribution of ⁸⁶Sr in the skeleton was imaged with the NanoSIMS ion microprobe with a spatial resolution of 200 nm and combined with images of the skeletal ultra-structure. Importantly, the distribution of the ⁸⁶Sr label in the P. porites skeleton was found to be strongly heterogeneous. This constrains the physical dimensions of the hypothetical Extracellular Calcifying Fluid (ECF) reservoir at the surface of the growing skeleton, which is implicit in most geochemical models for coral biomineralization. These new experimental capabilities allow for a much more detailed view of the growth dynamics for a wide range of marine organisms that biomineralize carbonate structures. [original abstract]^1";

5574 s[5571] = "FRICKE H., VARESCI E. (1982).- A scleractinian coral (Plerogyra sinuosa) with "photosynthetic organs".- Marine Ecology - Progress Series 7, 3: 273-278.- FC&P 14-1, p. 21, ID=6607Topic(s): Scleractinia Plerogyra; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";

5575 s[5572] = "WALLACE C.C. (1985).- Seasonal peaks and annual fluctuations in recruitment of juvenile scleractinian corals.- Marine Ecology Progress Series 21: 289-298.www.int-res.com/articles/meps/21/m021p289.pdf.- FC&P 14-2, p. 17, ID=6695Topic(s): larval recruitment; Scleractinia; Systematics: Cnidaria; Scleractinia;

Stratigraphy: Recent; Geography: ^Recruitment of juvenile scleractinian corals to natural calcium carbonate settlement plates varied seasonally and annually on 4 vertically separated reef front sites during a 3 yr study period. Early summer was the major recruiting season: of 1.470 recruits observed on 184 plates over 2 yr, 89% were in spring-summer (Oct to Feb), 8% in summer-winter (Feb to Jun) and 3% in winter-spring (Jun to Oct). The peak early summer recruitment was significantly greater in 1980-81 (32 juveniles per plate) than in 2 subsequent years (1981 - 82, 9 per plate; 1982 - 83, 1 per plate). [first part of an abstract]^1";

5576 s[5573] = "WALLACE C. (1999).- Staghorn Corals of the world. A revision of the genus Acropora.- CSIRO Publishing; 436 pp. ISBN 9780643063914.- FC&P 28-2, p. 13, ID=7001^Topic(s): taxonomy; Scleractinia Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Staghorn corals (genus Acropora) are the most obvious and important corals on coral reefs throughout the world, providing much of the beauty and variety seen on the reefs. This invaluable reference tool, the first major review of Acropora in over 100 years, synthesizes all we know about the genus. It assesses all the known species worldwide, describing each in detail and illustrating the range of variability of form with habitat and geographic location. The classification, evolution and world-wide distribution of all species are reviewed and illustrated with colour plates, full page black and white plates and distribution maps. Details of the general biology of staghorn corals are discussed and illustrated. * The book is complemented by a CD-ROM, Staghorn Corals of the world: A Key to Species of Acropora CD-ROM, containing a LucID-based key to all species of Acropora and a photographic database of type specimens from museums around the world.^1";

5577 s[5574] = "WALLACE C. (1999).- Staghorn Corals of the world. A key to species of Acropora CD-ROM.- CSIRO Publishing; CD-ROM. ISBN 0643063919.- FC&P 28-2, p. 14, ID=7002^Topic(s): identification key; Scleractinia Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Coral reef workers know the importance of staghorn corals (genus Acropora) on reefs throughout the world, and will recognise the need to accurately identify the different species. They will therefore appreciate the value of this interactive key for identifying staghorn corals which has resulted from the first major review of the Acropora in over 100 years. * A simple step-by-step selection of characters will enable the user to identify any of the 113 species of Acropora. Over 2000 photographs, micrographs and illustrations in colour and black and white are included to guide the user. Additionally there is a photographic database of the type specimens of Acropora collected from museums around the world. The CD-ROM is complemented by the book, Staghorn Corals of the world: A Revision of the Genus Acropora, which synthesizes all we know about this genus. It is an essential tool for all reef workers and coral workers around the world.^1";

5578 s[5575] = "GAUTRET P. (1999).- Matrices organiques intrasquelettiques des Scléactiniaux récifaux: Évolution diagénétique précoce de leurs caractéristiques biochimiques et conséquences pour les processus de cimentation. [in French, with English abstract].- Geobios 33, 1: 73-78.- FC&P 29-1, p. 49, ID=7042^Topic(s): organic skeletal matrix; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^Biochemical character and properties of intraskeletal organic matrices are studied in skeleton pieces from several growth zones sampled in a 25cm long living Porites core. In experimental conditions these organic matrices exhibit an inhibitory effect on CaCO₃ precipitation which increases all along the 15-20 upper cm of the core. Parallely relative amino acid compositions are more and more enriched in aspartic and glutamic acids from the surface to the base of the core, and molecular weights of glycoproteic compounds are comparable to those

of the uppermost living zone in all parts of the core except in the base. From the combination of experimental results it is concluded the the highest inhibiting efficiency of organic matrices is a consequence of quantity, the composition (Asp concentration) of organic matrices, and the preservation of high molecular weight assemblages. Consequences for cementation processes in superficial zones of coral reefs are examined. It is most probable that the diagenetic state of intraskeletal organic matrices influences the development of cements directly upon the surface of skeletal substrates, as well as the formation of diagenetic aragonite overlaying biogenic aragonite within skeletal structures. Conditions in reefal cryptic zones inhabited by sponges are discussed as a comparison with photic zones where scleractinian corals are located. [original abstract]^1";

5579 s[5576] = "PERRIN C., CUIF J.-P. (2001).- Ultrastructural controls on diagenetic patterns of scleractinian skeletons: evidence at the scale of colony lifetime.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 210-218.- FC&P 30-1, p. 20, ID=7070^Topic(s): microstructures, diagenesis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The earliest fine scale diagenetic changes in corals were investigated by comparing microstructural and ultrastructural features from the uppermost skeletal parts of living colonies with those obtained from older parts of the same specimen. In addition to its organic mineral duality, the initial heterogeneity of the scleractinian skeleton is shown by the occurrence of a micron scale zonation within crystal fibers, resulting from incremental growth during elementary cycles of biomineralization and also by the presence of two basic structural features, calcification centers and fibers, clearly differentiated from each other. Within the species analyzed, micro and ultrastructural data reveal additional fine scale diversity related to taxonomy. At the time scale of colony life, the earliest processes of diagenesis produce a thin fringe of syntaxial aragonite cements, alteration of the incremental zonation of scleractinian fibers, and also, preferential diagenesis within calcification centers. These early modifications of coral skeletons are obviously controlled by the biological ultrastructural characteristics of scleractinian taxa and also suggest that early diagenesis does not necessarily imply drastic change in environmental conditions. [original abstract]^1";

5580 s[5577] = "CUIF J.-P., DAUPHIN Y., DOUCET J., SALOME M., SUSINI J. (2003).- XANES mapping of organic sulfate in three scleractinian coral skeletons.- Geochimica et Cosmochimica Acta 67, 1: 75-83.- FC&P 33-1, p. 69, ID=7216^Topic(s): skeletogenesis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The presence and localization of organic sulfate within coral skeletons are studied by using X-ray absorption near edge structure spectroscopy (XANES) fluorescence. XANES spectra are recorded from four reference sulfur-bearing organic molecules; three amino acids (H-S-C bonds in cysteine; C-S-C bonds in methionine; one disulfide bond C-S-S-C bonds in cystine) and a sulfated sugar (C-SO₄ bonds in chondroitin sulfate). Spectral responses of three coral skeletons show that the sulfated form is extremely dominant in coral aragonite, and practically exclusive within both centres of calcification and the surrounding fibrous tissues of coral septa. Mapping of S-sulfate concentrations in centres and fibres gives us direct evidence of high concentration of organic sulfate in centres of calcification. Additionally, a banding pattern of S-sulfate is visible in fibrous part of the coral septa, evidencing a biochemical zonation that corresponds to the step-by-step growth of fibres. [original abstract]^1";

5581 s[5578] = "WIJSMAN-BEST M. (1974).- Habitat-induced modification of reef corals (Faviidae) and its consequences for taxonomy.- In Proceedings of the Second International Symposium on Coral Reefs (22nd

June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 217-228.- FC&P 4-1, p. 18, ID=5020^Topic(s): variation, habitat-induced; Scleractinia, Faviidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";

- 5582 s[5579] = "HOEKSEMA B.W. (1990).- Systematics and ecology of mushroom corals (Scleractinia: Fungiidae).- Edited by the author; 471 pp., 700 figs., 11 tbls.- FC&P 20-2, p. 64, ID=2959^Topic(s): systematics, ecology; Scleractinia, Fungiidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^[Unlike the majority of other reef corals, most Fungiidae do not remain attached to the bottom. Adult mushroom corals may be found on several kinds of substrata; they live on sand, rubble, dead coral or even on top of living coral. They can be found in environments where many other corals cannot live, such as lagoons, reef bases and terrigenous non-reefal bottoms. In the systematic part of this thesis, a taxonomic revision is given with descriptions of the 40 species that are presently classified with the Fungiidae (chapter 2.1). These descriptions define the material used in the other chapters. The family is divided into S1 genera, one of which, Fungia, is subdivided into seven subgenera. Three species are new to science and one is renamed because its name was already in use for another species. Furthermore, an overview of the stratigraphic distributions is given for all species. A tentative phylogenetic reconstruction down to the species level is given. The fungiidae are the first scleractinian family for which such an analysis has been undertaken. The cladogram that is provided should be considered a working hypothesis and not a sound basis for a completely revised classification. (fragment taken from extensive summary)]^1";
- 5583 s[5580] = "SCHUHMACHER H. (1977).- Ability in fungiid corals to overcome sedimentation.- Proc. 3rd Int. Coral Reef Symp. Miami 1: 503-509.- FC&P 10-2, p. 13, ID=6066^Topic(s): ecology; Scleractinia, Fungiidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5584 s[5581] = "SCHUHMACHER H. (1979).- Experimentelle Untersuchungen zur Anpassung von Pilzkorallen (Scleractinia, Fungiidae) an unterschiedliche Sedimentations- und Bodenverhaeltnisse.- Int. Revue ges. Hydrobiologie 64: 207-243.- FC&P 10-2, p. 13, ID=6069^Topic(s): ; Scleractinia, Fungiidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^^1";
- 5585 s[5582] = "CAIRNS S.D. (1997).- A generic revision and phylogenetic analysis of the Turbinoliidae (Cnidaria: Scleractinia).- Smithsonian Contributions to Zoology 591: 55 pp., 10 pls.- FC&P 27-1, p. 92, ID=3836^Topic(s): monograph; Scleractinia, Turbinoliidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: Recent; Geography: ^The monophyly of the Turbinoliidae is based on the unique (with the Caryophyllina) character of having its entire corallum invested with tissue, which is reflected in its well-formed costae from base to calice and its characteristically deep intercostal regions. All turbinoliids are solitary and free-living, and thus the complete investiture of its corallum might facilitate movement through or across a sandy substrate. The Turbinoliidae consists of 28 genera and 163 valid species, of which 22 genera and 49 species are extant. The earliest known turbinoliid is from the Late Cretaceous (Campanian) of Antarctica. All 28 genera are diagnosed and figured herein. The stratigraphic and geographic distributions are discussed for each genus, and a list of species known for each genus, including junior synonyms, is given. Two genera and two species are described as new: Pleotrochus, P. zibrowii, Foveolocyathus, and Sphenotrochus wellsi. Peponocyathus is restricted to those species having transverse division, which requires the resurrection of Deltocyathoides Yabe and Eguchi 1932, for those species that do not reproduce by transverse

division, and it also requires the synonym of *Truncatocyathus* Stolarski 1992. *Tropidocyathus* is divided into two genera, allowing the resurrection of *Cyathotrochus* Bourne 1905. *Oryzotrochus stephensoni* Wells 1959, is identified as a *Turbinolia*, which synonymizes *Oryzotrochus* and extends the stratigraphic range of *Turbinolia* from the Oligocene to Recent. [first part of extensive summary]^1";

5586 s[5583] = "RIEGL B., BLOOMER J.P. (1995).- Tissue damage in scleractinian and alcyonacean corals due to experimental exposure to sedimentation.- *Beiträge zur Paläontologie* 20: 51-63.- FC&P 25-2, p. 73, ID=3179^Topic(s): tissue damage; Scleractinia, Octocorallia; Systematics: Cnidaria; Scleractinia Octocorallia; Stratigraphy: Recent; Geography: ^Four South African scleractinian corals (*Favia fava*, *Favites pentagona*, *Platygyra daedalea* and *Gyrosmlia interrupta*) and four alcyonacean corals (*Lobophytum depressum*, *Lobophytum venustum*, *Sinularia dura* and *Sinularia leptoclados*) were experimentally exposed to high sedimentation conditions in the laboratory during a period of six weeks. Experimental sedimentation corresponded to the highest measured sedimentation levels on South African coral reefs, being 200 mg cm⁻²h⁻¹. Corals were monitored for tissue necroses and bleaching during the course of the experiment and histological sections were prepared after the termination of the experiment. During the experiment, tissue necroses appeared earlier and more frequently in alcyonacea than in scleractinia. Histological sections showed degeneration and necroses of epithelia and mucus-producing cells with accumulation of free mucous material in the epithelia as well as loss of zooxanthellae, was observed in three alcyonacea (*Lobophytum depressum*, *Sinularia dura*, *Sinularia leptoclados*). Not all parts of the alcyonacean colonies were equally affected by tissue damage and bleaching. In particular, elevated lobes and finger-like projections, which were never covered by sediment for long periods, did not exhibit the same severe damage or bleaching as flat parts of the colonies. Scleractinia did not suffer the same amount of tissue damage as alcyonacea, no bleaching was observed. Partial necroses and degeneration of epithelia as well as changes in mucus producing cells were also observed in scleractinia.^1";

5587 s[5584] = "HARTMAN W.D. (1984).- *Astrhorhizae*, mamelons, and symbionts of Recent Sclerosponges.- *Palaeontographica Americana* 54: 305-314 [Oliver W. A. Jr et al. (eds): *Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria*].- FC&P 14-1, p. 55, ID=1042^Topic(s): structures; Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Recent; Geography: ^The traces of the converging exhalant canals on the skeletons of Recent sclerosponges are described. The exhalant canals are commonly associated with mamelons on the surface. Bacteria occur in the tissue of some sclerosponges but zooxanthellae have not been found.^1";

5588 s[5585] = "ROSENHEIM B.E., SWART P.K., THORROLD S.R., WILLENZ P., BERRY L., LATKOCZY C. (2004).- High resolution Sr/Ca records in sclerosponges calibrated to temperature in situ.- *Geology* 32, 2: 145-148.- FC&P 33-1, p. 78, ID=7226^Topic(s): paleotemperatures; Porifera sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: Holocene; Geography: ^Ratios of strontium to calcium have been analysed by laser-ablation inductively coupled plasma-mass spectroscopy (LA-ICP-MS) in a skeletal section of the sclerosponge *Ceratoporella nicholsoni*. The growth period, representative of 3 yr, was stained in the skeleton with a fluorochrome (calcein). Temperatures were recorded at 2 h intervals within the shallow cryptic reef enclosure that the sclerosponge inhabited on the northern coast of Jamaica, allowing the formulation of a direct empirical relationship between Sr/Ca and temperature. To verify this calibration, Sr/Ca ratios of two sclerosponges of the same species from depths of 67m and 136m in Exuma Sound, Bahamas, were

analysed by LA-ICP-MS and compared to the temperatures from these depths over a decade prior to collection. The result is an independently verified, high-resolution empirical calibration for the temperature sensitivity of Sr/Ca ratios in the aragonite skeleton of sclerosponges from Jamaica and the Bahamas. The calibration is a first for *C. nicholsoni* and indicates that the sclerosponges are more sensitive temperature recorders than zooxanthellate corals. It represents an important step in establishing skeletal geochemistry of sclerosponges as a proxy of temperature in the upper 250m of the ocean. [original abstract]^1";

5589 s[5586] = "WILLMANN R. (1985).- Seriale Abdrucke der Ohrenqualle *Aurelia aurita* (L.).- *Natur und Museum* 115, 3: 86-88.- FC&P 14-1, p. 64, ID=1077^Topic(s): ; Scyphozoa, Aurelia; Systematics: Cnidaria; Scyphozoa; Stratigraphy: Recent; Geography: ^1";

5590 s[5587] = "VACELET J. (1978).- Description et affinités d'une éponge sphinctozoaire actuelle.- *Coll. Int. CNRS 291 (Biologie des spongiaires)*: 283-293; Lyon.- FC&P 9-1, p. 56, ID=5846^Topic(s): ; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Recent; Geography: ^A "living fossil" of the group Sphinctozoa has been discovered in the Indian Ocean and in New Caledonia in a very cryptic habitat of the outer slope of coral reefs. The living tissue is inside a series of hemispherical chambers. The perforated chamber walls are composed of aragonite and consist of a feltwork of microfibrils. In the growing sponge, the skeleton of a new chamber appears first as an organic matrix, which is the template for a later calcification. There are no spicules. The histology, cytology and sexual reproduction are compared to those of the recent Porifera. They are similar to those of the Ceractinomorpha in the class Demospongia. * This study shows that most fossil Sphinctozoa were relatives of Demospongia. They are considered by the author as an order of the class Demospongia. These sponges were devoid of spicules. Thus, the exclusion from the Porifera of some fossil groups as Stromatopores or some Tabulates on the ground of the absence of spicules is not valid. A new order Sphaerocoelida is proposed for Cretaceous sponges which have the same structure, but which have calcareous spicules and probably are homeomorphs of the class Calcarea. A comparison is made between the 14 recent sponges which possess a non-spicular calcareous skeleton. The large diversity of both the skeleton and the living tissue of these sponges indicates that their hypercalcification is an archaic character, which was frequent in the past and which disappeared in most of the recent sponges. [original abstract]^1";

5591 s[5588] = "JAMES N.P., WRAY J.L., GINSBURG R.N. (1988).- Calcification of Encrusting Aragonitic Algae (Peyssoneliaceae): Implications for the Origin of Late Paleozoic Reefs and Cements.- *Journal of Sedimentary Petrology* 68, 2: 291-303.- FC&P 18-2, p. 44, ID=2501^Topic(s): calcification, cementation; Algae aragonitic; Systematics: algae; Stratigraphy: Recent; Geography: ^Encrusting aragonite calcareous algae of the family Peyssoneliaceae are the largest group of calcified red algae outside the well-known Mg calcite Corallinaceae. They are distributed worldwide, are most heavily calcified in temperate and tropical waters, and grow as prone but arched sheets on soft mud substrates on hard rock surfaces, as extensive bridge-like networks between corals in reefs, and as concentric layers in nodules. Calcification is entirely aragonitic, species-specific and both intracellular and extracellular below the thallus as a hypobasal layer. The hypobasal layer develops outside the tissue as an encrustation of small aragonite botryoids attached to the lower surface between rhizoids, and on living plants it may exceed in thickness of the thallus. Calcification ranges from nonexistent in some cold-water forms, to thallus calcification only, to both thallus and hypobasal calcification, to species in which the

thallus is noncalcified but there is a hypobasal layer of aragonite botryoids. Although the confirmed fossil range of this family extends only to the Early Cretaceous, striking similarities between these aragonitic forms and some late Paleozoic phylloid algae suggest that they may be closely related. Their ability to grow on soft mud substrates and form structures composed of irregular arched sheets with extensive pore space, as well as their brittle nature, so susceptible to fragmentation, are all characteristics of mound-forming fossil phylloid algae. The hypobasal layer of botryoidal aragonite, developed while the plant is still growing, could easily act as a nucleation site for further epitaxial submarine precipitation, thus explaining the common association of Paleozoic phylloid algae and extensive fossil-reef cements that resemble botryoidal aragonite. The presence of hypobasal botryoidal aragonite on plants with noncalcified thallus raises the possibility that some fossil-reef cements may be related to now-vanished algae.^1";

5592 s[5589] = "FREIWALD A. (1993).- Coralline Algal Maerl Frameworks - Islands within the Phaeophytic Kelp Belt.- Facies 29, 1-2: 133-148.- FC&P 23-1.1, p. 87, ID=6842^Topic(s): ; coralline algae; Systematics: algae; Stratigraphy: Recent; Geography: ^^1";

5593 s[5590] = "HILLMER G., SCHOLZ J. (1996).- Structure and Dynamics of Bryozoan Communities and Microbial Mats.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 25, ID=3568^Topic(s): ecology; Bryozoa, microbial mats; Systematics: Bryozoa; Stratigraphy: Recent; Geography: ^Unlithified benthic microorganisms (potential stromatolites) have been identified as an important factor regulating spatial distributions of bryozoans and pioneer settlement in reefs. Skeletal adaptations and zoarial modifications of recent and fossil bryozoans provide information on competitive interactions with microbial mats. Mutualism with epizoic microorganisms also exists and is detectable in zooidal sculptures (bryozoan microreefs). The rates of competitive and mutualistic interactions are suggested to be a tool for use in paleoecological and paleoclimatic research. Possibilities for an "applied paleontology"; based on bryozoans as indicators for environmental stress and "artificial reef"; studies are outlined.^1";

5594 s[5591] = "SCHOLZ J. (1993).- Indications for Microbial Clues for Bryozoans when settling.- Facies 29: 107-118.- FC&P 24-2, p. 37, ID=4533^Topic(s): settlement; Bryozoa; Systematics: Bryozoa; Stratigraphy: Recent; Geography: ^^1";

5595 s[5592] = "SCHOLZ J., HILLMER G. (1995).- Reef-Bryozoans and Bryozoan-Microreefs - Control Factor Evidence from the Philippines and other Regions.- Facies 32: 109-144.- FC&P 24-2, p. 105, ID=4536^Topic(s): reefs, ecology; reefs, Bryozoa; Systematics: Bryozoa; Stratigraphy: Recent; Geography: ^In this paper, a preliminary concept on the interplay of local, regional and global control factors of bryozoan diversity and distribution pattern is introduced. Recent bryozoans from the Philippines, New Zealand and the Gulf of Aqaba are compared to the selected fossil specimens from the Oxfordian and Santonian. Reef bryozoan skeletons are studied in order to separate local control within the substrate-water interface from regional control. The latter originate mainly from the transport function of the water column (e.g. sediment load, wave energy, vagile predators). This is true especially for erect (tree-like) and massive (multilaminar) bryozoans which are subjected to the dynamics of the water body in the littoral area. This regional control, affects simultaneously several structural and substrate zones of a reef. Early life history of vertically growing reef bryozoans reflect local control, while older zoarial structures

reflect the signals of regional influence. Three types of multiserial nodular bryozoans are cited: self-overgrowing sheets ('S-Nodule'; derived from 'S-Sheet'), circumlaterally budding colonies ('C-Nodules'), and fungiform bryozoans. [part of extensive summary]^1";

- 5596 s[5593] = "SCHOLZ J. (1995).- Epibiotic microorganisms as a local control factor of bryozoan distribution and bryozoan "micro-reefs".- Beiträge zur Paläontologie 20: 75-87.- FC&P 24-2, p. 38, ID=4537^Topic(s): epibionts, microorganisms; epimontic microorganisms; Systematics: Bryozoa; Stratigraphy: Recent; Geography: ^^1";
- 5597 s[5594] = "SCHLICHTER D. (1980).- Adaptations of cnidarians for integumentary absorption of dissolved organic material.- Rev. Can. Biol. 39, 4: 259-282.- FC&P 16-1, p. 70, ID=1997^Topic(s): feeding absorption; Cnidaria feeding; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^^1";
- 5598 s[5595] = "SCHLICHTER D. (1983).- Ernährungsstrategien von Nesseltieren [nutritional strategies of Cnidaria].- Verh. Ges. Oekologie Mainz 1981, 9: 591-603.- FC&P 16-1, p. 71, ID=2000^Topic(s): feeding strategies; Cnidaria; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^^1";
- 5599 s[5596] = "WEFER C. (1985).- Die Verteilung stabiler Isotope in Kalkschalen mariner Organismen [stable isotope distribution in the shells of marine organisms].- Geol. Jb. A 82: 3-111.- FC&P 16-1, p. 71, ID=2003^Topic(s): stable isotopes, marine organisms; marine biota; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^[data on stable isotopes in hydrozoans, octocorals, hermatypic and ahermatypic scleractinians are at pp 56-68; with English and Russian summaries]^1";
- 5600 s[5597] = "HOFMANN D.K., HELLMANN M. (1995).- Studies in the Reef-dwelling Cnidarian Cassiopea spp.: RF-amide positive elements of the nervous system at different stages of development.- Beiträge zur Paläontologie 20: 21-29.- FC&P 25-2, p. 68, ID=3171^Topic(s): nervous system; Cnidaria, Cassiopea; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^The nervous system and its alterations in various stages of development has been investigated in Cassiopea andromeda and C. xamachana using immunocytological detection of RF-amide (Arg-Phe-amide) related neuropeptides which are known to occur generally in cnidarians. Immunoreactive neurons, visualized by epifluorescence in whole-mount preparations, were found in all stages of development investigated so far (asexual buds, metamorphosing buds, polyps, strobilae, ephyrae, and young medusae), except for bud anlagen developing at the parental polyps. Congruent results were obtained in the two species, also with respect to non-specific immunostaining of some ectodermal gland cells and nematocytes. Immunoreactive nerve nets were observed in tentacles and the hypostome of the polyp stages, in the manubrium and subumbrella of the ephyra, and also in the exumbrella of the young medusa. Apicobasal tracts paralleling septal muscles of the polyps calyx were seen only during bud-to-polyp metamorphosis. Condensations of anti-RF-amide positive nerve cells occurred in the scyphistoma at the margin of the hypostome, and as a prominent nerve ring below the tentacle bases, connecting the individual tentacular nerve nets. Dense nerve cell populations were noticed next to the rhopalia in ephyrae and in young medusae, a connecting circular tract at the umbrellar margin was detectable only in the latter. An apparent lack of anti-RF-amide positive neurons was recorded in the free-swimming buds, and in some domains of both the polyp and the young medusa. We suggest that the immunoreactive nerve elements in Cassiopea spp. reported on here represent only a subset of neurons within a more complex nervous system.^1";
- 5601 s[5598] = "CIERESZKO L.S., KARNS T.K.B. (1973).- Comparative

Biochemistry of Coral Reef Coelenterates.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 183-203.- FC&P 3-2, p. 36, ID=4933Topic(s): reefs coral, biochemistry; reefs, Cnidaria; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^1";

- 5602 s[5599] = "SORAUF J.E. (1974).- Observations on microstructure and biocrystallization in Coelenterates.- Biomineralization Research reports 7: 37-45.- FC&P 4-1, p. 16, ID=4995Topic(s): microstructures, biocrystallization; Cnidaria; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^Study with the scanning electron microscope shows basic differences in microstructure between several groups of coelenterates. The present report deals with skeletal microstructure and microarchitecture in Millepora (Milleporina), Stylaster, Errina, and Distichopora (Stylasterina) among hydrozoans. In the octocorals (Anthozoa) details are presented of Tubipora, Heliopora, and the gorgonian Eunicea. * The aragonitic milleporines and stylasterines have similarities to the scleractinian skeleton and a similar ectodermal model of biocrystallization can be employed to explain observed skeletal characteristics. The three groups are unified by the presence of a spherulitic type of crystallization, although the consistency of the proteinaceous "templating" material is obviously different for different groups. * Those coelenterates with mesogloea secretion of spicules or skeletal crystallites are all unified by needle-like crystallites of approximately the same size, each oriented with its long axis only slightly emergent from the surface of skeletal elements. The octocorals examined here each show such structure. Heliopora, in addition to this last has a different, more milleporine-like structure in the first-formed parts of its skeleton.^1";
- 5603 s[5600] = "SVOBODA A. (1978).- In situ monitoring of oxygen production and respiration in Cnidaria with and without Zooxanthellae.- Physiology and Behaviour of Marine Organisms [D.S. McLusky & A.J. Berry (eds): Proc. of the 12th European Symp. on Marine Biology, Stirling, Scotland, Sept. 1977]: 75-82; Pergamon Press, Oxford, New York.- FC&P 10-2, p. 13, ID=6070Topic(s): metabolism; Cnidaria physiology; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^1";
- 5604 s[5601] = "KAZMIERCZAK J., KEMPE S. (1991).- Modern cyanobacterial analogs of Paleozoic stromatoporoids.- Science 250: 1244-1248.- FC&P 20-1.1, p. 78, ID=2876Topic(s): analogies to stroms; Cyanobacteria; Systematics: Cyanophyta; Stratigraphy: Recent; Geography: ^[Recent and subfossil calcareous structures resembling cystose and subclathrate Paleozoic stromatoporoids have been discovered in an alkaline crater lake in Indonesia. The structures are produced by mats of coccoid cyanobacteria. Calcification of the mats is controlled by seasonal changes in calcium carbonate supersaturation. The structures are the result of periodic in vivo calcification of the surficial layers by low-Mg calcite and early post-mortem calcification of the aggregates below the mat surface by microbially precipitated aragonite. The authors believe this occurrence supports the cyanobacterial origin of stromatoporoids and the more alkaline nature and higher carbonate supersaturation of early Paleozoic seas in which the stromatoporoids lived.]^1";
- 5605 s[5602] = "KAZMIERCZAK J., KEMPE S. (1992).- Recent cyanobacterial counterparts of Paleozoic Wetheredella and related problematic fossils.- Palaios 7: 294-304.- FC&P 21-2, p. 47, ID=3341Topic(s): ecology; Cyanobacteria; Systematics: Cyanophyta; Stratigraphy: Recent; Geography: ^These structures found in a hypersaline lake in Indonesia are generated by calcifying mats of coccoid cyanobacteria. Analogues of various other organisms are also found within calcareous red algae and foraminiferans

- that form small reefs. This occurrence supports the authors' model of epicontinental seas of the Paleozoic, in which the "stromatoporoid stromatolites" grew, as hypersaline.^1";
- 5606 s[5603] = "BAKUS G.J. (1973).- The Biology and Ecology of Tropical Holothurians.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 326-367.- FC&P 3-2, p. 36, ID=4937^Topic(s): biology; Echinodermata,, Holothurioidea; Systematics: Echinodermata; Stratigraphy: Recent; Geography: ^^1";
- 5607 s[5604] = "GOY J. (1992).- Francois Peron, Charles-Alexander Lesueur and the first classification of Medusae.- Archives of Natural History 19, 3: 401-405.- FC&P 24-1, p. 59, ID=4469^Topic(s): classification; Medusae; Systematics: Cnidaria; Stratigraphy: Recent; Geography: ^Francoise Peron (1775-1810) and Charles-Alexander Lesueur (1778-1846) sailed with Captain Nicolas Baudin on the great French expedition to Australia from 1800 to 1804. The results of their work were published in 1807 (Peron 1807), translated into English in 1809 and have been very well analyzed recently by wallace (1984) with the remark: "Peron is a figure of equal importance to James Cook". During and after the voyage Peron and Lesueur became pioneers in the study of Medusae. At the beginning of the nineteenth century, the jellyfish were still a puzzle to scientists. Three species placed within the single genus Medusa without specific names but numbered as follows: Medusa 1286, Medusa 1287, Medusa 1288 were placed by Linnaeus (1746) among the Vermes. Medusa was placed among the molluscs by Bruguiere (1791), and with the echinoderms by Cuvier (1817) and Lamarck (1816). In 1799, Cuvier furthered the work of Reaumur (1710) and separated the genus Rhizostomites using the shape and number of mouths as characters. This last character was used by Peron and Lesueur to produce their work and separate the groups of the non-mouthed medusae and many-mouthed medusae. The structure of the mouth was the only character used at that time. The work of Peron and Lesueur was the first to show the diversity of the medusae with a description of 122 species and 29 genera. Their work was first read to the Academy of Sciences in 1808, and a table was published in the Annales du Museum (Peron and Lesueur 1810). It consisted of very specific descriptions which were made from the highly accurate Lesueur drawings. However, neither the drawings, except for the first 14 plates which were of some damaged animals (Lesueur 1815), nor most of the manuscript notes of Peron were ever published. After the death of Peron in 1810, this immense work did not stand up to critical review by non-specialist scientists. However, in 1980, some 170 years later, the text published in Annales du Museum d&Histoire naturelle, Paris (Peron and Lesueur 1809, 1810), the 96 plates painted by Lesueur and the 400-page unpublished manuscript prepared by Peron were finally brought together. Lesueur&s plates and Peron&s manuscript are deposited in the Museum d&Histoire naturelle at Le Havre (France) with the reference numbers 70001 to 70062 and 68325 to 68839. At the outset of the expedition neither Peron nor Lesueur were regarded as zoologists; Peron was enrolled as a medical doctor and Lesueur as an assistant gunner. As the jellyfishes were dominant in the catch in quantity, diversity, coloration and bioluminescence, they became attracted to them.^1";
- 5608 s[5605] = "BENAVIDES L.M., DRUFFEL E.R.M. (1986).- Sclerosponge growth rates as determined by 210Pb and d14C chronologies.- Coral Reefs 04: 221-224.- FC&P 15-2, p. 43, ID=0739^Topic(s): growth rates; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5609 s[5606] = "VACELET J., GARRONE R. (1985).- Two distinct populations of collagen fibrils in a "Sclerosponge" (Porifera).- NATO Series A, Biology of Invertebrate and lower Vertebrate collagens: 183-189 [Bairati A. & Garrone R. (eds)].- FC&P 15-1.2, p. 17, ID=0901^Topic(s): collagen fibrils; Porifera; Systematics:

- 5610 Porifera; Stratigraphy: Recent; Geography: ^^1";
s[5607] = "VACELET J. (1983).- Les eponges hypercalcifiées, reliques des organismes constructeurs de récifs du Paléozoïque et du Mésozoïque.- Bulletin Société Zoologique de France 108, 4: 547-557.- FC&P 14-1, p. 57, ID=1059^Topic(s): hypercalcified, analogous to Stroms ?; Porifera hypercalcified; Systematics: Porifera; Stratigraphy: Recent; Geography: ^About 15 species of recent sponges with supplementary solid calcareous skeletons can be considered to be survivors of the main reef builders of the Paleozoic and early Mesozoic. The calcareous skeleton appears to be an archaic feature which was prevalent among ancient sponges but lost in evolution.^1";
- 5611 s[5608] = "FALLON S.J., McCULLOCH M.T., GUILDERSON T.P. (2005).- Interpreting environmental signals from the coralline sponge *Astrosclera willeyana*.- Palaeogeography, Palaeoclimatology, Palaeoecology 228, 1-2: 58-69.- FC&P 34, p. 23, ID=1215^Topic(s): ecology; Porifera, *Astrosclera*; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Variations in ratios between elements as the sponge skeleton is secreted were compared with thickening cycles on the outer edge that correspond to 2-3 year intervals. Sr/Ca ratio showed weak correlation with the temperature records. Signal smoothing due to thickening or other control on Sr skeletal partitioning limits the use of this ratio as an indicator of water temperature^1";
- 5612 s[5609] = "ROSENHEIM B.E., SWART P.K., THORROLD S.R. (2005).- Minor and trace elements in sclerosponge *Ceratoporella nicholsoni*: Biogenic aragonite near the inorganic endmember.- Palaeogeography, Palaeoclimatology, Palaeoecology 228, 1-2: 109-129.- FC&P 34, p. 24, ID=1217^Topic(s): trace elements; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Ba/Ca, Mg/Ca, Pb/Ca ratios were compared with Sr/Ca ratios which have been shown to reliably record seasonal-scale temperature changes in sclerosponges. Sclerosponge aragonite incorporates trace elements with less vital effects than other organisms. Mg/Ca ratios show an inverse correlation to temperature. Mg/Ca and Ba/Ca show strong positive correlation and U/Ca values are 2.5x higher in sclerosponges than corals and show an insignificant correlation with temperature dependent Sr/Ca ratios.^1";
- 5613 s[5610] = "JANUSSEN D. (2002).- Die Glasschwämme, mehr als Tiefsee-Organismen.- Natur und Museum 132, 9: 364.- FC&P 32-2, p. 77, ID=1424^Topic(s): hyaline sponges; Porifera hyaline sponges; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5614 s[5611] = "JANUSSEN D., RAPP H.T., TENDAL O.S. (2003).- Das Ende eines Mythos: Über das Gedeihen der Kalkschwämme in großen Meerestiefen.- Natur und Museum 133, 11: 337-342.- FC&P 32-2, p. 77, ID=1426^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5615 s[5612] = "LAZARETH C.E., WILLENZ P., NAVES J., KEPPENS E., DEHAIRS F., ANDRE L. (2000).- Sclerosponges as a new potential recorder of environmental changes: Lead in *Ceratoporella nicholsoni*.- Geology 28, 6: 515-518.- FC&P 29-1, p. 71, ID=1518^Topic(s): pollution indicators; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Lead concentrations have been analyzed on a 223 yr profile through the aragonitic skeleton of the reef-building Caribbean sclerosponge *Ceratoporella nicholsoni* by using laser-ablation inductively coupled plasma mass-spectroscopy. A parallel study of the ¹³C distribution in the skeleton validates the previously established mean annual growth rate of 230 μm/yr, at least for long-term important environmental changes. The Pb trend in the specimen displays a general increase from 0.30 ppm ca. A.D.1760 to 2.15 ppm ca. A.D.1984; a major three-fold increase occurred after 1930. This

Pb profile is analogous to the results acquired from ice and coral cores and clearly highlights the potential of sclerosponges as a new proxy of environmental changes for time series extending over several centuries.¹";

- 5616 s[5613] = "JANUSSEN D., HILBERT K. (2002).- Schwämme als Rohstoff.- Natur und Museum 132, 5: 169-175.- FC&P 31-1, p. 76, ID=1659Topic(s): economic potential; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Sponges (Porifera) belong to the most common and in terms of their biomass dominant sessile aquatic animals. The fact that sponges are important sources of raw material is well known due to the world wide use of Spongia officinalis, the bath sponge (order Dictyoceratida). Its massive organic skeleton of spongine and the absence of spicules makes this sponge suitable as a hygienic article. Bath sponges have been used over centuries for cleaning wounds, for contraception and even as implant after breast cancer operations (Arndt 1938). During Man's history, many different types of medicine, mainly as powders, have been made of dried sponges and used against all kinds of diseases. The oldest pharmaceutical sponge utilisation was the ashes of burned bath sponges, which because of its high iodine content has proven to be an efficacious medicine against diseases of the thyroid gland. [initial part of "extended English abstract" of this paper in German, as published in FC&P 31, 1: 79-80]¹";
- 5617 s[5614] = "VACELET J. (1988).- Indications de profondeur donnees par les Spongiaires dans les milieux benthiques actuels.- Geologie Mediterraneenne 15, 1: 13-26.- FC&P 19-1.1, p. 62, ID=2692Topic(s): as bathymetry indicators; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5618 s[5615] = "WILLENZ P. (ed.) (1996).- Recent advances in sponge biodiversity inventory and documentation.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996, 242 pp.- FC&P 25-2, p. 29, ID=3092Topic(s): biodiversity; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5619 s[5616] = "RICHELLE-MAURER E., KUCHARCZAK J., VYVER van de G., VISSERS S. (1996).- Southern-blot hybridization, a useful technique in freshwater sponge taxonomy.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 227-229.- FC&P 25-2, p. 30, ID=3104Topic(s): freshwater, taxonomical techniques; Porifera, freshwater; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Total genomic DNA of the four freshwater sponge species common in Belgium, Ephydatia fluviatilis, Ephydatia muelleri, Spongia lacustris and Eunapius fragilis was isolated and restricted by the Eco RI endonuclease. Southern blot hybridization with a radiolabelled E. fluviatilis homeobox (Efh-1) revealed hybridization bands in the four species studied. Two restriction fragments of 2.2 kb and 5.4 kb were identified in E. fluviatilis and E. muelleri DNAs whereas in S. lacustris and Eunapius fragilis DNAs, only one fragment of 2.3 kb was detected. Our results demonstrate the existence of homeobox-containing genes in the four species. With Eco RI, no differences were observed between E. fluviatilis and E. muelleri, nor between S. lacustris and E. fragilis. It is suggested that S. lacustris and E. fragilis might be taxonomically related to each other as closely as are E. fluviatilis and E. muelleri. [original abstract]¹";
- 5620 s[5617] = "SANDERS M.L., SOEST van R.W.M. (1996).- A revised classification of Spongia mycofijiensis.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 117-122.- FC&P 25-2, p. 30, ID=3106Topic(s): systematic position; Porifera Spongia;

Systematics: Porifera; Stratigraphy: Recent?;
 Geography: ^The taxonomy of the Indo-Pacific sponge *Spongia mycofijiensis*, order Dictyoceratida, was investigated with particular regard to the appropriate genus assignment. This species, initially collected in Fiji in 1987, was noted for the presence of its unusual secondary metabolite chemistry. Since this time, there has been discussion of two alternative assignments for the species, namely *Leiosella* and *Hyattella*. Type specimens were studied from related genera of the families Spongiidae and Thorectidae, including *Spongia*, *Leiosella*, *Hyattella*, *Coscinoderma*, *Lendenfeldia*, *Hippospongia*, *Dactylospongia* and *Cacospongia*. It was found that the skeleton compared most closely to members of the genus *Cacospongia*, family Thorectidae (= Irciniidae) and is therefore concluded that the species be reassigned to this genus. [original abstract]^1";

5621 s[5618] = "VACELET J., FIALA-MEDIONI A., FISHER C.R., BOURY-ESNAULT N. (1996).- Symbiosis between methane-oxidizing bacteria and a deep-sea carnivorous cladorhizid sponge.- Mar. Ecol. prog. Ser. 145: 77-85.- FC&P 26-2Topic(s): poriferan - bacterial symbiosis; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Dense bush-like clumps of several hundred individuals of a new species of *Cladorhiza* (Demospongiae, Poecilosclerida) have been observed near methane sources in mud volcanoes, 4718 to 4943m deep in the Barbados Trench. The sponge tissue contains two main morphological types of extracellular symbiotic bacteria: small rodshaped cells and larger coccoid cells with stacked membranes. Stable carbon isotope values, the presence of MeDH and ultrastructural observations all indicate that a least some of the symbionts are methanotrophic. * Ultrastructural evidence of intracellular digestion of the symbionts and the stable C and N values suggest that the sponge obtains a significant portion of its nutrition from the symbionts. Ultrastructure of the sponge embryo suggests direct transmission through generations in brooded embryos. The sponge also maintains a carnivorous feeding habit on tiny swimming prey, as do other cladorhizids.^1";

5622 s[5619] = "VACELET J., WILLENZ P., HARTMAN W.D. (2010).- Living Hypercalcified Sponges.- Treatise Online 04, Part E: 1-16.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 47, ID=6425^Topic(s): sponges hypercalcified; hypercalcified sponges; Systematics: Porifera; Stratigraphy: Recent; Geography: ^[chapter subheadings include: (1) introduction; (2) morphological types compared with fossil analogs; (3) skeleton, microstructure, biomineralization process, and modes of preservation; (4) growth rate, longevity, and properties of the hypercalcified skeleton; (5) mode of life; (6) ecology and geographic distribution; and (7) classification and evolution]^1";

5623 s[5620] = "BERGQUIST P.R., WALSH D., GRAY R.D. (1997).- Relationships Within and Between the Orders of Demospongiae that Lack a Mineral Skeleton.- In: *Sponge sciences: multidisciplinary perspectives* [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6884^Topic(s): systematics; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";

5624 s[5621] = "HAJDU E. (1997).- Toward a Panbiogeography of the Seas: Sponge Phylogenies and General Tracks.- In: *Sponge sciences: multidisciplinary perspectives* [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6884^Topic(s): phylogeny, biogeography; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";

5625 s[5622] = "JONES W.C. (1997).- Spicule Form and Morphogenesis in the Calcareous Sponge *Leuconia fistulosa* (Johnston).- In: *Sponge sciences: multidisciplinary perspectives* [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1,

- p. 15, ID=6885^Topic(s): spiculae; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5626 s[5623] = "KOZIOL C., SCHEFFER U., PANCER Z., KRASKO A., MULLER W.E.G. (1997).- Sponges as Biomarkers of the Aquatic Environment: Application of Molecular Probes.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6886^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5627 s[5624] = "SCHONBERG C.H., BARTHEL D. (1997).- Unreliability of Demosponge Skeletal Characters: The Example of Halichondria panicea.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6887^Topic(s): systematics, skeletal characters; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5628 s[5625] = "SIM C.J. (1997).- A Two-Sponge Associations from Komun Island, Korea.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6888^Topic(s): ecology, biocoenoses; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5629 s[5626] = "SOEST R.W.M.van, FUSETANI N., ANDERSEN R.J. (1997).- Straight-Chain Acetylenes as Chemotaxonomic Markers of the Marine Haplosclerida.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 15, ID=6890^Topic(s): chemosystematics; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5630 s[5627] = "AMANO S., HORI L. (1997).- Larval Flagellated Cells Transform to Choanocytes in Demosponge Metamorphosis.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6891^Topic(s): ontogeny, metamorphosis; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5631 s[5628] = "BAVESTRELLO G., CERRANO C., CORRIERO G., SARA M. (1997).- Three-Dimensional Architecture of the Canal System of Some Hadromerids (Porifera, Demospongiae).- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6892^Topic(s): canal system; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5632 s[5629] = "EGAMI N. (1997).- Radiosensitivity of Freshwater Sponge Gemmules.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6893^Topic(s): ecology, radiosensitivity; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5633 s[5630] = "GAINO E., MAGNINO G. (1997).- Exogenous Cyclic AMP (cAMP) and Dibutyryl-Cyclic AMP (DB-cAMP) Induce in vitro Morphological Variations in the Choanocytes of Clathrina cerebrum (Porifera, Calcarea).- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6894^Topic(s): variability induced; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5634 s[5631] = "KAIMORI N., TENMA S., SUZUKI R. (1997).- Freshwater Sponge Culture in the Aquarium.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6895^Topic(s): culture; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";

- 5635 s[5632] = "LEYS S.P. (1997).- Fusion and Cytoplasmic Streaming are Characteristics of at Least Two Hexactinellids: Examination of Cultured Tissue from *Aphrocallistes vastus*.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6897^Topic(s): behavior; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5636 s[5633] = "LIZHEN W. (1997).- Status of Freshwater Sponge Study in China.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6898^Topic(s): research status; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5637 s[5634] = "MASUDA Y., KURODA M., MATSUNO A. (1997).- An Ultrastructural Study of the Contractile Filament in the Pinacocyte of a Freshwater Sponge.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6901^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5638 s[5635] = "MOGAMI Y., IWASARU C., WATANABE Y. (1997).- Feasibility Studies of the Space Experiment on the Development of the Freshwater Sponge *Ephydatia fluviatilis*.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6902^Topic(s): freshwater; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5639 s[5636] = "NAKAMURA Y., OKADA K., WATANABE Y. (1997).- The Ultrastructure of Spermatozoa and 1st Structural Change in the Choanocytes of *Sycon calcaravis* Hozawa.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6903^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5640 s[5637] = "SHIMIZU K., YOSHIZATO K., FUSETANI N. (1997).- Factors Influencing Tissue Reconstitution by Dissociated Sponge Cells.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6904^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5641 s[5638] = "SUZUKI Y., WATANABE Y. (1997).- Endogenous Circannual Rhythm, Like a Biological Clock, Controls Gemmule Germination in *Spongilla alba*.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6905^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5642 s[5639] = "DUMDEI.E.J., BLUNT J.W., MUNRO M.H.G., BATTERSHILL C.N., PAGE M.J. (1997).- The whys and Whats of Sponge Chemistry: why Chemists Extract Sponges and what Problems Does This Cause?.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6908^Topic(s): chemistry; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5643 s[5640] = "KOBAYASHI J., TSUDA M. (1997).- Manzamine-Related Alkaloids from Okinawan Marine Sponges.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6909^Topic(s): chemistry; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5644 s[5641] = "KOBAYASHI M., KITAGAWA I. (1997).- Likely Microbial

- Participation in the Production of Bioactive Marine Sponge Chemical Constituents.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6910^Topic(s): chemistry; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5645 s[5642] = "OCLARIT J.M., YAMAOKA Y., KAMIMURA K., OHTA S., IKEGAMI S. (1997).- Andrimid, an Antimicrobial Substance in the Marine Sponge Hyatella, Produced by an Associated Vibrio Bacterium.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6912^Topic(s): antimicrobial agents; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5646 s[5643] = "TOMONO Y., HIROTA H., FUSETANI N. (1997).- Antifouling Compounds against Barnacle (Balanus amphitrite) Larvae from the Marine Sponge Acanthella cavernosa.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6913^Topic(s): antibiotic agents; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5647 s[5644] = "TSUKAMOTO S., KATO H., HIROTA H., FUSETANI N. (1997).- Antifouling and Metamorphosis-Promoting Compounds from the Marine Sponges Pseudoceratina purpurea and Agelas mauritiana.- In: Sponge sciences: multidisciplinary perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 17, ID=6914^Topic(s): antibiotic agents; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5648 s[5645] = "WORHEIDE G., REITNER J., GAUTRET P. (1997).- Comparison of biocalcification processes in the two coralline demosponges Astrosclera willeyana Lister, 1900, and "Acanthochaetetes" wellsi Hartman and Goreau, 1975.- Proceedings of the 8th International Coral Reef Symposium, vol. 2: 1427-1432.- FC&P 27-1, p. 112, ID=6916^Topic(s): biomineralization; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^The different biomineralization processes of the two "living fossils", Astrosclera willeyana and "Acanthochaetetes" wellsi were studied by epifluorescence microscopy, SEM, TEM, and biochemical analyses.The basal skeleton of A. willeyana is made of aragonite spherulites. These spherulites are built in the dermal layer in large vesicle cells (LVC) in the early stages. After a releasing event, the spherules fuse together by epitaxial growth. In "A". wellsi the basal skeleton is made of high Mg-calcite. It is constructed of bundles of elongated, tangentially oriented crystals. The biomineralization takes place in three different places in the skeleton, the active zones are localized in the uppermost parts of the skeleton. In both cases the mineralization is associated with highly acidic mucus substances, rich in aspartic and glutamic acid which control the biomineralization processes. The understanding of the biomineralization processes in these two cases gives insight into the formation of ancient reef constructors like the stromatoporoids and chaetetids. [original abstract]^1";
- 5649 s[5646] = "HOOPER J.N.A. (ed.) (1999).- Proceedings of the 5th International Sponge Symposium 'Origin & Outlook'.- Memoirs of the Queensland Museum 44; 720 pp. [symposium proceedings] - FC&P 28-2, p. 6, ID=6929^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^This is to announce the publication of the Proceedings of the 5th International Sponge Symposium, 'Origin & Outlook'. The theme of the Symposium, 'Origin & Outlook' (held at the Queensland Museum, Brisbane, in June-July 1998), refers to the adage that scientific progress rests on the

knowledge of the past, and reflects the productive interaction between palaeontology, biology, chemistry, ecology, cytology, molecular biology and other disciplines as multidisciplinary approaches to the strange but innovative world of sponges. * The Proceedings volume contains 720 pages, comprising 4 invited papers, 67 peer-reviewed general papers, and an additional 72 'Notes'; scattered throughout the volume (the latter consisting of other abstracts of papers and posters presented at the Symposium). The Proceedings volume contains information on all aspects of sponge sciences, encompassed a broad range of topics, including: the production of chemicals and the chemical ecology of sponge metabolites with pharmaceutical potential; commercial sponge fisheries and their human impacts; sponge cell behaviour and their immunological implications; the role of sponges as pollution indicators and their ecological interactions with other communities; the role of 'living fossil' sponges in coral reef geomorphology; advances in the origins and relationships of Porifera as evidenced by molecular biology; recent discoveries in biodiversity, evolution, biogeography and palaeontology of the phylum; and the physiology, ultrastructure and interactions of sponges with symbiotic microbes. [book presentation]^1";

- 5650 s[5647] = "BELL A.H., BERGQUIST P.R, BATTERSHILL C.N. (1999).- Feeding biology of *Polymastia croceus*.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 51-57.- FC#038;P 28-2, p. 7, ID=6936^Topic(s):feeding biology; Porifera; Systematics: Porifera; Stratigraphy:Recent; Geography:^^1";
- 5651 s[5648] = "BERGQUIST P.R., SOROKIN S., KARUSO P. (1999).- Pushing the boundaries: a new genus and species of Dictyoceratida.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 57-63.- FC#038;P 28-2, p. 7, ID=6937^Topic(s):new taxa; Porifera; Systematics: Porifera; Stratigraphy:Recent; Geography:^^1";
- 5652 s[5649] = "CERRANO C., BAVESTRELLO G., BENATTI U., CATTANEO-VIETTI R., GIOVINE M., SARA M. (1999).- Incorporation of inorganic matter in *Chondrosia reniformis* (Porifera: Demospongiae): the role of water turbulence.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 85-93.- FC#038;P 28-2, p. 8, ID=6940^Topic(s): Porifera; Systematics: Porifera; Stratigraphy:Recent; Geography:^^1";
- 5653 s[5650] = "DESQUEYROUX-FAUNDEZ R. (1999).- Convenient genera or phylogenetic genera? Evidence from Callyspongiidae and Niphatidae (Haplosclerida).- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 131-147.- FC#038;P 28-2, p. 8, ID=6944^Topic(s):systematics, genera; Porifera; Systematics: Porifera; Stratigraphy:Recent; Geography:^^1";
- 5654 s[5651] = "DUCKWORTH A.R., BATTERSHILL C.N., SCHIEL D.R., BERGQUIST P.R. (1999).- Farming sponges for the production of bioactive metabolites.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 155-160.- FC#038;P 28-2, p. 8, ID=6946^Topic(s):farming; Porifera; Systematics: Porifera; Stratigraphy:Recent; Geography:^^1";
- 5655 s[5652] = "EVANS-ILLIDGE E.A., BOURNE D.J., WOLFF C.W.W., VASILESCU I.M. (1999).- A preliminary assessment of 'space wars'; as a determining factor in the production of novel bioactive indoles by *Iotrochota* sp.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 161-167.- FC#038;P 28-2, p. 8, ID=6947^Topic(s):space competition; Porifera; Systematics: Porifera; Stratigraphy:Recent; Geography:^^1";
- 5656 s[5653] = "FAULKNER D.J., HARPER M.K., SALOMON C.E., SCHMIDT E.W.

- (1999).- Localisation of bioactive metabolites in marine sponges.-
Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings
of the 5th International Sponge Symposium]: 167-174.- FC&P
28-2, p. 8, ID=6948Topic(s): bioactive biometabolites;
Porifera; Systematics: Porifera; Stratigraphy: Recent;
Geography: ^^1";
- 5657 s[5654] = "GARSON M.J., CLARK R.J., WEBB R.I., FIELD K.L., CHARAN R.D.,
McCAFFREY E.J. (1999).- Ecological role of cytotoxic alkaloids:
Haliclona sp. nov, an unusual sponge / dinoflagellate association.-
Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings
of the 5th International Sponge Symposium]: 205-214.- FC&P
28-2, p. 8, ID=6952Topic(s): cytotoxic alcaoids; Porifera;
Systematics: Porifera; Stratigraphy: Recent;
Geography: ^^1";
- 5658 s[5655] = "HAJDU E. (1999).- Toward a phylogenetic classification of
the Mycalids with anisochelae (Demospongiae: Poecilosclerida), and
comments on the status of Naviculina Gray, 1867.- Memoirs of the 5th
Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th
International Sponge Symposium]: 225-238.- FC&P 28-2, p. 8,
ID=6954Topic(s): classification; Porifera; Systematics:
Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5659 s[5656] = "HILL M.S. (1999).- Morphological and genetic examination of
phenotypic variability in the tropical sponge Anthosigmella varians.-
Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings
of the 5th International Sponge Symposium]: 239-248.- FC&P
28-2, p. 8, ID=6955Topic(s): fenotype, genotype; Porifera;
Systematics: Porifera; Stratigraphy: Recent;
Geography: ^^1";
- 5660 s[5657] = "KONIG G.M., WRIGHT A.D. (1999).- Cymbastela hooperi and
Amphimedon terpenensis: where do they really belong?.- Memoirs of the
Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th
International Sponge Symposium]: 281-288.- FC&P 28-2, p. 8,
ID=6959Topic(s): ; Porifera; Systematics: Porifera;
Stratigraphy: Recent; Geography: ^^1";
- 5661 s[5658] = "LOBO-HAJDU G., MANSURE J.J., SALGADO A., HAJDU E., MURICY
G., ALBANO R.M. (1999).- Random amplified polymorphic DNA (RAPD)
analysis can reveal intraspecific evolutionary patterns in Porifera.-
Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings
of the 5th International Sponge Symposium]: 317-329.- FC&P
28-2, p. 9, ID=6963Topic(s): molecular data,
microevolution; Porifera; Systematics: Porifera;
Stratigraphy: Recent; Geography: ^^1";
- 5662 s[5659] = "LOPEZ J.V., MCCARTHY P.J., JANDA K.E., WILLUOGHBY R.,
POMPONI S.A. (1999).- Molecular techniques reveal wide phyletic
diversity of heterotrophic microbes associated with Discodermia spp.
(Porifera: Demospongiae).- Memoirs of the Queensland Museum 44 [J.N.A.
Hooper (ed.): Proceedings of the 5th International Sponge Symposium]:
329-342.- FC&P 28-2, p. 9, ID=6964Topic(s): microbe
symbionts; Porifera; Systematics: Porifera; Stratigraphy:
Recent; Geography: ^^1";
- 5663 s[5660] = "MALDONADO M., URIZ M.-J. (1999).- A new dendroceratid sponge
with reticulate skeleton.- Memoirs of the Queensland Museum 44 [J.N.A.
Hooper (ed.): Proceedings of the 5th International Sponge Symposium]:
353-360.- FC&P 28-2, p. 9, ID=6966Topic(s): new
taxa; Porifera; Systematics: Porifera; Stratigraphy:
Recent; Geography: ^^1";
- 5664 s[5661] = "OSINGA R., REDEKER D., BEUKELAER P.B.de, WIJFFELS R.H.
(1999).- Measurement of sponge growth by projected body area and
underwater weight.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper
(ed.): Proceedings of the 5th International Sponge Symposium]:
419-427.- FC&P 28-2, p. 9, ID=6972Topic(s): growth
measurement; Porifera; Systematics: Porifera; Stratigraphy:
Recent; Geography: ^^1";

- 5665 s[5662] = "PANSINI M., CATTANEO-VTETTI R., SCHIAPARELLI S. (1999).- Relationship between sponges and a taxon of obligatory inquilines: the siliquariid molluscs.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 427-438.- FC&P 28-2, p. 9, ID=6973^Topic(s): obligatory inquilines; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5666 s[5663] = "PITCHER C.R., WASSENBERG T.J., SMITH G.P., CAPPO M., HOOPER J.N.A., DOHERTY P.J. (1999).- Innovative new methods for measuring the natural dynamics of some structurally dominant tropical sponges and other sessile fauna.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 479-485.- FC&P 28-2, p. 9, ID=6978^Topic(s): ecology; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5667 s[5664] = "RICHELLE-MAURER E., VYVER G.van de (1999).- Expression of homeobox-containing genes in freshwater sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 509-515.- FC&P 28-2, p. 9, ID=6982^Topic(s): gene expression; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: freshwater^^1";
- 5668 s[5665] = "SAMAIAI T., GIBBONS M.J., KELLY M. (1999).- Morphological phylogenetic considerations on the relationships of Isodictya Bowerbank, 1865.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 517-525.- FC&P 28-2, p. 9, ID=6983^Topic(s): morphology, phylogeny; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5669 s[5666] = "SANDERS M., DIAZ M.C., CREWS P. (1999).- Taxonomic evaluation of jaspakinolide-containing sponges of the family Coppatiidae.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 525-533.- FC&P 28-2, p. 9, ID=6984^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5670 s[5667] = "SCHUPP P., EDER C., PAUL V., PROKSCH P. (1999).- Chemistry, ecology and biological activity of the haplosclerid sponge Oceanapia sp.; Can ecological observations and experiments give a first clue about pharmacological activity?.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 541-550.- FC&P 28-2, p. 10, ID=6986^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5671 s[5668] = "SIM C.J., LEE K.J. (1999).- Relationship of sand and fibre in the horny sponge, Psammocinia.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 551-558.- FC&P 28-2, p. 10, ID=6987^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5672 s[5669] = "SIMPSON J.S., GARSON M.J. (1999).- Cyanide and thiocyanate-based biosynthesis in tropical marine sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 559-568.- FC&P 28-2, p. 10, ID=6988^Topic(s): metabolism; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5673 s[5670] = "SOEST R.W.M.van, BRAEKMAN J.-C. (1999).- Chemosystematics of Porifera: a review.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 569-590.- FC&P 28-2, p. 10, ID=6989^Topic(s): chemosystematics; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^^1";
- 5674 s[5671] = "VACELET J. (1999).- Planktonic armoured propagules of the

- excavating sponge *Alectona* (Porifera: Demospongiae) are larvae: evidence from *Alectona wallichii* arid *A. mesatlantica* sp.nov.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 627-643.- FC&P 28-2, p. 10, ID=6994^Topic(s):propagulae; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^1";
- 5675 s[5672] = "VOLKMER-RIBEIRO C., CORREIA M.M.F., BRENHA S.L.A., MENDONCA M.A. (1999).- Freshwater sponges from a Neotropical sand dune area.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 643-650.- FC&P 28-2, p. 10, ID=6995^Topic(s): Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: Neotropical, freshwater^1";
- 5676 s[5673] = "WILKINSON C.R., SUMMONS R., EVANS E. (1999).- Nitrogen fixation in symbiotic marine sponges: ecological significance and difficulties in detection.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 667-674.- FC&P 28-2, p. 10, ID=6998^Topic(s):N fixation; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: marine^1";
- 5677 s[5674] = "HOFFMANN F., JANUSSEN D., DRÖSE W., ARP G., REITNER J. (2003).- Histological investigations of organisms with hard skeletons: a case study of siliceous sponges.- *Biotechnic and Histochemistry* 78, 2-4: 191-199.PMID 14714883.- FC&P 33-1, p. 76, ID=7222^Topic(s):histological techniques; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^Siliceous and calcareous sponges commonly are treated with acid to remove the spicules prior to embedding and cutting for histological investigations. Histology of spiculated sponge tissue represents a challenging problem in sponge histotechnology. Furthermore, fluorescence in situ hybridization (FISH), a key method for studying sponge-associated microbes, is not possible after acid treatment. For a broad range of siliceous sponge species, we developed and evaluated methods for embedding in paraffin, methylmethacrylate resins, LR white resin and cryomatrix. Different methods for cutting tissue blocks as well as mounting and staining sections also were tested. Our aim was to enable histological investigations and FISH without prior removal of the spicules. To obtain an overview of tissue and skeleton arrangement, we recommend embedding tissue blocks with LR white resin combined with en bloc staining techniques for large specimens with thick and numerous spicules, but paraffin embedding and subsequent staining for whole small specimens. For FISH on siliceous sponges, we recommend Histocryl embedding if the spicule content is high, but paraffin embedding if it is low. Classical histological techniques are used for detailed tissue examinations. [original abstract]^1";
- 5678 s[5675] = "TANAKA K., AOKI M. (1997).- Crustacean Infauna of the Demosponge *Halichondria okadai* (Kadota) with Reference to the Life Cycle of *Gnathia* sp. (Isopoda: Gnathiidea).- In: *Sponge sciences: multidisciplinary perspectives* [Y. Watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6906^Topic(s):symbiosis; Porifera - Crustacea; Systematics: Porifera Arthropoda; Stratigraphy: Recent; Geography: ^1";
- 5679 s[5676] = "SOLE-CAVA A.M., BOURY-ESNAULT N. (1999).- Patterns of intra and interspecific genetic divergence in marine sponges.- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper (ed.): *Proceedings of the 5th International Sponge Symposium*]: 591-602.- FC&P 28-2, p. 10, ID=6990^Topic(s):genetic divergence; Porifera; Systematics: Porifera; Stratigraphy: Recent; Geography: ^1";
- 5680 s[5677] = "ERESKOVSKY A.V., BORCHIellini C., GAZAVE E., IVANISEVIC J., LAPEBIE P., PEREZ T., RENARD E., VACELET J. (2009).- The

Homoscleromorph sponge *Oscarella lobularis*, a promising sponge model in evolutionary and developmental biology.- *BioEssays* 31: 89-97.-
 FC&P 36, p. 30, ID=6393^Topic(s): molecular studies;
 Porifera Homoscleromorpha; Systematics: Porifera;
 Stratigraphy: Recent; Geography: ^Sponges branch basally
 in the metazoan phylogenetic tree and are believed to be composed of
 four distinct lineages with still uncertain relationships. Indeed, some
 molecular studies propose that Homoscleromorpha may be a fourth Sponge
 lineage, distinct from Demospongiae in which they were traditionally
 classified. They harbour many features that distinguish them from other
 sponges and are more evocative of those of the eumetazoans. They are
 notably the only sponges to possess a basement membrane with collagen
 IV and specialized cell junctions, thus possessing true epithelia.
 Among Homoscleromorphs, we have chosen *Oscarella lobularis* as a model
 species. This common and easily accessible sponge is characterized by
 relatively simple histology and cell composition, absence of skeleton,
 and strongly pronounced epithelial structure. In this review, we
 explore the specific features that make *O. lobularis* a promising
 homoscleromorph sponge model for evolutionary and developmental
 researches.^1";

5681 s[5678] = "MURICY G. (1999).- An evaluation of morphological and
 cytological data sets for the phylogeny of Homosclerophorida (Porifera:
 Demospongiae).- *Memoirs of the Queensland Museum* 44 [J.N.A. Hooper
 (ed.): *Proceedings of the 5th International Sponge Symposium*]:
 399-410.- FC&P 28-2, p. 9, ID=6970^Topic(s):
 phylogeny; Porifera; Systematics: Porifera; Stratigraphy:
 Recent; Geography: ^^1";

5682 s[5679] = "REITNER J. (1989).- Struktur, Bildung und Diagenese der
 Basalskelette bei rezenten Pharetroniden unter besonderer
 Berücksichtigung von *Petrobiona massilina* Vacelet et Levi 1958
 (Minchinellida, Porifera).- *Berliner geowissenschaftliche Abhandlungen*
 A106: 343-383.- FC&P 20-1.1, p. 72, ID=2466^Topic(s):
 skeletal structures, diagenesis; Porifera, Pharetronida,
 Petrobiona; Systematics: Porifera; Stratigraphy: Recent;
 Geography: ^Petrobiona massiliana is a Recent pharetronid sponge
 with a secondary basal skeleton composed of high Mg calcite. *Petrobiona*
 is linked with the subclass Calcaronea. The basal skeleton is mainly
 constructed of elongated spherulitic elements. The living tissue of the
 sponge is restricted to the upper part of the calcareous skeleton,
 except for narrow canals which penetrate the basal skeleton. The basal
 skeleton grows within an extremely thin mucus layer between the
 pinacoderm of the living sponge and the substrate or ontogenetically
 older basal skeleton. This layer is called the "extra-pinacodermal
 mucus layer". The primary basal skeleton elements are called
 "sclerodermites" or elongated cement-chips and grow within the
 outer-pinacodermal space. The shape of the chips is influenced by the
 upward movement of sponge tissue during growth. The spicular skeleton
 of the sponge is partly entrapped by syn-vivo-formed cement-chips.
 Chemistry of the spicules is nearly similar to the primary elements. An
 early diagenetic neomorphic process alters the single Mg calcite
 crystals of the spicules into polycrystalline, granular, or prismatic
 structures. Within the oldest parts of the basal skeleton the entire
 structure of the spicules is changed into diagenetic spherulites.
 Stable isotope content (C13/ O18) of the primary cement-chips and
 spicules are nearly similar. Cements of the basal skeleton differ only
 in more positive O18 values, a typical diagenetic feature. Remarkable
 are relatively high C13 values (+2,3). A strong vital effect (e.g. high
 content of respirative CO2) is therefore not noticed. The basal
 skeleton of *Petrobiona* was compared with another pharetronid species of
 the Calcaronea group, *Minchinella lamellosa*. This particular sponge is
 a true living fossil and is characterized by a rigid interior
 choanosomal spicular skeleton. This second type of pharetronid basal
 skeleton is constructed of spicules which are connected by high Mg

- calcite cements, analogous to with the primary cement-chips of Petrobiona. Chemical data as well as stable isotope content are comparable with Petrobiona. [fragment of extensive original summary]^1";
- 5683 s[5680] = "WEISSENFELS N. (1989).- Biologie und Mikroskopische Anatomie der Suesswasserschwaemme (Spongillidae).- Gustav Fischer Verlag (Stuttgart, New York); ISBN 3-437-30600-6; in German, English version in preparation.- FC&P 18-2, p. 48, ID=2514^Topic(s): biology, anatomy; Porifera, Spongillidae; Systematics: Porifera; Stratigraphy: Recent; Geography: ^well illustrated (112 drawings and black and white photos) important new contribution to sponge biology. The book represents on ca. 100 pages the results of Prof. Weissenfels and co-workers investigations during the last sixteen years on four European fresh water sponges (*Ephydatia fluviatilis* (L.), *E. muelleri* (Lieberkohn), *Spongilla lacustris* (L.), and *Eunapius* (*Spongilla*) *fragilis* (Leidy) and therefore the current knowledge of this group. Weissenfels's group was able to cultivate fresh water sponges in aquaria, the species *Ephydatia fluviatilis* was the main object of research. Important is, the new developed and used SEM-preparation technique (critical point drying) to demonstrate the outer shape of cells and other soft tissue characters beside well done TEM micrographs. The author gives an extremely good overview on the ontogenetic development of a young sponge hatching from a gemmule or developed from an incubated parenchymella-larvae. All stages of tissue development are figured with SEM, TEM, and LM micrographs and described in simple but informative German, which allows not native speakers to understand the main content. Beside the characteristics of tissue structures different cell types, and ontogenetic development, physiology aspects are described and help to understand e.g. how a sponge feeds, how an injured sponge recreates, and how organic- and mineralized skeletal elements are constructed. The problem of individuality of a sponge is discussed. An ontogenetic ("phylogenetic") tree of sponge cells is given and allows a short overview on the different sponge cell types and their function. The book is made specially for biologists and students of biology. I believe this book is good also for paleontologists, because it gives an excellent overview on the anatomy, function morphology of certain characters, the physiology of the excretions processes (function of the pore- and channel system), and finally the formation of the collagen/spongin- and spicule skeleton. The latter is very important for paleontologists to understand more about sponge skeletons in respect of taxonomy and phylogeny. Recommendation: necessary for all scientists who are working on sponges and closely related organisms like "stromatoporoids", "chaetetids", "sphinctozoans" and "archeocyathids" and should be available in every scientific library. [reviewed by Joachim Reitner]^1";
- 5684 s[5681] = "MANCONI R., PRONZATO R. (1996).- Geographical distribution and systematic position of *Sanidastra yokotonensis* (Porifera: Spongillidae).- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 219-225.- FC&P 25-2, p. 29, ID=3101^Topic(s): distribution, systematics; Porifera, Spongillidae; Systematics: Porifera; Stratigraphy: Recent; Geography: ^*Sanidastra yokotonensis* Volkmer-Ribeiro and Watanabe 1983 was known till now only from the type locality in the eastern Japan. We refer here on three new findings from running waters of Corsica and Sardinia Islands. The diagnostic characters of our specimens, such as spicules morphology and gemmule structure, fit well with those of the original description. The peculiar disjunct distribution is intriguing and we propose some hypotheses to explain it. We discuss also some aspects of the systematic position of this species. [original abstract]^1";
- 5685 s[5682] = "SCHUHMACHER H. (1983).- Korallenriffe: kunstliche Riffe

geben erstmals Einblick in die Riffentstehung.- Umschau 83, 2: 48-52.-
 FC&P 13-1, p. 13, ID=0390^Topic(s): reefs
 artificial; reefs initiation; reefs, artificial; Systematics: ;
 Stratigraphy: Recent; Geography: ^Artificial coral reefs
 and reef formation.^1";

5686 s[5683] = "KUHLMANN D.H.H. (1984).- Das lebende Riff.- Landbuch Verlag
 Hannover: 185 pp.- FC&P 13-2, p. 10, ID=0628^Topic(s):
 reefs; reefs; Systematics: ; Stratigraphy: Recent;
 Geography: ^An English edition of this book is in preparation by
 the editorial Arco, New York under the title of "Living Reefs of
 the world".^1";

5687 s[5684] = "TURCOTTE D.L., BERNTHAL M.J. (1984).- Synthetic coral-reef
 terraces and variations of Quaternary sea level.- Earth and Planetary
 Science Letters 70: 121-128.- FC&P 14-1, p. 69,
 ID=1085^Topic(s): eustacy; reefs; Systematics: ;
 Stratigraphy: Quaternary; Geography: ^Coral-reef terraces
 on tectonically elevated coasts provide important data on variations of
 sea level. In this paper a systematic approach is presented for the
 construction of synthetic reef terraces. ^1";

5688 s[5685] = "RICHTER D.K. (1984).- Zur Zusammensetzung und Diagenese
 natuerlicher Mg-calcite.- Bochumer geol. geotechn. Arb. 15: 310.-
 FC&P 14-1, p. 70, ID=1086^Topic(s): calcite
 diagenesis; mineralogy, calcite; Systematics: ; Stratigraphy:
 Recent; Geography: ^The study of the quantitative
 transformation in the diagenesis of Mg-calcite (especially with regard
 to the coronas of the sea-urchin Echinocyaaus pusillus, to regular
 echinoid spines, to coralline algae, and to skeletons of the bryozoan
 Sertella beaniana) requires a detailed knowledge of the used methods
 (mainly XRD-analysis) and of the composition of modern carbonate
 material. For this reason the chapters concerning diagenesis are
 preceded by a methodic summary and an extensive description of the
 MgCO3-content of modern calcitic skeletons. Examples from the Greek
 coasts are used to explain the character, environment, and extent of
 the Mg-calcite diagenesis. Different patterns of diagenesis are used to
 illustrate the regional importance of diagenetic investigations.
 Special aspects of Mg-calcite diagenesis, referred to in this study,
 are dolomitization, Fe-calcitization, cathodoluminescence,
 silicification, and undulosity of Mg-calcites.^1";

5689 s[5686] = "BAKER A.C., STARGER C.J., MCCLANAHAN T.R., GLYNN P.W.
 (2004).- Coral Reefs: Coral's adaptive response to climate
 change.- Nature 430: 741. [brief communication]10.1038/430741a.-
 FC&P 33-2, p. 10, ID=1095^Topic(s): climatic change;
 reefs; Systematics: ; Stratigraphy: Recent; Geography:
 ^The long-term response of coral reefs to climate change depends on
 the ability of reef-building coral symbioses to adapt or acclimatize to
 warmer temperatures, but there has been no direct evidence that such a
 response can occur. Here we show that corals containing unusual algal
 symbionts that are thermally tolerant and commonly associated with
 high-temperature environments are much more abundant on reefs that have
 been severely affected by recent climate change. This adaptive shift in
 symbiont communities indicates that these devastated reefs could be
 more resistant to future thermal stress, resulting in significantly
 longer extinction times for surviving corals than had been previously
 assumed. [original abstract]^1";

5690 s[5687] = "HUGHES T.P., BAIRD A.H., BELLWOOD D.R., CARD M., CONNOLLY
 S.R., FOLKE C., GROSBERG R., HOEGH-GOULDBERG O., JACKSON J.B.C.,
 KLEYPAS J., LOUGH J., MARSHALL P., NYSTROEM M., PALUMBI S.R., PANDOLFI
 J., ROSEN B.R., ROUGHGARDEN J. (2003).- Climate change, human impacts,
 and the resilience of coral reefs.- Science 301, 5635: 929-933.-
 FC&P 33-2, p. 45, ID=1205^Topic(s): resilience;
 reefs; Systematics: ; Stratigraphy: Recent; Geography:
 ^The diversity, frequency, and scale of human impacts on coral
 reefs are increasing to the extent that reefs are threatened globally.

Projected increases in carbon dioxide and temperature over the next 50 years exceed the conditions under which coral reefs have flourished over the past half-million years. However, reefs will change rather than disappear entirely, with some species already showing far greater tolerance to climate change and coral bleaching than others. International integration of management strategies that support reef resilience need to be vigorously implemented, and complemented by strong policy decisions to reduce the rate of global warming. [original abstract]^1";

- 5691 s[5688] = "VECSEI A. (2004).- A new estimate of global reefal carbonate production including the fore-reefs.- Global and Planetary Change 43: 1-18.- FC&P 33-2, p. 46, ID=1210^Topic(s): carbonate production; reef carbonates; Systematics: ; Stratigraphy: Recent; Geography: global^Reefal carbonate production is an important component of the carbon cycle. In this paper, the methods for assessing this production are compared. Data on framework-dominated and biodebris-dominated for-reefs are integrated for new estimates of the global reef area (304.000 - 345.000 km²), of the production in reef-flat to fore-reef transects (average 0,9 - 2,7 kg.m⁻² year⁻¹), and of the production in the world's reefs (0,65 - 0,83 Gt year⁻¹). These estimates are the first to incorporate the recently published global reef-flat area and to integrate fore-reef data from all reef 47 provinces. The amount of reefal carbonate production at the local, regional, and even more at the global scale remains poorly constrained of few data.^1";
- 5692 s[5689] = "BELLWOOD D.R., HUGHES T.P., FOLKE C., NYSTROM M. (2004).- Confronting the coral reef crisis.- Nature 429: 827-833. [Nature review]10.1038/nature02691.- FC&P 34, p. 71, ID=1306^Topic(s): extinctions; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^The world-wide decline of coral reefs calls for an urgent reassessment of current management practices. Confronting large-scale crisis requires a major scaling-up of management efforts based on an improved understanding of the ecological processes that underlie reef resilience. Managing for improved resilience, incorporating the role of human activity in shaping ecosystems, provides basis of coping with uncertainty, future changes and ecological surprises. Here we review the ecological roles of critical functional groups (for both corals and reef fishes) that are fundamental to understanding resilience and avoiding phase shifts from coral dominance to less desirable, degraded ecosystems. We identify striking biogeographic differences in the species richness and composition of functional groups which highlight the vulnerability of Caribbean reef ecosystems. These findings have profound implications for restoration of degraded reefs, management of fisheries, and the focus on marine protected areas and biodiversity hotspots as priorities for conservation.^1";
- 5693 s[5690] = "PANDOLFI J.M. (2006).- Corals fail a test of neutrality.- Nature 440: 35-36. [news and views]10.1038/440035a.- FC&P 34, p. 90, ID=1335^Topic(s): biodiversity; biodiversity; Systematics: ; Stratigraphy: Recent; Geography: ^Ecologists continue to wrestle with a central question in biodiversity studies - the predictions of species' distribution in various environments. A merger of different theories is the long-term prospect. [comments on a paper by Dornelas et al. 2006]^1";
- 5694 s[5691] = "NORRIS S. (2001).- Thanks for all the fish.- New Scientist 2310: 36-39.- FC&P 31-1, p. 69, ID=1644^Topic(s): calcification rates; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^ [Not everyone agrees that reefs are shrinking. According to calculations by Joan Kleypas of the US National Center for Atmosphere Research, increasing CO₂ should already be making reefs grow more slowly. But exactly the opposite may be true on the Great Barrier Reef, according to a study of old coral skeletons by Dave Barnes of the Australian Institute of Marine Science. Calcification rates for the major reef-building genus Porites, he found, were 4 per

cent higher from 1930 to 1979 than for each of the three preceding 50-year periods, perhaps because rising ocean temperatures gave the corals a growth boost. So what happened to the calcification problem? In follow-up experiments in the laboratory, Barnes found a possible explanation: as CO₂ concentrations rise to levels approaching double the pre-industrial norm, reef rocks release carbonate in a form known as magnesian calcite. This has a buffering effect, shifting the acidity of ocean water back towards its normal value and so stimulating calcification. At about the same time, Robert Halley and his colleagues with the US Geological Survey in St. Petersburg, Florida, used an underwater chamber on an actual reef to monitor chemical responses to raised CO₂ levels. They observe the same buffering phenomenon. "we found it occurred at much less than a doubling of atmospheric CO₂"; he says. Many experts doubt this buffering mechanism will do much to offset the expected decrease in calcification, though. Researchers led by Chris Langdon of Columbia University saw no sign of buffering at doubled CO₂ levels in the Biosphere 2 experiments, for example. Halley counters that this may simple be due to the oversimplified nature of the Biosphere reef. For example, he notes, in natural reefs the surf produces a soluble fine sediment that is absent in Biosphere 2. But even if buffering takes place, mixing by ocean currents will likely overwhelm any locally produced effects on water chemistry, says Kleypas. "I think it might help some reefs in very calm, enclosed areas," she says, "but I don't think it's going to operate on a large scale."^1

- 5695 s[5692] = "PREOBRAZHENSKIY B.V. (1986).- Sovremennye rify [modern reefs; in Russian].- Nauka, Moskva: 244 pp., 67 figs., 4 tabs.- FC#038;P 16-1, p. 73, ID=2010^Topic(s): monograph; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^1[the book deals with the recent knowledge of the geomorphology, structure and the changing ecological processes which are responsible for the formation of coral reefs. This monograph is based on observations done by the author during reef-expeditions, but also by analysis of comprehensive literature. Special attention is paid to the conception of the term reef, and a new classification of the reefs of the world is proposed. The main topics of this monograph are: brief overview on the history of reef research, problems of investigation on reef ecosystems, reef morphology and reef facies, biology of corals, stability of reef systems against destruction, energy analyses of reefs, lithogenetic processes in reefs, model of a reef ecosystem, principles of (new) classification of reefs, brief characteristics of some reefs and problems of reef-formation (including interpretation of fossil reefs)]^1";
- 5696 s[5693] = "HILLMER G., SCHOLZ J. (1986).- Dependence of Quaternary reef terrace formation on tectonic and eustatic effects.- Philippine Scientist 23: 58-64.- FC#038;P 16-2, p. 26, ID=2061^Topic(s): tectonics, eustacy; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: ^1";
- 5697 s[5694] = "MEBS D. (1989).- Gifte im Riff. Toxikologie und Biochemie eines Lebensraumes.- Wissenschaftliche Verlagsgesellschaft, Stuttgart: 120 pp., 63 figs. [toxicology and biochemistry of the coral reef environment] .- FC#038;P 19-1.1, p. 19, ID=2569^Topic(s): toxicology biochemistry; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^1";
- 5698 s[5695] = "BLANCHON P., SHAW J. (1995).- Reef drowning during the last deglaciation: Evidence for catastrophic sea-level rise and ice-sheet collapse.- Geology 23, 1: 4-8.- FC#038;P 25-1, p. 51, ID=3061^Topic(s): eustacy; reefs; Systematics: ; Stratigraphy: Holocene; Geography: ^1Elevations and ages of drowned Acropora palmata reefs from the Caribbean-Atlantic region document three catastrophic, metre-scale sea-level-rise events during the last deglaciation. These catastrophic rises were synchronous with (1) collapse of the Laurentide and Antarctic ice sheets, (2) dramatic

reorganization of ocean-atmosphere circulation, and (3) releases of huge volumes of subglacial and proglacial meltwater. This correlation suggests that release of stored meltwater periodically destabilized ice sheets, causing them to collapse and send huge fleets of icebergs into the Atlantic. Massive inputs of ice not only produced catastrophic sea-level rise, drowning reefs and destabilizing other ice sheets, but also rapidly reduced the elevation of the Laurentide ice sheet, flipping atmospheric circulation patterns and forcing warm equatorial waters into the frigid North Atlantic. Such dramatic evidence of catastrophic climate and sea-level change during deglaciation has potentially disastrous implications for the future, especially as the stability of remaining ice sheets - such as in West Antarctica - is in question. ^1";

5699 s[5696] = "PICTON B.E. (1996).- The Species Directory Marine Database: a hierarchical taxonomic database for species-oriented biological recording in the marine environment.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 49-61.- FC&P 25-2, p. 29, ID=3102^Topic(s): marine species list, database; marine species; Systematics: ; Stratigraphy: Recent; Geography: ^A database for storing information from a survey of the sublittoral benthos of the Northern Ireland coast was developed in the Ulster Museum during the period 1982-1985. The database included a thesaurus of species names compiled with the intention of covering all marine species known in the British Isles. This species dictionary was then edited and published by the Marine Conservation Society, with individual lists being checked by experts in each group. Code numbers allocated to the species were used to store information on the species present at each site surveyed. * These data have now been transferred to a new database, programmed in Advanced Revelation. The relational features of Advanced Revelation have been used to store a hierarchical Linnaean taxonomy, enabling sorting of species in taxonomic order while taking into account changing taxonomies. Special consideration has been given to the coding of synonymous species names. Literature references have been incorporated into the database and linked to the species names. Specimens in the Ulster Museum collections and in the herbarium of University College, Galway have been entered into the database. Field sites have their own tables within the database, and specimen records are linked to the details of the sites where they were collected and the other species recorded at that site. Details of photographs are also stored and linked to species, sites and specimens where appropriate. [...] The Species Directory Marine Database is described and the details of the structure of the database and the validation routines discussed. A strategy for entering all species names for the group Porifera, together with all citations of these names in the literature and all specimens held in museums around the world is presented. [excerpts from extensive summary; for full text see <http://www.vliz.be/imis/imis.php?refid=107790>]^1";

5700 s[5697] = "GUNKEL F., ZANKL H. (1996).- Effects of Different Substrate Surface Roughness on Sessile Invertebrate Recruitment off Lee Stocking Island, Exuma Cays, Bahamas - Preliminary Results.- Goettinger Arbeiten zur Geologie und Palaontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 24, ID=3566^Topic(s): benthos; sessile invertebrates; Systematics: ; Stratigraphy: Recent; Geography: ^The effects of different hard substrate surface roughness on the early development of subtidal sessile invertebrate communities were studied over a period of two years in a shallow tidal channel (3m water depth) and a deeper platform edge habitat (27m) near Lee Stocking Island, Exuma Cays, Bahamas. PVC-panels of different surface roughness and panels of natural Key Largo Limestone were

deployed and collected after 6, 12 and 24 months of exposure. Sessile invertebrates of nearly all major taxa also found in natural cryptic habitats at each study site recruited on these panels (foraminifera, sponges, hydrozoans, scleractinian corals, bryozoans, synascidian tunicates, serpulid polychaetes and cirriped crustaceans). Recruited communities showed clear variations between substrate roughness both in mean number of species per panel and mean diversity with higher values on rough surface PVC. A tendency towards community assimilation between all substrate types from 12 to 24 months of recruitment was observed. Recruitment on smooth surfaces may be a delayed convergence compared to rough surfaces. This is likely to be the consequence of a much slower development of bioorganic films by microbial activities due to low potentials of adhesion on smooth substrates.^1";

5701 s[5698] = "TREECK P.van, SCHUHMACHER H., PASTER M. (1996).- Grazing and Bioerosion by Herbivorous Fishes - Key Processes Structuring Coral Reef Communities.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp- FC&P 26-1, p. 30, ID=3580^Topic(s): reefs, coral reefs, bioerosion; grazing, bioerosion; Systematics: ; Stratigraphy: Recent; Geography: ^Recolonization experiments were carried out in 10 and 20m depths within a fore reef area near Aqaba (Red Sea). Substrates were exposed in different orientations towards light and in different depths. Grazing by Diadema setosum was avoided by the experimental design. The recolonization process of these substrates was heavily affected by grazing herbivorous fish. Experimental substrates, made of coral skeleton were measured before and after exposition. The loss of material quantifies the impact of grazing. The rate of erosion varies with orientation of the substrates and depths. Grazing fish belonged mostly to families unsuspecting of being active bioeroders. Bioerosion rates were compared with net carbonate production in the respective area. A theoretical scenario of the impact of herbivorous fish on coral reef communities is deduced. The study will present how grazing by herbivorous fish is one of the major control factor structuring coral reef communities.^1";

5702 s[5699] = "MEYER D.E., SCHUHMACHER H. (1993).- Okologisch vertragliche Bauprozesse im Meerwasser. Kunstliche Riffe und Rehabilitation von Riffen.- Die Geowissenschaften 11, 12: 408-412.- FC&P 23-1.1, p. 61, ID=4132^Topic(s): reefs artificial; reefs, artificial; Systematics: ; Stratigraphy: Recent; Geography: ^Integrated electrochemical and biogenic deposition of hard material in sea water provides an attractive substrate for many hard bottom settlers. Brucite, aragonite and other minerals are precipitated from the ambient seawater on a cathode of the shape desired. The integration of direct-current phases and dead phases permits the calcareous matter to be deposited by electrochemical precipitation and by the secretion of sessile organisms. The physical substrate is colonized by a highly diverse community of marine organisms as they occur on natural hard substances in the sea. This method is well suited for restoring damaged coral reefs and other habitats which have been degraded by industrial activities or by the exploitation of building materials in coastal areas.^1";

5703 s[5700] = "SCHUHMACHER H., KLENE W., DULLO W.-C. et al. (1995).- Factors controlling Holocene reef growth: an interdisciplinary approach.- Facies 32: 145-188.- FC&P 24-2, p. 105, ID=4619^Topic(s): reef growth, limiting factors; reef growth; Systematics: ; Stratigraphy: Holocene; Geography: global^This interim report deals with investigations on key factors controlling reef growth by zoophysiologicals, ecologists, paleontologists and geologists. The different levels of emphasis are the coral animal and the reef community. The main study area is the Red Sea which reaches over 20° latitude up to the northernmost margin of

the global coral reef belt. Supplementary results on microborer ecology are provided from the Bahamas. The desert enclosed Red Sea, not influenced by land runoff and only minimally by anthropogenic (urban and touristic) nutrient inputs, is predestined for a study on the principal influence of light on calcification within bathymetrical and latitudinal gradients. Hence, on the level of the zooxanthellate scleractinian animal phototrophic and heterotrophic energy supply and its bearing on calcification are being measured in different coral species - in particular in *Porites* sp., one of the most important reef builders. The growth of 15 zooxanthellate scleractinians in the Gulf of Aqaba correlates with the annual light cycle. This correlation is observable down to 40m depth. Other growth promoting factors seem to have less influence on coral extension. [first part of extensive summary]^1";

- 5704 s[5701] = "TRIBBLE G.W. (1993).- Organic matter oxidation and aragonite diagenesis in a coral reef.- *Journal of Sedimentary Petrology* 63, 3: 523-527.- FC&P 24-2, p. 107, ID=4621^Topic(s): reefs diagenesis; oxidation, diagenesis; Systematics: ; Stratigraphy: Recent; Geography: ^A combination of field and theoretical work is used to study controls on the saturation state of aragonite inside a coral-reef framework. A closed-system ion-speciation model is used to evaluate the effect of organic-matter oxidation on the saturation state of aragonite. The aragonite saturation state initially drops below 1 but becomes oversaturated during sulfate reduction. The C:N ratio of the organic matter affects the degree of oversaturation, with N-poor organic material resulting in a system more corrosive to aragonite. Precipitation of sulfide as FeS strongly affects the aragonite saturation state, and systems with much FeS formation will have a stronger tendency to become oversaturated with respect to aragonite. Both precipitation and dissolution of aragonite are predicted at different stages of the organic reaction pathway if the model system is maintained at aragonite saturation. Field data from a coral-reef framework indicate that the system maintains itself at aragonite saturation, and model-predicted changes in dissolved calcium follow those observed in the interstitial waters of the reef. Aragonite probably acts as a solid-phase buffer in regulating the pH of interstitial waters. Because interstitial water in the reef has a short residence time, the observed equilibration suggests rapid kinetics.^1";
- 5705 s[5702] = "DODD R.J., HATTIN D.E., LIEBE R.M. (1973).- Possible living analog of the Pleistocene Key Largo Reefs of Florida.- *Bulletin geological Society of America* 84, 12: 3995-4000.- FC&P 3-1, p. 15, ID=4846^Topic(s): analogs of fossil reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5706 s[5703] = "ROBERTS H.H. (1974).- Variability of reefs with regard to changes in wave power around an island.- In *Proceedings of the Second International Symposium on Coral Reefs* (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 497-512.- FC&P 4-1, p. 19, ID=5043^Topic(s): morphological variability; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5707 s[5704] = "SACHET M.H., DAHL A.L. (eds) (1974).- Comparative investigations of Tropical Reef Ecosystems: Background for an integrated coral reef program.- *Atoll Research Bulletin* 172: 169 pp., 40 figs. [Smithsonian Institution, Washington].- FC&P 4-2, p. 48, ID=5220^Topic(s): reef ecosystems, CITRE project; reef ecosystems; Systematics: ; Stratigraphy: Recent; Geography: tropics^Informations on the CITRE project. First investigations on Caribbean and Pacific area.^1";
- 5708 s[5705] = "KONISHI K. (1975).- Late Quaternary glacio-eustasy and Arc-Trench Tectonism as derived from radiometric studies of fossil reef complexes.- *Marine Sciences Monthly* 7, 9 [Proceedings of the

- "Ancient Reef Complex" Symposium]:- FC&P 5-1, p. 16, ID=5330^Topic(s): glacio-eustacy, tectonism; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: ^^1";
- 5709 s[5706] = "GEISTER J. (1978).- Book review - H. W. Fricke: Bericht aus dem Riff.- FC&P 7, 1: 28.- FC&P 7-1, p. 28, ID=5587^Topic(s): reefs; reefs, book review; Systematics: ; Stratigraphy: Recent; Geography: ^Das Buch ist sowohl ein Erlebnis- als auch Forschungsbericht aus den Riffen des Roten Meeres und des Indopazifiks. Hier werden jedoch nicht die verwirrende, bunte Vielfalt der Rifforganismen und die oftmals phantastischen Unterwasserlandschaften der Korallenriffe in das Zentrum des Interesses gerückt, sondern das Verhalten der Rifftiere zueinander und in Beziehung zu ihrem Lebensraum. So lesen wir unter anderem von Aggressivität und ihrer innerartlichen und zwischenartlichen Kontrolle bei Korallenfischen, von Kannibalismus und Selbstmord unter Gorgonenhauptern, vom Verhalten der Riffseeigel sowie von sozial kontrollierter Wachstumshemmung und Geschlechtsumwandlung bei Anemonenfischen. [first fragment of a review]^1";
- 5710 s[5707] = "FRICKE H.W. (1976).- Bericht aus dem Riff. Ein Verhaltensforscher experimentiert im Meer.- R. Piper & Co. Verlag, Muenchen: 254 pp., 87 figs.- FC&P 7-1, p. 28, ID=5588^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5711 s[5708] = "LADD H.S. (1977).- Types of coral reefs and their distribution.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 01.- FC&P 7-1, p. 32, ID=5591^Topic(s): reefs, distribution; reefs, distribution; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5712 s[5709] = "STEERS J.A., STODDART D.R. (1977).- The origins of fringing reefs, barrier reefs, and atolls.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 02.- FC&P 7-1, p. 32, ID=5592^Topic(s): reef types; reef types; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5713 s[5710] = "STODDART D.R., STEERS J.A. (1977).- The nature and origins of coral reefs islands.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 03.- FC&P 7-1, p. 32, ID=5593^Topic(s): reef types; reef types; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5714 s[5711] = "KONISHI K., MATSUDA S. (1980).- Relative fall of sea level within the past 3000 years.- Trans. Proc. Palaeont. Soc. Japan N.S. 117: 243-246.- FC&P 10-1, p. 33, ID=5954^Topic(s): eustacy; eustacy; Systematics: ; Stratigraphy: Holocene; Geography: ^^1";
- 5715 s[5712] = "BUSS L.W., JACKSON J.B.C. (1979).- Competitive networks: nontransitive competitive relationships in cryptic coral reef environments.- American Naturalist 113, 2: 223-234.- FC&P 10-1, p. 58, ID=6008^Topic(s): cryptic habitats; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5716 s[5713] = "SCHUHMACHER H. (1977).- A hermit crab, sessile on corals, exclusively feeds by feathered antennae.- Oecologia 02, 7: 371-374.- FC&P 10-2, p. 12, ID=6065^Topic(s): reef dwellers, hermit crabs; reef dwellers, hermit crabs; Systematics: ; Stratigraphy: Recent; Geography: ^^1";
- 5717 s[5714] = "BERGER W.H. (1982).- Deglacial CO2 Buildup: Constraints on the coral-reef model.- Palaeogeography, Palaeoclimatology, Palaeoecology 040: 235-253.- FC&P 12-1, p. 45, ID=6190^Topic(s): reef models, CO2; reef models, CO2; Systematics: ; Stratigraphy: Holocene; Geography:

^The coral-reef hypothesis of deglacial CO₂ buildup in the atmosphere can account for about one-half of the signal seen in ice cores, assuming additional coral-reef growth releases 2 atmospheric carbon masses (ACM). The carbonate dissolution signal on the deep sea floor suggests titration of only 1 ACM. At least 4 ACM of CO₂ must be made available to satisfy the requirements of p CO₂-increase, growth of biosphere and of sedimentary carbon pool, carbonate dissolution on the sea floor, and saturation of newly introduced meltwater. A drop in ocean fertility is called for to provide the missing CO₂. Such a drop is evident in deep-sea cores from the western equatorial Pacific. CO₂ buildup appears to occur as a step, near 13,500 years B.P. Dissolution on the deep-sea floor begins near 11,000 years B.P. The difference of 2,500 years may describe a mixing lag due to meltwater input (the "worthington Effect"). [original summary]^1";

5718 s[5715] = "MONTAGGIONI L.F., BRAITHWAITE C.J.R. (2009).- Quaternary coral reef systems: history, development processes and controlling factors.- Developments in marine geology 5, 17: 532 pp., 157 figs; Elsevier. ISBN 978-0-444-53247-3 ISSN 1572-5480. [monograph] - FC&P 36, p. 100, ID=6522^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Quaternary; Geography: ^This book presents both state-of-the art knowledge from Recent coral reefs (1.8 million to a few centuries old) gained since the eighties, and introduces geologists, oceanographers and environmentalists to sedimentological and paleoecological studies of an ecosystem encompassing some of the world's richest biodiversity. Scleractinian reefs first appeared about 300 million years ago. Today coral reef systems provide some of the most sensitive gauges of environmental change, expressing the complex interplay of chemical, physical, geological and biological factors. The topics covered will include the evolutionary history of reef systems and some of the main reef builders since the Cenozoic, the effects of biological and environmental forces on the zonation of reef systems and the distribution of reef organisms and on reef community dynamics through time, changes in the geometry, anatomy and stratigraphy of reef bodies and systems in relation to changes in sea level and tectonics, the distribution patterns of sedimentary (framework or detrital) facies in relation to those of biological communities, the modes and rates of reef accretion (progradation, aggradation versus backstepping; coral growth versus reef growth), the hydrodynamic forces controlling water circulation through reef structures and their relationship to early diagenetic processes, the major diagenetic processes affecting reef bodies through time (replacement and diddolution, dolomitization, phosphatogenesis), and the record of climate change by both individual coral colonies and reef systems over the Quaternary.^1";

5719 s[5716] = "GEISTER J. (1985).- Book review: Das lebende Riff (by Dietrich Kuhlmann, 1984).- FC&P 14, 2: 49-50. [book review] - FC&P 14-2, p. 49, ID=6717^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^ […] "Das lebende Riff" [ist] eine der besten, allgemeinverstandlichen Darstellungen der rezenten Korallenriffe, uber die wir heute verfugen. Dieser Eindruck wird noch verstarkt durch eine hervorragende Illustrierung mit Zeichnungen und zahlreichen prachtvollen Farbfotos. […] Palaontologen und Geologen werden dankbar sein fur die geschickte Zusammenfassung der wichtigsten Daten zur Physiologie und Oekologie der rezenten Korallen und anderen Riffbewohner, welche andernfalls in der weit verstreuten Fachliteratur zusammengesucht werden mussten. [extracted from conclusions of the review]^1";

5720 s[5717] = "KUHLMANN D. (1985).- Living Coral Reefs of the world.- Arco Publ. Inc.: 185 pp., 151 photographs in color, 50 figs; New York. [book] - FC&P 14-2, p. 50, ID=6718^Topic(s): reefs; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^Authorized translation of the German book, "Das lebende

Riff"; published by Verlag Edition Leipzig, German Democratic Republic and by Landbuch Verlag Hannover, Federal Republic of Germany. The book is an up-to-date scientific review concerning recent hermatypic corals and coral reefs. Content: * history of coral research, * structure, growth and diversity of Scleractinia, * environmental factors, * other reef-builders, * coral reefs - their genesis, types and structure, * ecology of reef organisms, * importance and imperilment of coral reefs, * classification and distribution of recent Scleractinia. * The book is useful for scientists, students and all people who want to know more about the physiological and ecological causal connections, and the reasons of danger and devastating and now killing of coral reefs.^1";

- 5721 s[5718] = "GATTUSO J.-P., JAUBERT J. (1988).- Computation of metabolic quotients in plant-animal symbiotic units.- Journal of theoretical Biology 130, 2: 205-212.- FC&P 17-2, p. 24, ID=6770^Topic(s): plant-animal symbiosis; plant-animal symbiosis; Systematics: ; Stratigraphy: Recent; Geography: ^Equations of several metabolic quotients of symbiotic units are derived taking a zooxanthellate scleractinian coral as a case study but are useful in any plant-animal symbiotic association. These quotients are: the photosynthetic quotient of the coral (PQnet) and zooxanthellae (PQz), and the respiratory quotient of the coral (RQC).^1";
- 5722 s[5719] = "FRASER R.H., CURRIE D.J. (1996).- The species richness-energy hypothesis in a system where historical factors are thought to prevail: coral reefs.- The American Naturalist 148, 1: 138-159.- FC&P 29-1, p. 65, ID=7048^Topic(s): species richness; reefs; Systematics: ; Stratigraphy: Recent; Geography: ^Much of the variance in species richness of terrestrial organisms has been related to levels of available energy (the species richness-energy hypothesis). In contrast, the global patterns of coral diversity have been hypothesized to depend mainly on disturbance and historical factors. In this study, we test several general diversity hypotheses as they relate to hermatypic corals by examining the relationships between coral generic richness at 130 sites worldwide and descriptors of the environment that would be suggested by the hypotheses. The best environmental predictors of diversity are mean annual ocean temperature and an estimate of regional coral biomass, which suggests that available energy limits regional generic richness. In contrast, we found little evidence supporting other ecological hypotheses, including the hypotheses that disturbance or environmental stability is an important control of diversity. We also investigated historical hypotheses proposed to explain coral distributions. We found a relationship between coral richness and up-current island density that is consistent with vicariance models of speciation and theories of coral dispersal. Using multiple regression, 71% of the variation in coral generic richness could be statistically explained using a combination of variables representing both ecological and historical factors. Similar patterns exist for both coral species and reef fishes. [original summary]^1";
- 5723 s[5720] = "IVANOVSKIY A.B. (1984).- Sistema korallov: uspekhi i perspektivy.- Stratigrafiya i Paleontologiya drevneyshego fanerozoya: 107-111 [Ivanovskiy A. B. & Ivanov I. B. (eds); Nauka, Moskva].- FC&P 13-2, p. 59, ID=0607^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Discussed are the relations between Paleozoic, Mesozoic and Cenozoic representatives of Anthozoa.^1";
- 5724 s[5721] = "GRASSHOFF M. (1981).- Polypen und Kolonien der Blumentiere (Anthozoa). Der Bau der Polypen.- Natur und Museum 111, 1: 1-8.- FC&P 13-2, p. 9, ID=0622^Topic(s): polyp structure; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5725 s[5722] = "MONTAGGIONI L. (1985).- Recifs coralliens.- Geochronique 16:

- 13.- **FC&P 15-1.2**, p. 42, ID=0769**Topic(s):** **symposium volume; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy;** **Geography:** **^**[Report upon the 5th congress of the Comite International sur les Recifs Coralliens de IABO at Papeete 1985. Les actes de 5e congres donneront lieu a la publication de 5 volumes d'environ 400 pages chacun. Le volume 1 (Recifs coralliens de Polynesie Francaise - Guides d'Excursion) et le volume 2 (Resumes des communications) sont disponibles. Les 3 derniers volumes (Rapports des seminaires, communications) seront publies au debut de 1986. Pour tout renseignement, s'adresser a: Ecole Pratique des Hautes Etudes, Laboratoire de Biologie Marine, 55, rue de Buffon, 75005 Paris)].**^1"**;
- 5726 **s[5723]** = "PAVLOVA A.P. (1985).- O principakh klassifikacii korallov s akantinnymi septami. [principles of classification of corals with acanthine septa].- Paleontologicheskii Zhurnal 1985, 3: 22-30.- **FC&P 15-1.2**, p. 28, ID=0881**Topic(s):** **classification; Anthozoa, acanthine septa; Systematics: Cnidaria; Anthozoa; Stratigraphy;** **Geography:** **^**Vorgestellt wird ein kurzer Abriss der Erforschung von Korallen mit holacanthem und rhabdacanthem Septalapparat. Es wird der Versuch unternommen, ihre Klassifizierung auf der Basis des Baus der Septaltrabekeln, der Wachstumsform und der Struktur des Interseptalapparates vorzunehmen.**^1"**;
- 5727 **s[5724]** = "BONDARENKO O.B. (1983).- Sootnoshenie razlichnykh "genezov" u iskopaemykh kolonialnykh korallov.- Paleontologicheskii Zhurnal 1983, 3: 3-12.- **FC&P 14-1**, p. 43, ID=0951**Topic(s):** **Anthozoa phylogeny; Systematics: Cnidaria; Anthozoa; Stratigraphy;** **Geography:** **^**[Wechselbeziehung verschiedener "Genesen" bei fossilen kolonialen Korallen] Untersucht wurde die Ontogenese von Protocoralliten, die Hystero-genese adulter Koralliten und ihre Modifikationen, die Astogenese und Phylogene-se von Kolonien. Herausgearbeitet wurde die Gesamtheit sowie die spezifischen Züge der verschiedenen "Genesen" und ihre wechselseitige Beeinflussung. Darüberhinaus wird die Wechselbeziehung der "Genese"-Stadien mit der Modellvorstellung von A.V. Severtsova betreffend die "Phylembryogenese" diskutiert.**^1"**;
- 5728 **s[5725]** = "DODGE R.E., VAISNYS J.R. (1984).- Skeletal growth chronology of recent and fossil corals.- Skeletal Growth of Aquatic Organisms. Biological Records of Environmental Change [Rhoads D. C. & Lutz R. A. (eds)]: 493-517.- **FC&P 14-1**, p. 43, ID=0953**Topic(s):** **sclerochronology; Anthozoa; Systematics: Cnidaria; Anthozoa;** **Stratigraphy;** **Geography:** **^^1"**;
- 5729 **s[5726]** = "LELESHUS V.L. (1983).- Globalnye ekologicheskie krizisy v evolyucii korallov i vozmozhnye ikh prichiny. [global ecological crises in history of corals and their probable causes].- Paleontologiya i evolyuciya biosfery (Trudy 25. Inter. Symposium Paleont. Ass.) / 61-65.- **FC&P 14-1**, p. 43, ID=0954**Topic(s):** **extinctions; Anthozoa; Systematics: Cnidaria; Anthozoa;** **Stratigraphy;** **Geography:** **^^1"**;
- 5730 **s[5727]** = "SCHUHMACHER H., ZIBROWIUS H. (1985).- what is hermatypic? A redefinition of ecological groups in corals and other organisms.- Coral Reefs ..., 4: 1-9.- **FC&P 14-1**, p. 45, ID=0957**Topic(s):** **zooxanthellate, hermatypic; reef builders; Systematics: Cnidaria; Anthozoa; Stratigraphy;** **Geography:** **^**The term hermatypic, as widely used in the literature of extant and fossil scleractinia, includes, by definition (Wells 1933), the confusing generalization of equating reef-building with containing zooxanthellae. In course of time the use of the term diverged into denoting organisms which are either reef-building (including calcareous Rhodophyta) or those that contain zooxanthellae (including soft Alcyonaria). The equation: reef-building corals harbour zooxanthellae and vice-versa, is invalidated by reviewing the various ecological categories of corals

such as: reef-building species without the support of zooxanthellae, zooxanthellae-containing corals which inhabit but do not build reefs, zooxanthellae-containing, non-reef-building corals beyond the bathymetric and latitudinal limits of reefs, and framework-erecting corals in deep waters without zooxanthellae. Former attempts to improve the original definition of hermatypic are shown to be insufficient to match the ecological diversity of corals. A strict terminological separation of the properties zooxanthellae-containing, reef-building and (more generally) framework-building is provided by the use of the revised, respectively new terms zooxanthellate, hermatypic and constructional (with the respective antonyms azooxanthellate, ahermatypic and nonconstructional). This terminology also applies to non-scleractinians.^1";

5731 s[5728] = "PERRIN C. (2003).- Compositional heterogeneity and microstructural diversity of coral skeletons: implications for taxonomy and control on early diagenesis.- Coral Reefs 22, 2: 109-120.- FC&P 33-2, p. 12, ID=1103^Topic(s): coral skeletons, mineralogy, taxonomy; coral skeletons; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Fine-skeletal features of scleractinian skeletons were investigated in living colonies, from ultra-thinsections and SEM preparations. In contrast to what is commonly admitted, the coral fiber is a composite structure differing markedly from a simple aragonite crystal unit. The heterogeneity of coral fiber is shown by the occurrence of a micron-scale zonation resulting from incremental growth during cycles of biomineralization. In addition, high magnification SEM reveals that a calcification center corresponds to a particular structural element clearly differentiated from the surrounding fibers and defined by its own crystal arrangement. The duality of this center / fiber arrangement corresponds to a general architecture of scleractinians, resulting from similar processes of skeletogenesis. An additional fine-scale diversity related to taxonomy is reflected by variations in the geometry and crystallinity of centres and also in the strength and regularity of fiber incremental zonation. These initial differences both within the same colony and between distinct taxa would be emphasized during diagenetic history, leading to differential susceptibility of structural elements to diagenetic processes, and also to specific behavior of distinct taxa in relation to diagenesis.^1";

5732 s[5729] = "SCRUTTON C.T. (2005).- Corals and other Cnidaria.- Encyclopedia of Geology [Selley R. C., Cooks L. R. M. & Plimer I. R. (eds)]: vol. 2: 321-334.- FC&P 33-2, p. 13, ID=1107^Topic(s): ; Anthozoa Cnidaria; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^This paper is an entry to the Encyclopedia of Geology and gives an overview on the actual knowledge of corals and related organisms. "Cnidarian Organization and Classification"; "Geological History"; "Coral Structure and Taxonomy"; and "Coral Ecology and Palaeoecology" are the topics. In "Geological History" the different groups are discussed, their Precambrian origins and the Phanerozoic diversity, the latter characterized by the main groups Hydrozoa, Scyphozoa and Anthozoa. Organization, distinguishing features, origin and relationships are treated in more detail - especially of the three main groups Tabulata, Rugosa and Scleractinia. "Coral structure and taxonomy" deals as well with problems of interpretation. Coral classification, Ecology and Paleoecology are discussed with the Scleractinians first and in comparison with those of the Rugosa and Tabulata. Instructive graphs - for example life cycles, geological ranges of zoantharian corals, relationship between septal insertion, and generalized ecological and palaeoecological ranges of the three main groups - and representative figures impart additional information. A glossary and selected references for further reading complete this very informative representation of "Corals and other Cnidaria".^1";

- 5733 s[5730] = "MARTIN-GARIN B., LATHUILIERE B., GEISTER J. (2003).- Morphométrie, dimensions fractales et coraux.- 3ème symposium "morphométrie et évolution des formes"; Paris: 1 p.- FC&P 34, p. 65, ID=1292^Topic(s): morphometry, fractals; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5734 s[5731] = "MARTIN-GARIN B., LATHUILIERE B., GEISTER J. (2003).- Using fractals to characterize the interspecific variability of corals.- Berichte des Institutes für Geologie und Paläontologie der Karl-Franzens-Universität, Graz/Austria: .: 62. [abstract] - FC&P 34, p. 65, ID=1293^Topic(s): morphometry, fractals; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5735 s[5732] = "MARTIN-GARIN B., LATHUILIERE B., GEISTER J. (2003).- Dimensions fractales structurale et texturale pour quantifier les morphologies septales et calicinales des coraux.- Réunion spécialisée SGF"une paléontologie biologique: hommage au professeur Henri Tintant" Dijon 20-21 nov.: 29. [abstract] - FC&P 34, p. 65, ID=1294^Topic(s): morphometry, fractals; Anthozoa morphometry; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5736 s[5733] = "BUDD A.F. (2001).- What is a species of coral? And why does it matter?.- American Paleontologist 9, 3: 2-4.- FC&P 30-2, p. 9, ID=1590^Topic(s): species problem; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5737 s[5734] = "SCRUTTON C.T. (1981).- The measurement of corallite size in corals.- Journal of Paleontology 55, 3: 687-688.- FC&P 10-2, p. 68, ID=1775^Topic(s): measurement methods; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[description of a method for recording corallite areas in cross-sections of massive colonial corals]^1";
- 5738 s[5735] = "PREOBRAZHENSKIY B.V. (1980).- Morphogenesis in corals: Methodical Aspects.- Acta Palaeontologica Polonica 25, 3-4: 473-476.- FC&P 11-2, p. 43, ID=1874^Topic(s): morphogenesis; corals, morphogenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Teleologic approach to the coral morphogenetic studies shows no promise. The knowledge of coral growth process is an experiment based on the fundamental principles of Pierre Currie's Symmetry Theory. Light is a major morphogenetic factor for hermatypic colonial corals. [original summary]^1";
- 5739 s[5736] = "GILL G.A. (1982).- A supposed rythmic mechanical process in coral skeleton growth.- Proc. 1st. Internat. Meeting on Palaeontology, Essential of Historical Geology, Venice, June 1981. E. Montanaro-Gallitelli Edit., p. 445-466, 9 figs., 4 pis. Mucchi, Modena.- FC&P 12-2, p. 39, ID=1879^Topic(s): sclerochronology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Modes of rhythmic growth in corals are discussed and interpreted as a mechanical necessity. Their suggested common pattern would be the alternation in movement between growing parts and stationary supporting counterparts. Demonstration of an evolutionary trend is attempted. [original summary]^1";
- 5740 s[5737] = "SOKOLOV B.S., IVANOVSKIY A.B. (eds) (1987).- Rify i rifoobrazuyushchiye korally [reefs and reef-constructing corals; in Russian].- Nauka, Moskva: 295 pp., 131 figs., 40 pls.- FC&P 16-1, p. 74, ID=2012^Topic(s): reef-builders; reefs, reef-builders; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[the book deals with a brief outline on geomorphology and ecology of reefs, all basic features of fossil and living reef-constructing coelenterates; their morphology is described in detail; the morphological terms are explained in a glossary; a comprehensive reference list is also given; the main chapters are: Ivanovskiy A. B.: Reefs and reef-constructing organisms; Koshynin V.

- H.: Ecology and geomorphology of coral reefs; Bolshakova L. N.: Stromatoporoidea; Solovieva V. V.: Chaetetida; Marfenin N. N.: Hydrozoa, general aspects of the living organisms; Margulich R. Ya: Siphonophorida; [author?]: Anthozoa, fossil organisms; Potashova M. N.: Tabulata; Bondarenko O. B.: Heliolitoidea; Ivanovskiy A. B.: Rugosa; Marfenin N. N.: Anthozoa, general aspects of the living organisms; Kuzmicheva E. J.: Fossil and living Scleractinia; Kuzmicheva E. J. et Mal'yutin O. I.: Fossil and living Octocorals]^1";
- 5741 s[5738] = "COATES A.G., JACKSON J.B.C. (1987).- Clonal growth, algal symbiosis, and reef formation by corals.- Paleobiology 13, 4: 363-378.- FC&P 17-1, p. 19, ID=2116^Topic(s): clonal growth, algal symbiosis, reefs; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The occurrence of zooxanthellae in Recent scleractinian corals is strongly correlated with their growth form, corallite size, and degree of morphological integration of corallites. The great majority of zooxanthellate corals are multiserial with small, highly integrated corallites, whereas most corals lacking zooxanthellae are solitary or uniserial forms with large, poorly integrated corallites. Beginning in the Jurassic, fossil scleractinian faunas are morphologically similar to Recent faunas dominated by zooxanthellate species, strongly implying that most scleractinians contained zooxanthellae by that time. Evidence for Siluro-Devonian tabulates and Triassic scleractinians is equivocal but still suggests that rugosan corals lacked zooxanthellae. Most populations of Recent zooxanthellate corals contribute to reef formation, but many do not. Similarly, fossil corals interpreted to contain zooxanthellae on morphological grounds did not always form reefs. Recent reef formation depends upon a host of environmental factors that have little to do with the possession of zooxanthellae per se. Coral morphology should be a better predictor of the presence of zooxanthellae in fossil corals than their association with reefs.^1";
- 5742 s[5739] = "OSPANOVA N.K. (1986).- Travmaticheskaya izmenchivost kak pokazatel' rekapitulatsiy [traumatic variability as insight into recapitulation; in Russian].- Izvestiya Akademii Nauk Tadzhikskoy SSR 1986, 4: 57-81.- FC&P 17-1, p. 26, ID=2138^Topic(s): variability, recapitulation; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5743 s[5740] = "IVANOVSKIY A.B. (1987).- Some remarks on genus concept in corals.- Akademiya Nauk SSSR, Sibirskoe Otdeleniye, Institut Geologii i Geofiziki [Dagic A. S. (ed.), Systematics and phylogeny of fossil invertebrates]: 19-25 [in Russian].- FC&P 18-1, p. 37, ID=2251^Topic(s): genera, concepts of; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5744 s[5741] = "KOZLOVA L.E., KRASNOV E.V., GLEBOVSKAYA E.A., GORSKAYA A.I., KILINA L.I., KOVALEVA L.T., LEVANOVA O.N., MANDRIKOVA N.T., PODGORNYKH N.P., IGNATIEV A.V., POLYAKOVA D.M. (1982).- Comparative study of the skeletal material of fossil and recent corals.- Trudy Instituta Geologii i Geofiziki, Dalnevostochnyi Nauchnyi Tsentr, Institut Biologii Moria 379 [Paleobiogeokhimiya morskikh bespozvonochnykh]: 3-23 [in Russian].- FC&P 18-1, p. 37, ID=2254^Topic(s): skeletal mineralogy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5745 s[5742] = "STANLEY G.D.jr (2006).- Photosymbiosis and the evolution of modern coral reefs.- Science 312, 5775: 857-858. 10.1126/science.1123701.- FC&P 35, p. 101, ID=2430^Topic(s): coral reefs, photosymbiosis; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Symbiosis is the most relevant and enduring biological theme in the history of our planet. Photosymbiosis - whereby photosynthetic microorganisms (symbionts) live inside an animal (host), deriving benefits, sometimes mutual - is found today among calcifying foraminifers and giant clams but is best exemplified in corals, the master builders of reefs. Photosymbiosis fosters diversity and novel

- adaptations. Recent studies on global change, coral degradation, and the future of coral reefs highlight the relevance of photosymbiosis to reef evolution. [introductory part of a review paper]^1";
- 5746 s[5743] = "MARTIN-GARIN B., LATHUILIERE B., VERRECCHIA E.P., GEISTER J. (2007).- Use of fractal dimensions to quantify coral shape.- Coral Reefs 26, 3: 541-550.- FC&P 35, p. 109, ID=2441^Topic(s): morphometry, fractals; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^A morphometrical method to quantify and characterize coral corallites using Richardson Plots and Kaye's notion of fractal dimensions is presented. A Jurassic coral species (Aplosmilina spinosa) and five Recent coral species were compared using the Box-Counting Method. This method enables the characterization of their morphologies at calicular and septal levels by their fractal dimensions (structural and textural). Moreover, it is possible to determine differences between species of Montastraea and to tackle the high phenotypic plasticity of Montastraea annularis. The use of fractal dimensions versus conventional methods (e.g., measurements of linear dimensions with a calliper, landmarks, Fourier analyses) to explore a rugged boundary object is discussed. It appears that fractal methods have the potential to considerably simplify the morphometrical and statistical approaches, and be a valuable addition to methods based on Euclidean geometry.^1";
- 5747 s[5744] = "OEKENTORP K. (2007).- The microstructure concept - coral research in the conflict of controversial opinions.- Bulletin of Geosciences 82, 1: 95-97.- FC&P 35, p. 110, ID=2443^Topic(s): microstructures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^A^1";
- 5748 s[5745] = "IVANOVSKIY A.B. (1989).- Korally: proshloe, nastoyashchee i budushchee [corals: past, presence and future; in Russian].- Nauka, Moskva, 61 pp., 33 figs., 1 tbl., 2 pls.- FC&P 18-2, p. 30, ID=2469^Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^AIn this paper the morphological characteristics and the structure of corals, their role in the construction of reefs is being described as well as their systematic diversity. Moreover, the problem of origin of the corals is discussed in detail as well as the history of evolution, the periods of extinction, and the reconstruction of coral reef ecosystems. The paper is richly illustrated with drawings and photos of fossil and recent corals. [translated from the original Russian summary]^1";
- 5749 s[5746] = "PANDOLFI J.M. (1989).- Developmental sequences in colonial corals: an overview.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 69-81.- FC&P 19-1.1, p. 13, ID=2524^Topic(s): colonial; corals colonial; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^A^1";
- 5750 s[5747] = "HUBBARD J.A.E.B. (1989).- The role of ephemera in correlation amongst reefs and coralliferous sequences.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 125-132.- FC&P 19-1.1, p. 13, ID=2530^Topic(s): reefs stratigraphy; reefs, stratigrafical correlation; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^A^1";
- 5751 s[5748] = "OEKENTORP K. (1989).- Diagenesis in corals: syntaxial cements as evidence for post-mortem skeletal thickenings.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 169-177.- FC&P 19-1.1, p. 13, ID=2535^Topic(s): diagenesis; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ;

- Geography: ^^1";
- 5752 s[5749] = "KUHLMANN D.H.H. (1989).- Korallenforschung im Museum fuer Naturkunde.- Wissenschaftliche Zeitschrift der Humboldt-Universitaet, Reihe Mathematik / Naturwiss. 38, 4: 407-414.- FC&P 19-1.1, p. 39, ID=2615^Topic(s): research history; Anthozoa research; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Der Grundstock fuer die Steinkorallensammlung des Berliner Museums fuer Naturkunde wurde im Grundungsjahr der Universitaet 1810 durch eine Schenkung gelegt und in den folgenden Jahren durch Expeditionen und Ankaeuft vermehrt. Die beiden Weltkriege unterbrachen diese Entwicklung abrupt. Erst nach der Gruendung der DDR konnten die Korallenuntersuchungen unter Gesichtspunkten der Oekologie, Genese und Evolution wieder aufgenommen werden, wobei eine neue und generelle Korallenriff-Entstehungstheorie entwickelt wurde.^1";
- 5753 s[5750] = "IVANOVSKIY A.B. (1990).- O strukture skeleta korallov (nekotorye itogi). [on the structure of coral skeleton (some results); in Russian].- In: Kolobova I.M. & Khozatskiy L.I. (eds): Ezhegodnik Vsesoyuznogo Paleontologicheskogo Obshchestva 33: 33-39; Leningrad (Nauka). [in Russian].- FC&P 19-2.1, p. 23, ID=2733^Topic(s): skeletal structures; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The skeleton of all corals is built analogously: crystallites form microtufts which group into tufts. They, on the other hand, develop sclerodermites and trabeculae. Four types among the trabeculae can be distinguished: holacanth, monacanth, rhabdacanth and rhipidacanth. The sclerenchyme, however, only shows two types: fibrous and lamellar. [translated from original summary]^1";
- 5754 s[5751] = "KOWALSKI H. (1990).- Gerolsteiner Fossilien in der Sammlung Goethe.- Die Eifel 85: 89-90.- FC&P 19-2.1, p. 26, ID=2742^Topic(s): collection of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^It easily falls into oblivion that the greatest German poet Johann Wolfgang Goethe also had a secondary occupation. As a "Private Legation Councillor" of the dukedom Sachsen-Weimar he - among other things - was endeavoured to revive the mining industry. This led him to deal with geology and mineralogy more thoroughly. He not only started a mineralogical collection in which fossils also existed, he also grappled with geological questions. In 1816 Goethe received three fossils from Gerolstein together with some other pieces. These specimens can be seen in the illustrations 1-3. Whereas Calceola sandalina Linne (fig. 1) is obvious, Favosites gotlandica Goldfuss (fig. 2) can only be classed to the genus Favosites Lamarck in a wider sense. It seems doubtful whether the coral fragment referred to as Cyathophyllum helianthoides (fig. 3) belongs to the species of Goldfuss. [fragment of paper]^1";
- 5755 s[5752] = "IVANOVSKIY A.B. (1990).- 'katastrofy" v istorii zemli i evoluciya korallov. ["catastrophies" in the Earth's history and the evolution of corals; in Russian] .- In: Principi razvitija i istorizma v Geologii i Paleontologii.- Sbor. nauchn. trudov; Dubatolov V.N. (ed.): 189-197; Nauka, Siberian Branch, Novosibirsk.- FC&P 20-1.1, p. 51, ID=2815^Topic(s): extinctions, phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5756 s[5753] = "GRASSHOFF M. (1991).- Die Evolution der Cnidaria. II. Solitare und koloniale Anthozoen.- Natur und Museum 121, 9: 269-282. [in German].- FC&P 20-2, p. 47, ID=2902^Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5757 s[5754] = "LELESHUS V.L. (1990).- Procvetaniya i krizisy v evoljucii korallov. [stages of flourishing and crises in coral evolution; in Russian].- Paleontologicheskij Zhurnal 1990, 4: 15-22.- FC&P 20-2, p. 47, ID=2903^Topic(s): expansions, extinctions; Anthozoa phylogeny; Systematics: Cnidaria; Anthozoa;

- Stratigraphy: ; Geography: ^^1";
- 5758 s[5755] = "OEKENTORP K. (1991).- Korallen und ihre Lebensraume.- Jschr. Ges. Forderung westfalische Wilhelms-Univ. 199/91: . pp? [in German].- FC&P 20-2, p. 48, ID=2907^Topic(s): ecology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5759 s[5756] = "KUHLMANN D.H.H. (1991).- Adaptationsmuster hermatypischer Korallen als Grundlage zum Verstaendnis der Korallenriffgenese (Kompensationstheorie) [in German, with English summary].- Mitt. Zool. Mus. Berlin 67,1: 209-218.- FC&P 20-2, p. 68, ID=2969^Topic(s): coral reefs, theory of compensation; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Existing coral reef theories fail to explain the origin of all types of coral reefs, because biological aspects are insufficiently considered. However, biological factors, especially metabolism of symbiotic, hermatypic corals, are among the most important in the construction of coral reefs, despite the importance of geological, palaeoclimatic and hydrographic features. Of the different ways of feeding, the autotrophic one is the most effective for corals living in shallow waters. The intracellular cycling of metabolic products of host and symbiont uses the minimum of energy, leaving more energy available for growth, reproduction and production of calcium carbonate. Adaptation to different environmental factors by corals at different depths leads to the power of the hermatypic corals to compensate for oscillations of sea floor and relative sea level. Therefore, the biologic complex is the central point in understanding the origin of coral reefs. Because of the adaptational peculiarity of corals and their ability to compensate for environmental alterations, this proposal is called the coral reef theory of compensation. The model is valid for all reef types of all coral reef regions.^1";
- 5760 s[5757] = "LATHUILLIERE B., GILL G.A. (1995).- Some new suggestions on functional morphology in pennular corals.- Publications du Service geologique du Luxembourg 29: 259-264.- FC&P 25-2, p. 20, ID=3083^Topic(s): structures, pennulae; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5761 s[5758] = "LATHUILLIERE B. (1996).- Is morphology a good way to understand the evolution of corals? .- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 81-105.- FC&P 25-2, p. 37, ID=3119^Topic(s): morphology, phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Within a family, genera are usually separated on the basis of their colonial structure. The periodic occurrence of transgeneric highly variable specific units (spectra) in the fossil record poses nomenclatural and phylogenetic problems. A detailed example among Jurassic Montlivaltiids is presented in this paper involving the genera Montlivaltia, Coenotheca, Thecosmilia, Latiphyllia and Complexastrea. These spectra are related to peculiar unstable nonreefal environments and are characterized by the dominance of young stages of the colonial growth (astogeny). The arising nomenclatural difficulties are solved by way of spectral nomenclature which allows naming morphological types, as well as taxonomic units and keeping some stability within the general frame of nominal taxa. Genera correspond to grades (solitary, thamnasterioid, phaceloid, meandroid, cerioid) rather than clades and the colonial structure is a labile character. Several alternative phylogenetic hypotheses are proposed, among which, some can renew our vision of this group and emphasize that the iterative production of generic level shapes is best explained by mean of heterochronic processes. It is suggested that testing of these hypotheses be extended to other families such as Microsolenidae, Stylophyllidae or Fungiidae.^1";
- 5762 s[5759] = "SWART P.K., LEDER J.J. (1996).- The utility of the stable isotopic signatures in coral skeletons.- Paleontological Society Papers

- 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 249-291.- FC&P 25-2, p. 46, ID=3133^Topic(s): stable isotopes, C O; corals, zooxanthellate vs azooxanthellate; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^There is a fundamental ecologic differentiation between zooxanthellate and non-zooxanthellate corals. This paper reviews factors which govern the stable carbon and oxygen isotopic composition of these groups of corals. Although the stable carbon and oxygen isotope compositions of coral skeletons are strongly influenced by environmental and physiological factors, the precise mechanisms remain a matter of debate. In particular the oxygen isotopic composition is known to be governed by the temperature and the oxygen isotopic composition of the water and perhaps also by kinetic factors. In contrast the carbon isotopic composition is controlled by a combination of photosynthesis, respiration, autotrophy, heterotrophy, and the isotopic composition of dissolved inorganic carbon. Using a combination of carbon and oxygen isotopes it is possible to distinguish zooxanthellate from non-zooxanthellate corals.^1";
- 5763 s[5760] = "HEIKOOP J.M., TSUJITA C.J., RISK M.J., TOMASCIK T. (1996).- Corals as Proxy Recorders of Volcanic Activity: Evidence from Banda Api, Indonesia.- Palaios 11, 3: 286-292.- FC&P 25-2, p. 36, ID=3186^Topic(s): volcanism indicators; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Corals growing on the flanks of Banda Api, Indonesia, contain records of volcanic activity which occurred in May, 1988. Ashfall killed portions of some massive coral colonies (Porties lobata), resulting in the formation of death surfaces. These surfaces were preferential sites for extensive bioerosion and incorporation of volcanic ash into underlying skeletal pores. Subsequent coral regeneration resulted in the preservation of death / regrowth surfaces overlying trapped volcanic ash. An orange-colored iron-rich chemical precipitate is preserved in the skeletons of corals which survived the volcanic event. These distinct orange bands are contemporaneous with the death / regrowth surfaces. The iron banding is interpreted as being a product of hydrothermal activity which accompanied volcanism X-radiographs of coral skeletons confirm that the timing of formation of both the death surfaces and the orange banding is coincident with the 1988 eruption. The features preserved in these corals may be valuable proxy indicators of volcanic events in analogous recent and ancient environments.^1";
- 5764 s[5761] = "STANLEY G.D.jr (ed.) (1996).- Paleobiology and Biology of Corals.- Paleontological Society Papers 1: vi+296 pp.- FC&P 25-2, p. 28, ID=3187^Topic(s): biology; corals biology; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5765 s[5762] = "STANLEY G.D.jr (1996).- Paleobiology and biology of corals: introduction to volume.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 3-6.- FC&P 25-2, p. 28, ID=3188^Topic(s): biology; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5766 s[5763] = "VERON J.E.N. (1996).- Evolution in corals.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 7-38.- FC&P 25-2, p. 28, ID=3189^Topic(s): phylogeny; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5767 s[5764] = "LOSER H. (1996).- Database applications in coral research.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 207-248.- FC&P 25-2, p. 28, ID=3192^Topic(s): databases; corals research; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5768 s[5765] = "SCHOUPE A.von (1991).- Episodes of coral research history up to the 18th century.- [journal?] 6th International Symposium on

- Fossil Cnidaria including Archaeocyatha and Porifera, Muenster, Germany; Inaugural lecture; 36 pp.- FC&P 21-1.1, p. 48, ID=3239^Topic(s): research history; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5769 s[5766] = "GRASSHOFF M. (1992).- Die Korallen von Espers Werk "Die Pflanzenthiere".- Natur u. Museum 122, 10: 325-330.- FC&P 21-2, p. 60, ID=3363^Topic(s): collection of fossils; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^In der Section Marine Evertebrata I [des Forschungsinstituts u. Museums Senckenberg] wurden im Laufe der Arbeiten über Korallen die von E.J.C. Esper beschriebenen Anthozoen kritisch überprüft. Die von Espers Sammlung noch existierenden Stücke sind im Senckenbergmuseum aufbewahrt. Die Publikationsdaten des Werkes "Die Pflanzenthiere", das in Lieferungen von 1788-1830 erschien, wurden in Kooperation mit Dr. Georg Scheer, Hessisches Landesmuseum Darmstadt, aufgedeckt, der auch die Arbeiten über die Steinkorallen durchführte. [discussion on Esper's work and his studies as well as on the whereabouts of the material studied by Esper]^1";
- 5770 s[5767] = "SCHÖUPPE A.von (1993).- Episodes of coral research history up to the 18th Century.- Courier Forschungsinstitut Senckenberg 164: 001-016. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 9, ID=3432^Topic(s): research history; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^A comprehensive survey of coral research history up to the 18th century is given. The presentation comprises both the history of recent coral research and that of fossil corals. Two pre-scientific subperiods led to the scientific period of coral research at the turn from the 18th to the 19th century.^1";
- 5771 s[5768] = "TURNSEK D., LOSER H. (1993).- The history of Mesozoic coral research after 1940.- Courier Forschungsinstitut Senckenberg 164: 037-046. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 10, ID=3435^Topic(s): research history; coral research; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^About 260 palaeontological papers on Mesozoic corals published since 1940 have been quantitatively analysed. New higher taxa such as genera, subfamilies, families, superfamilies and suborders are introduced. Systematic differences in the approaches of various authors and the role of some important new morphological terms are discussed. An extensive bibliography is furnished separately.^1";
- 5772 s[5769] = "LE TISSIER M.D'A.A., SCRUTTON C.T. (1993).- A review of density banding in Recent and fossil corals.- Courier Forschungsinstitut Senckenberg 164: 055-061. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 11, ID=3437^Topic(s): density banding; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The historical development of research on density banding and related features of cyclo-morphic growth are briefly reviewed. Since the growth of interest in sclerochronology in the early 1970's work on Recent and fossil corals has proceeded quite separately. In Palaeozoic corals, it has been the practice to study and illustrate density banding in acetate peel or thin sections, whilst in Recent corals, X-radiography of thick (±10mm) slices has been almost universally the rule. The problems inherent in this latter practice are discussed. A study of the structure of density banding in Recent and fossil corals underlines the close similarity between these features in the two groups and supports their interpretation as comparable in origin and temporal significance.^1";
- 5773 s[5770] = "DARRELL J.G., TAYLOR P.D. (1993).- Macrosymbiosis in corals:

a review of fossil and potentially fossilizable examples.- Courier Forschungsinstitut Senckenberg 164: 185-198. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 16, ID=3453Topic(s): macrosymbiosis; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Symbiosis means living together and encompasses various types of associations between different species, ranging from parasitism through commensalism and amensalism to mutualism. Instances of macrosymbiosis involving modern zoantharian corals are numerous, especially in reefs, but only a small proportion of these are likely to be preserved and recognizable in fossil material. Sessile symbionts have the best potential for fossilization and recognition. Fossil coral macro-symbioses can be classified conveniently into encrusting, boring and intergrowth categories. Trophic relationships between symbionts and the effects of the symbionts on each others fitness are matters of speculation, but data on obligacy, taxonomic specificity, structural integration of symbionts etc. are accessible in fossil material. A preliminary review of coral macrosymbioses suggests that: (a) few symbioses are species specific and obligate for both partners; (b) although some symbionts show apparent adaptations for living in symbiosis, convincing examples of coevolution have yet to be demonstrated; (c) symbioses peaked in numbers during the Devonian, declined in the later Paleozoic, and increased towards modern high levels from about the Miocene onwards; (d) whereas encrusting and intergrowth symbioses predominated in the Paleozoic, boring and intergrowth symbioses are commoner at the present day.^1";

- 5774 s[5771] = "POTTS D.C., BUDD A.F., GARTHWAITE R.L. (1993).- Soft tissue vs. skeletal approaches to species recognition and phylogeny reconstruction in corals.- Courier Forschungsinstitut Senckenberg 164: 221-231. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 17, ID=3457Topic(s): classification; corals classification; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Species of Caribbean Porites were recognized independently in material collected from St. Croix and Florida using live tissue, allozyme, and morphometric techniques. Preliminary results suggest close correspondence between methods, although more subgroups can be distinguished using live tissues and allozymes. Although no morphometric differences separated three samples of P. "astreoides", differences in allele frequencies and pigmentation suggest the existence of two species. Morphometric and allele frequency differences both suggest that two species exist within samples of P. "divaricata". Both approaches also suggest that corals collected as P. "furcata" from St. Croix and as P. "porites" from Miami are the same species; P. "furcata" and P. "porites" from St. Croix can be distinguished by both techniques. Phylogenies constructed separately using the two approaches also tend to agree. Incorporation of fossils into the analysis suggests that two radiations may have occurred in the Caribbean since the Eocene: (1) early to middle Miocene and (2) Pleistocene to early Holocene. Extinctions appear concentrated between the late Pliocene and early Holocene.^1";
- 5775 s[5772] = "ATODA K. (1992).- Anthozoa: Taxonomy, Morphology and Life Cycle Physiology.- In: Mc-Graw-Hill Encyclopedia of Science and Technology: p. 658.- FC&P 22-2, p. 78, ID=3490Topic(s): taxonomy, morphology, physiology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5776 s[5773] = "IVANOVSKIY A.B. (1993).- Evoljucija i sistema korallov.- Dokl. [Rossiyskoy] Akad. Nauk 330, 6: 786-789.- FC&P 22-2, p. 79, ID=3496Topic(s): phylogeny, taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";

- 5777 s[5774] = "HUBBARD J.A.E.B. (1997).- Fundamental factors, material properties and incipient diagenesis: a caveat case study of scleractinian analogues for rugosan interpretation.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 117-127.- FC&P 26-2, p. 25, ID=3707^Topic(s): taphonomy, diagenesis; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^This paper is concerned with the hypothesis that in overlooking the information which can be derived from living corals we are in danger of ignoring data which is critical to the proper interpretation of the highly sensitive chemical signals currently being derived from them. This has implications for the interpretation of both extant and extinct groups. The fundamental feature which distinguishes this paper from the many more sophisticated studies of living scleractinians and their more recent geological records in the Pleistocene concerns the nature of the material properties involved. It draws attention to the influential role of the critical sizes of the individual components in relation to their preparation and resultant geologic implications. The main diagenetic contrasts in preservation appear to relate to the precise timing of the sealing-off of the coralla from the surrounding migratory fluids. Where an influx of clay mineral laden waters follows immediately after a toxic event the likelihood of the preservation of calical details is higher than normal. Thus clay rich horizons are likely to contain the best preserved external features although subsequent penetration of the seal may result in the complete replacement of the internal fabric.^1";
- 5778 s[5775] = "GUDO M., HUBMANN B. (1997).- Fremdkoerpereinschlusse in fossilen Korallenskeletten aus Sicht der Konstruktionsmorphologie.- Geol. Palaeont. Mitt. Innsbruck 22: 43-59.- FC&P 26-2, p. 58, ID=3736^Topic(s): construction morphology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The fossil records of rugose corals are rare of swallowed bodies enclosed in the intratabular and intradissepimental spaces. In the most well known examples of bodies enclosed in the fossil skeletons they are probably swallowed through the gastrovascular cavity of the polyp and then they were atrophied together with parts of the basal soft body. These particles became an enclosed part of the extracorporeal skeleton. Presupposing that living beings can be understood as organismic constructions different functions performing the hydraulic, machine-like, and energy conducting entities can be explained. By analyzing anthozoan polyps some very important and indispensable functions are realized. Retention of the hydraulic filling by a valve like effect of the mouth tube, the ingestion of large food particles and the ejection of swallowed objects through the mouth tube are possible. Particles which get into the spaces between the tethering mesenteries could not be ejected on the usual way back through the pharynx. Getting rid of such swallowed particles is only possible by atrophying the basal soft body where the swallowed body has been deposited. Thereby the particle is enclosed in the extracorporeal skeleton.^1";
- 5779 s[5776] = "GATTUSO J.-P., FRANKIGNOUILLE M., BOURGE L., ROMAINE S., BUDEMEIER R.W., (1998).- Effect of calcium carbonate saturation of seawater on coral calcification.- Global and Planetary Change 18: 37-46.- FC&P 27-1, p. 49, ID=3805^Topic(s): calcification; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The carbonate chemistry of seawater is usually not considered to be an important factor influencing calcium-carbonate-precipitation by corals because surface seawater is supersaturated with respect to aragonite. Recent reports, however, suggest that it could play a major role in the evolution and biogeography of recent corals. We investigated the calcification rates of five colonies of the zooxanthellate coral Stylophora pistillata in synthetic seawater using the alkalinity anomaly technique. Changes in

aragonite saturation from 98% to 585% were obtained by manipulating the calcium concentration. The results show a nonlinear increase in calcification rate as a function of aragonite saturation level. Calcification increases nearly 3-fold when aragonite saturation increases from 98% to 390%, i.e., close to the typical present saturation state of tropical seawater. There is no further increase of calcification at saturation values above this threshold. Preliminary data suggest that another corals species, *Acropora* sp., displays a similar behavior. These experimental results suggest: (1) that the rate of calcification does not change significantly within the range of saturation levels corresponding to the last glacial-interglacial cycle, and (2) that it may decrease significantly in the future as a result of the decrease in the saturation level due to anthropogenic release of CO₂ into the atmosphere. Experimental studies that control environmental conditions and seawater composition provide unique opportunities to unravel the response of corals to global environmental changes.¹¹;

- 5780 s[5777] = "GRASSHOFF M., GUDO M. (1998).- Die Evolution der Coelenteraten. I. Gallertoid-Korallen und Oktokorallen.- Natur und Museum 128, 5: 129-138.- FC&P 28-1, p. 26, ID=3899Topic(s): phylogeny; Gallertoida, Octocorallia; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The paper presents a reconstruction of the evolutionary pathway to the coelenterate bauplan; the octocorals are shown [or: are interpreted as] to be close to the level of ancestral coelenterates.¹¹;
- 5781 s[5778] = "LELESHUS V.L. (1995).- The importance of crises for coral evolution.- Zhurnal obshchey biologii 56, 2: 200-209.- FC&P 27-2, p. 58, ID=3922Topic(s): extinctions; Anthozoa phylogeny; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^In the evolution of corals the epochs of flourishing alternated with crisis. During the crisis and the beginning of the flourishing the evolution rates were maximal. At the time the taxa of highest ranks emerged (families, suborders, orders). Subsequently the evolution rates decreased and were minimal at the end of the epochs of flourishing. 8 crises were established in coral evolution: Postordovic, Postludlov, Serpukhovo-Bashkirian, Lower-Triassic, Lower-Jurassic, Middle-Cretaceous, and Palaeocenic. They differ in their significance and duration. The largest and longest of them was the Lower-Triassic crisis. During it the most fundamental taxonomic changes occurred. In the end of Palaeozoic the last clear representatives of Tabulata and Rugosa disappeared, whereas 20 new genera, 10 families, and 6 suborders of the Scleractinia order emerged in the beginning of Middle Triassic. Small Permian solitary rugosae of the family Plerophyllidae were the ancestors of Mesozoic scleractinians. The second largest crisis was Famenian. By the beginning of it the order Heliolitida disappeared, as well as some 30 families and 210 genera of other corals. By the beginning of Carbonic 200 new genera, 20 families, and three suborders of corals emerged. The third largest crisis took place in Lower Jurassic. By the beginning of it approximately 96% of Upper Triassic corals have disappeared, whereas 220 new genera, 22 families, and 3 to 5 new suborders emerged in the end of Lower and in the Middle Jurassic. The epochs flourishing of and crises of coral evolution were not dependent upon the degree of their endemism.¹¹;
- 5782 s[5779] = "OSPANOVA N.K. (1991).- Range of application of the biogenetic law in colonial corals.- New material on geology of Tajikistan: 34-36; Donish, Dushanbe.- FC&P 23-1.1, p. 41, ID=4120Topic(s): colonial; corals colonial; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5783 s[5780] = "SOROKIN Yu.I. (1993).- Coral Reef Ecology.- Ecological Studies 102 [Lange O.L., Mooney H.A. & Remmert H. (eds)]: i-x + 465 pp., 101 figs., 120 tabs.; Springer Verlag, Berlin - Heidelberg -

- New York - ISBN 3-540-56427-6.- FC&P 23-1.1, p. 96, ID=4215^Topic(s): coral reefs, ecology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^All aspects of coral reef science are covered systematically and on the basis of a holistic ecosystem approach. The geological history of coral reefs, their geomorphology as well as biology including community structure of reef biota, their functional characteristics, physiological aspects, biogeochemical metabolism, energy balance, environmental problems and management of resources are treated in detail. The main topics are: Reef Lime Constructions Reef Environments Plancton in Coral Reef Waters Benthic Microflora, Periphyton and Plant Associations Reef Zoobenthos Coral Reef Fish Communities of Corals in Reef Ecosystems Morphology and Ecological Physiology of Corals Nutrition of Corals Biogeochemical Metabolism and Energy Flows in Reef Ecosystems Destruction and Recovery of Reef Systems, Reef and Man.^1";
- 5784 s[5781] = "LELESHUS V.L. (1994).- Vid v paleontologii (na primere paleozoijskikh korallov).- Paleontologicheskii Zhurnal 1994, 3: 34-40. [species criteria in paleontology (exemplified by data for paleozoic corals); in Russian].- FC&P 24-1, p. 57, ID=4465^Topic(s): fossil species concept; species in paleontology; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Stratigraphic method is considered to be the most reliable for revealing species criteria while studying fossil material. The conclusion is made that quantitative indices of morphologic characters can be used as species criteria in many cases.^1";
- 5785 s[5782] = "GRABNER E. (1969).- Die Koralle in Volksmedizin und Volksglauben.- Z. volkskde 65: 183-195. [in German: corals in folk medicine and popular belief].- FC&P 24-1, p. 60, ID=4470^Topic(s): folk medicine; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5786 s[5783] = "SCHOLZ J., KRUMBEIN W.E. (1994).- Entwicklung tropischer Korallenriffe.- Biologie in unserer Zeit 24, 2: 96-102.- FC&P 24-2, p. 38, ID=4535^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: tropics^1";
- 5787 s[5784] = "SORAUF J.E. (1995).- The "oldest corals".- American Paleontologist 03, 1: 1-2.- FC&P 24-2, p. 80, ID=4561^Topic(s): phylogeny; corals "oldest"; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5788 s[5785] = "STEHLI F.G., WELLS J.W. (1971).- Diversity and age problems in hermatypic corals.- Systematic Zoology 20: 115-126.- FC&P 1-2, p. 11, ID=4626^Topic(s): hermatypic; corals hermatypic; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5789 s[5786] = "WELLS J.W. (1969).- The formation of dissepiments in zoantharian corals.- In Campbell (ed): Stratigraphy and Palaeontology - Essays in Honour of Dorothy Hill; Australian National Univ. Press, Canberra: pp 17-26.- FC&P 1-2, p. 11, ID=4627^Topic(s): dissepiments; zoantharian corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5790 s[5787] = "WELLS J.W. (1970).- Problems of annual and daily growth-rings in corals.- In Runcorn S K (ed): Palaeogeophysics; Acad. Press, London & New York; pp 3-10.- FC&P 1-2, p. 11, ID=4628^Topic(s): growth mode; corals, growth rings; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5791 s[5788] = "FISCHER J.C., SALVAT B. (1971).- Paléocéologie et écologie des Mollusques dans les complexes récifaux coralliens.- Haliotis 1: 65-103.- FC&P 1-2, p. 12, ID=4629^Topic(s): ecology; coral reef mollusks; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Les auteurs consacrent la

première partie de leur exposé à rappeler quelles sont les caractéristiques essentielles, biotiques et abiotiques, des milieux récifaux coralliens: nature des organismes constructeurs, morphologie des récifs, classification des milieux coralliens, distribution et conditions d'existence des récifs à Madréporaires, tant fossiles qu'actuels. La seconde partie est consacrée à l'examen de la composition, de la répartition et de l'importance des peuplements malacologiques dans ces milieux, en envisageant successivement les Mollusques commensaux ou parasites des Madréporaires hermatypiques, les Mollusques du récif proprement dit, les Mollusques des substrats meubles biogènes, les Mollusques des eaux récifales et pérorécifales. ^1";

- 5792 s[5789] = "KRAVTSOV A.G. (1971).- Elements of ecology of recent corals and paleoecology of fossil corals.- Zapiski Leningradskogo ordenov Lenina i trudovogo Krasnogo Znameni Gornogo Instituta im. G.V. Plekhanova 59, 2, Paleontology (1971): 26-32.- FC&P 2-1, p. 23, ID=4738^Topic(s): ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5793 s[5790] = "YONGE C.M. (1972).- Aspects of Productivity in Coral Reefs.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 1-12.- FC&P 2-2, p. 12, ID=4761^Topic(s): coral reefs, productivity; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5794 s[5791] = "ABBOTT B.M. (1973).- A method of predicting the density of fossil corals.- The Mercian Geologist 1973, 4: 209-211.- FC&P 3-1, p. 11, ID=4836^Topic(s): skeletal density; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5795 s[5792] = "COATES A.G., OLIVER W.A.jr (1973).- Coloniality in Zoantharian Corals.- In Boardman, Cheetham and Oliver (eds): Animal Colonies; Dowden, Hutchinson & Ross Inc., Stroudsburg, Pa: 3-27.- FC&P 3-1, p. 11, ID=4838^Topic(s): colonial; zoantharian corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Genera of colonial zoantharian corals have been more numerous than solitary genera through most of Phanerozoic time even though colonial genera were a minority of the Rugosa. Various forms of coralla represent widely different levels of development in terms of both integration within colonies and adaptive success, but the two are not necessarily correlated. Phaceloid rugosans represent a low level of integration with no connection between individuals other than skeletal; in contrast, coenosteid scleractinians represent a high level of integration with confluent gastro-vascular cavities and coordinated skeleton building. But both forms were very successful in terms of generic diversity and longevity, whereas Paleozoic coenosteid heliolitoidids were relatively unsuccessful. The evolution of coloniality in zoantharian corals was paralleled by the evolution of the coral-reef building habit. Paleozoic corals built only small reefs, apparently because of slow growth, relative instability, and failure to solve the problem of the disposal of metabolic waste. Mesozoic to Recent corals developed porous skeletons that are strong, stable, and rapidly built. In addition, they have developed an algal symbiosis that has solved the waste problem and increased the rate of CaCO3 deposition. These factors together have made possible the surf-resistant oceanic reefs of late Mesozoic to Recent time.^1";
- 5796 s[5793] = "OLIVER W.A.jr (1968).- Some aspects of colony development in Corals.- Journal of Paleontology 42, 5: 16-34.- FC&P 3-1, p. 12, ID=4841^Topic(s): coloniality; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Many peculiarities of growth and development in colonial metazoans are related to the fact that a true colony is a clone, composed of

genetically identical individuals reproduced asexually from a single founding individual. In fossil colonies the close relationship of individuals may be difficult to prove, but it must be assumed for analysis to be meaningful. Intercolony variation is due to the interaction of genetic and environmental controls as in solitary organisms. Intracolony variation may be very limited because of the lack of genetic variation, but microenvironmental differences (situation within colony) may cause enough individual variation to mask the restrictive effect of genetic similarity. Study of the number of major septa in some Devonian solitary and colonial rugose corals shows significantly less variation within colonies than within "populations" or species of colonial, or solitary forms. Greater variation within some colonies may result from either genetic or mechanical accidents. Septal number and diameter are closely correlated in populations and species, but analyses of individuals within colonies frequently show weak or no correlation. Available data suggest: (1) that septal-number variation may be genetically limited in rugose corals and (2) that the general assumption that number of septa is a function of diameter may be in error.^1";

5797 s[5794] = "GUNTHER A. (1973).- Entwicklung und Lebensbedingungen der Korallen.- Aufschluss 24, 2: 63-70; Heidelberg.- FC&P 3-1, p. 18, ID=4855^Topic(s): phylogeny, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";

5798 s[5795] = "JONES O.A., ENDEAN R. (eds) (1973).- Biology and Geology of Coral Reefs.- Academic Press, New York and London; vol. 1: Geology 1.; 410 pp.- FC&P 3-1, p. 21, ID=4861^Topic(s): coral reefs, biology, geology; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^This first geology volume is restricted to chapters dealing with the reefs of particular areas;discussion of topics applicable to coral reefs throughout the world is deferred to the second geology volume. Important additions of our knowledge of corals reefs, particularly the spectacular results that stemmed in recent years from work in the Marshall Islands - seismic surveys and dredging at depths of 1460-3660m, as well as deep borings - are discussed. This work not only provided proof of Darwin's explanation of the origin of deep ocean atolls by progressive subsidence of their foundations but also yielded important conclusions on other aspects of the history of those reefs. Ladd summarizes this work in his chapter on Bikini and Eniwetok Atolls. * Ironically, the stimulus to the undertaking of these studies was the desirability of surveys prior and subsequent to the testing of nuclear explosive devices. The surveys were primarily to document the effects of the explosions, but incidentally, during a few years of study, they yielded far more definitive information on coral atolls than had the total of all previous work. * Similar considerations prompted surveys of Mururoa Atoll in the Tuamotu Archipelago, surveys which in turn produced much new data on the reefs, only some of which can be correlated with data on the atolls of the Marshall Islands. The reefs of French Polynesia, including Mururoa Atoll, as well as those of New Caledonia are described by Chevalier in Chapters 4 and 5. * As Stoddart (Biol. Rev. 44, p. 437) has pointed out and as is briefly discussed by Whitehouse in Chapter 6, Darwin's theory is not necessarily applicable to barrier reefs on continental shelves or surrounding "high" (continental) islands. Barrier reefs in particular need further study in regard to the nature and geological history of their foundations quite apart from work in other geological fields. * Proposals to establish an air base on one of the islands in the Indian Ocean initiated studies of the fauna of the islands involved, studies which were widened to include most of the reefs in the ocean. The more important features of these reefs are summarized by Stoddart in Chapter 2.[first part of extensive summary]^1";

5799 s[5796] = "WINDLE P.N., AUGUSTYNEK R.M., NITECKI M.H. (1973).-

Catalogue of type and referred specimens of fossil corals in Field Museum of Natural History.- Fieldiana Geology 32: 1-95.- FC&P 3-1, p. 31, ID=4901Topic(s): collections of fossils; catalogue of fossils; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Consistently with previous catalogues, only holotypes are recognized as valid types. * Entries are made in their initially published form and are ordered alphabetically by genera, then by species within the genus.^1";

5800 s[5797] = "ABBOTT B.M. (1974).- Flume studies on the stability of model corals as an aid to quantitative palaeoecology.- Palaeogeography, Palaeoclimatology, Palaeoecology 015: 1-27.- FC&P 3-2, p. 30, ID=4912Topic(s): stability, ecology; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Flume experiments were performed in order to investigate the movement, susceptibility to transport, and final orientation of model corals on various sediments under differing current conditions. Seven sets of models (giving a total of 50 models in all) were studied, first on a fixed bed of coarse sand (representing lithified conditions), then on a free bed of the same material (representing unlithified conditions). All movements of the models and their final orientations were recorded. The experiments began with a study of the relationship between a series of spherical caps (hemispheres) and right-spherical cones, and their competent velocities on a fixed bed. These results were then compared with a second series of models having an effective density believed to be analogous with that of Favosites gothlandicus (Lamarck), a species common in the Wenlock Limestone Formation, and found both in and out of its life position. * From these experiments, conclusions regarding the relative stability and susceptibility to transport of various growth forms were drawn. From the experimental evidence, spherical caps would generally be expected to return to their growth orientation, even after transportation, whereas it is unlikely that the conical forms would regain their growth orientation. These results and conclusions were extended by a study of composite models which indicated the manner in which coral colonies would move when subjected to transportation by an unidirectional current. These models demonstrated how the most stable orientation of these models was size-dependent. * The second group of experiments was carried out on an unlithified bed. Here, interference of the models with the current could be studied and also the resulting effect on the sediment. Scour hollows were developed owing to the intense vorticity generated around the higher models. This removal of sediment results in the undercutting of the model. Two possible situations could then arise. Firstly, the model was removed from the bed, this subsequently resulting in the removal of the previously produced sedimentary structures. Secondly, the models tipped forward into the upcurrent scour hollow and were buried, the associated sedimentary structures undergoing modification. * The relative hydrodynamic theory is included where this helps to clarify the results of the experiments. Finally, the relevance of the experiments to the colonial organisms of the Wenlock bioherms is discussed.^1";

5801 s[5798] = "GVIRTZMAN G., FRIEDMAN G.M., MILLER D.S. (1973).- Control and distribution of uranium in coral reefs during diagenesis.- Journal of Sedimentary Petrology 43, 4: 985-997.- FC&P 3-2, p. 32, ID=4918Topic(s): reefs diagenesis, U; reefs, diagenesis; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The concentration of about 2ppm of uranium in the aragonitic skeletons of modern scleractinian corals which we studied is a constant value, regardless of occurrence, anatomy or taxonomy. * The presence of cement of aragonite or high magnesian calcite usually raises the concentration of bulk samples to about 3ppm. Modern corals may contain up to 50% of cementing minerals. Organisms, such as corals and coralline algae, while secreting their skeleton, discriminate against the uptake of uranium, whereas the uptake of uranium by mineral

cements is less restrained. Aragonite cement contains about 3,6ppm and high-magnesian calcite cement 2,6ppm uranium. * During leaching by fresh water, the aragonite of the skeletons of corals dissolves out. This creates hollow molds which fill with drusy low-magnesian calcite. In emergent reefs from the shores of the Red Sea which display the effects of progressive diagenesis this calcite is enriched in uranium (3,9ppm) beyond that found in marine cements. Second-generation calcite which fills original voids in the coral from the emergent reefs contains a lower level of uranium concentration (1,3ppm). The level of concentration of uranium in low-magnesian calcite of diagenetically altered corals is a function of the availability of uranium in meteoric waters. * In aragonite as well as in high- and low-magnesian calcite uranium replaces calcium or occupies lattice vacancies in the crystal lattice.^1";

- 5802 s[5799] = "LUCAS G. (1973).- Role des organismes dans la genèse des roches. Applications aux récifs coralliens.- Sciences de la Terre 18, 3 (tirage réservé aux membres Assoc. Sédim. Fracs.): 257-271; Nancy.- FC&P 3-2, p. 34, ID=4921^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Les formations construites, souvent appelées "récifs" - mot dont on essaye de préciser le sens - sont envisagées sous divers aspects: morphologie extérieure, relation de l'armature construite et du remplissage, nombre de groupes systématiques d'organismes participant à la construction (stoeicité). Les etres vivants sont classés et étudiés d'après les modalités de leur contribution à la construction; une attention particulière est portée aux récifs coralliens. [is it a publication, if edition is so restricted?]^1";
- 5803 s[5800] = "MACINTYRE I.G., SMITH S.V., ZIEMAN J.C.jr (1974).- Carbon flux through a coral-reef ecosystem: a conceptual model.- Journal of Geology 82, 2: 161-171.- FC&P 3-2, p. 34, ID=4922^Topic(s): coral reefs, carbon flux; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The potential application of modeling techniques to sedimentological studies of modern carbonate environments is demonstrated by a suggested conceptual model of the carbon system in a coral reef ecosystem. A graphic model employed to delineate the locations and characteristics of carbon flow patterns in the reef ecosystem modeling is thought to be a valid tool of geological research which should be considered a necessary first step in studies of systems such as the one described. The given model is intended to stimulate discussion about the usefulness of modeling in geological investigations of coral reefs, particularly in identifying the geological priorities in coral-reef research. This model will also form the basis for future simulation analyses.^1";
- 5804 s[5801] = "SCHUHMACHER H. (1975).- Die Steinkorallen, lebende Geologie.- Bild der Wissenschaft 1975, 10-12: 1442-1449.- FC&P 3-2, p. 35, ID=4926^Topic(s): stony, living geology; corals stony; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5805 s[5802] = "SOROKIN Yu.I. (1973).- Microbiological Aspects of the Productivity of Coral Reefs.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 17-45.- FC&P 3-2, p. 36, ID=4929^Topic(s): coral reefs, microbiota; coral reefs, productivity; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5806 s[5803] = "MUSCATINE L. (1973).- Nutrition of Corals.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 77-115.- FC&P 3-2, p. 36, ID=4931^Topic(s): nutrition; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";

- 5807 s[5804] = "BURKHOLDER P.R. (1973).- The Ecology of Marine Antibiotics and Coral Reefs.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 117-182.- FC&P 3-2, p. 36, ID=4932^Topic(s): coral reefs, marine antibiotics; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5808 s[5805] = "CONNELL J.H. (1973).- Population Ecology of Reef-Building Corals.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 205-245.- FC&P 3-2, p. 36, ID=4934^Topic(s): hermatypic, population ecology; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5809 s[5806] = "SCHMIDT H. (1974).- On evolution in the Anthozoa.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 533-560.- FC&P 4-1, p. 17, ID=5007^Topic(s): phylogeny; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5810 s[5807] = "MOORE W.S., KRISHNASWAMI S. (1974).- Correlation of X-radiography revealed banding in corals with radiometric growth rates.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 269-276.- FC&P 4-1, p. 18, ID=5024^Topic(s): growth banding, geochronometry; corals growth banding ; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5811 s[5808] = "MACINTYRE I.G., SMITH S.V. (1974).- X-radiographic studies of skeletal development in coral colonies.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 277-287.- FC&P 4-1, p. 18, ID=5025^Topic(s): colonial; coral colonies; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5812 s[5809] = "ABBOTT B.M. (1975).- Implications for the Fossil Record of Modern Carbonate Bank Corals.- Bulletin geological Society of America 86, 2: 203-204.- FC&P 4-1, p. 21, ID=5064^Topic(s): reefs; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5813 s[5810] = "HUBBARD J.A.E.B. (1974).- Barne's technique amended for analyzing fabric and cavity development in coral reef communities.- Journal of Paleontology 48, 4: 769-777.- FC&P 4-1, p. 23, ID=5075^Topic(s): hermatypic, cavity development; reef corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5814 s[5811] = "CHESHMEDJIEVA V.L. (1974).- Coraux coloniaux du Crétacé supérieur près du village de Carlo, arrondissement de Breznik. [en bulgare, résumé en français] .- 001 Annuaire de l'Université de Sofia, Fac. Géol. et Géogr., Livre 1, Géologie 66: 5-12.- FC&P 4-1, p. 45, ID=5173^Topic(s): colonial; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^En complément à une étude sur deux espèces de Scléactiniaires du Maestrichtien moyen de Garlo (arrondissement de Breznik), l'auteur décrit ici Parapolytremacis actinacioides et cinq espèces de Scléactiniaires, connus dans d'autres régions au Santonien.^1";
- 5815 s[5812] = "CHENEY D.P. (1973).- Cell Proliferation as an index of Growth in Corals; incorporation of 3H-Thymidine.- In T. Tokioka & S. Nishimura (eds): Recent Trends in research in Coelenterate Biology. Proceedings of the Second International Symposium on Cnidaria (held in Kushimoto, Japan, 16-19 October 1972): 285-297.- FC&P 4-2, p. 40, ID=5199^Topic(s): growth index; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5816 s[5813] = "HASHIMOTO Y., ASHIDA K. (1973).- Screening of toxic Corals and isolation of a toxic Polypeptide from Goniopora sp.- In T. Tokioka

- & S. Nishimura (eds): Recent Trends in research in Coelenterate Biology. Proceedings of the Second International Symposium on Cnidaria (held in Kushimoto, Japan, 16-19 October 1972): 705-711.- FC&P 4-2, p. 40, ID=5201^Topic(s): toxicity; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5817 s[5814] = "KAWAGUTI S. (1973).- Electron microscopy on symbiotic algae in reef corals.- In T. Tokioka & S. Nishimura (eds): Recent Trends in research in Coelenterate Biology. Proceedings of the Second International Symposium on Cnidaria (held in Kushimoto, Japan, 16-19 October 1972): 779-783.- FC&P 4-2, p. 40, ID=5202^Topic(s): symbionts, algal; Anthozoa, Zooxanthellae; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5818 s[5815] = "CROSSLAND C.J., BARNES D.J. (1974).- The role of metabolic nitrogen in Coral calcification.- Marine Biology 28: 525-552.- FC&P 4-2, p. 45, ID=5208^Topic(s): metabolic N, biocalcification; coral calcification; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^When pieces of the staghorn coral *Acropora acuminata* are incubated with ¹⁴C-urea, the label is incorporated into skeletal carbonate. Incorporation of this label differs from that of H¹⁴CO₃, suggesting urea is not immediately hydrolysed to provide a further source of HCO₃. The effects of certain organic substrates upon calcification suggest the ornithine cycle is involved. Citruline, an ornithine cycle intermediate, is found in high concentrations in the tissues of hermatypic corals. Urea, allantoin, NH₃ and arginine are also present. These compounds are barely detectable in zooxanthella or an ahermatypic coral. The allantoin may be present as calcium salts. It is suggested that allantoin are the medium by which Ca²⁺ and CO₂ are transported to sites of calcification. Hydrolysis of urea, formed by breakdown of allantoin, yields CO₂ and NH₃. The NH₃ may neutralise protons formed during precipitation of CaCO₃ and bring about their removal from sites of calcification. As well as providing urea, the ornithine cycle may also be involved in the removal of NH₃ from sites of calcification.^1";
- 5819 s[5816] = "FLOWER R.H., DUNCAN H.M. (1975).- Some problems in coral phylogeny and classification.- *Bulletins of American Paleontology* 57, 287: 175-192.- FC&P 4-2, p. 57, ID=5266^Topic(s): phylogeny, taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[description of *Cyrtophyllurn devlinae* n.sp., *Propora lambei* (Schubert), *Mcleodea loisae* n.gen., n.sp.]^1";
- 5820 s[5817] = "OMURA A. (1975).- Geologic history of the ocean floor from "fossil corals reef".- *Marine Sciences Monthly* 7, 9 [Proceedings of the "Ancient Reef Complex" Symposium]: ... -FC&P 5-1, p. 16, ID=5331^Topic(s): reefs geohistory; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5821 s[5818] = "KOZLOVA L.E. (1974).- Study of corals with the help of physico-chemical analysis.- *Drevniye Cnidaria* [B.S. Sokolov (ed.)], 1: 255-264.- FC&P 5-2, p. 6, ID=5401^Topic(s): physico-chemical analysis; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Comments on the chemical analysis of fossil corals and their enclosing sediments.^1";
- 5822 s[5819] = "IVANOVSKIY A.B. (1974).- Corals: Paleobiogeographic provinces or magnafacies.- *Geologiya i geofizika* 15, 8: 16-24. [in Russian].- FC&P 5-2, p. 9, ID=5427^Topic(s): biogeography; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^General discussion of ecologic and geographic significance of distribution patterns in modern and fossil corals.^1";
- 5823 s[5820] = "STRUSZ D.L. (1981).- Catalogue of type and figured corals from the Commonwealth Palaeontological Collection, Bureau of Mineral

- Resources, Canberra.- FC&P 10, 1: 12-18.- FC&P 10-1, p. 12, ID=5466Topic(s): collections of fossils; corals collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[types of the Commonwealth Palaeontological Collection, Canberra; it is sad to report, writes Strusz, that many of the specimens listed in this report are missing; a serious fire in April 1953 may have destroyed most of the slides in the sets CPC 495-572, 765-776 and 1029-1052, but other missing material cannot be accounted for in this way]^1";
- 5824 s[5821] = "IVANOVSKIY A.B. (1978).- Sistema korallov. [systematics of corals; in Russian].- Paleontologicheskii Zhurnal 1978, 1: 25-30.- FC&P 8-2, p. 38, ID=5579Topic(s): systematics; Anthozoa, systematics; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[a brief discussion of classification and phylogeny in the Anthozoa]^1";
- 5825 s[5822] = "GEISTER J. (1978).- Coral collections - Ecole cant. de Porrentruy & Progymnase de Delemont.- FC&P 7, 1: 28-29.- FC&P 7-1, p. 28, ID=5589Topic(s): collections of fossils; coral collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: Switzerland^^1";
- 5826 s[5823] = "VEEH H.H., GREEN D.C. (1977).- Radiometric geochronology of coral reefs.- Biology and Geology of Coral Reefs 4 (Geology 2) [O.A. Jones & R. Endean (eds)]; chapter 06.- FC&P 7-1, p. 32, ID=5596Topic(s): coral reefs, geochronometry; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5827 s[5824] = "FEDOROWSKI J. (1978).- Some aspects of coloniality in rugose corals.- Palaeontology 21, 1: 177-224.- FC&P 7-2, p. 22, ID=5643Topic(s): coloniality; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5828 s[5825] = "LAUB R.S. (1978).- Axial torsion in corals.- Journal of Paleontology 52, 3: 737-740.- FC&P 8-2, p. 38, ID=5644Topic(s): axial torsion; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[a brief discussion of axial torsion in rugose corals]^1";
- 5829 s[5826] = "STODDART D.R., JOHANNES R.E. (1978).- Coral reefs: research methods.- UNESCO, Paris; 581 pp. (ISBN 92-3-101491-9).- FC&P 7-2, p. 27, ID=5671Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[the book contains 43 reports on research methods morphology and structure of reefs, distribution of biota, energy and nutrient flux]^1";
- 5830 s[5827] = "BISCHOFF G.C.O. (1978).- Septodaeum siluricum, a representative of a new subclass Septodaearia of the Anthozoa, with partial preservation of the soft parts.- Senckenbergiana lethaea 59, 4/6: 229-273.- FC&P 8-2, p. 52, ID=5735Topic(s): ; Anthozoa Septodaearia; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Based on more than 6800 phosphatized, originally organic thecae and 12 specimens with partially preserved soft parts, Septodaeum siluricum n.g., n.sp., a colony building form ranging from early Ordovician through early Devonian is described. * The phosphatized soft parts consist of a circular stomodaeum, evenly subdivided by commonly 6 radial stomodaeal mesenteries with strong retractor muscles on either side that also operate a stomodaeal membrane spanning the intermesenterial spaces. The peripheral zone is evenly subdivided by 3, 6, 7, or 8 radial complete mesenteries with strong retractor muscles equally well developed on both faces. Orally located intermesenterial spaces are separated from the gastro-vascular cavity by an intermesenterial membrane that represents an aboral-lateral extension of the stomodaeal wall and is operated by retractor muscles of the complete mesenteries. Intercommunication between intermesenterial spaces and gastrovascular cavity is provided by fenestrae. The incomplete mesenteries are short

and may reach a total number of 32. The complete mesenteries are inserted singly. Asexual reproduction is by means of lateral increase and mesenterial budding. * Presence of stomodaeum in combination with the mode of asexual reproduction characterizes the new taxon as a representative of the Anthozoa. * The unusual anatomical configuration of the complete mesenteries, the mode of their insertion, as well as the possession of stomodaeal mesenteries, and stomodaeal and intermesenterial membranes, unknown from other Anthozoa, necessitate the placing of Septodaeum siluricum in a new subclass Septodaearia, regarded as an ancient, separate phyletic line of the Anthozoa. [original abstract]^1";

- 5831 s[5828] = "MINATO M. (1967).- Examples of divisional budding in some solitary corals.- I. Hayasaka Commemoration volume: 143-144.- FC&P 9-1, p. 19, ID=5779^Topic(s): budding, division; corals division; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5832 s[5829] = "SOKOLOV B.S. (1980).- Korally v istorii Zyemli. [corals in Earth history; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 41, ID=5800^Topic(s): ; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5833 s[5830] = "BABAYEV R.G., KRASNOV Ye.V. (1980).- Formy rosta korall'ov sovremennykh i drevnykh rifovykh lagun. [growth forms of living and fossil reef-lagoon corals; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5801^Topic(s): growth forms, morphology; lagoon corals, morphology; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5834 s[5831] = "KELLER N.B. (1980).- Osobennosti morfologii i ontogeneticheskogo razvitiya sovremennykh glubokovodnykh madreporariy i nekotorye elementy ikh zoogeografii. [morphological and ontogenetical peculiarities of extant deep-water madreporarians with some remarks on their biogeography; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 43, ID=5808^Topic(s): deep-water, morphology, ontogeny, biogeography; corals deep-water; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5835 s[5832] = "LATYPOV Yu.Ya., KHAYZNIKOVA K.B. (1980).- Soobshchestva korall'ov i vydeleniye korrelyatsionnykh stratigraficheskikh podrazdeleniy. [corals assemblages and establishemnt of stratigraphic horizons; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5813^Topic(s): biostratigraphy; corals zonation; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5836 s[5833] = "LEBANIDZE E.M. (1980).- O sposobakh pochkovaniya u predstaviteley roda Ironella Starostina et Krasnov 1970. [offsetting modes of the genus Ironella; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 43, ID=5815^Topic(s): budding; offsetting corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5837 s[5834] = "ROSEN B.R. (1981).- The tropical high diversity enigma - the corals' eye view.- Chance and challenge. The evolving biosphere [P.L. Forey (ed.)]: 103-129; British Museum (Natural History) and Cambridge University Press.- FC&P 10-1, p. 38, ID=5961^Topic(s): biodiversity; corals biodiversity; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5838 s[5835] = "FEDOROWSKI J. (1981).- Some aspects of coloniality in corals.- Acta Palaeontologica Polonica 25, 3-4: 429-437.- FC&P 10-1, p. 44, ID=5968^Topic(s): coloniality; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[a discussion of some aspects of coloniality in corals including a comparison of budding in the Anthozoa with that in

- the Hydrozoa, and consideration of the fusion of corallites in colonies; four types of fusion are discussed and the formation of gregaria is also briefly considered]^1";
- 5839 s[5836] = "IVANOVSKIY A.B. (1981).- Principles of construction of coral system.- Acta Palaeontologica Polonica 25, 3-4: 381-383.- FC&P 10-1, p. 45, ID=5969^Topic(s): taxonomy; Anthozoa; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[a brief discussion of the methodology of coral systematics]^1";
- 5840 s[5837] = "SCHUHMACHER H. (1978).- Korallen - Aufbau, Biologie, Systematik.- Lichtbildreihe D 22154, 16 diapositives, explanation booklet of 16 pp; V-Dia-Verlag, Heidelberg.- FC&P 10-2, p. 4, ID=6040^Topic(s): biology; corals biology; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[diapositives]^1";
- 5841 s[5838] = "SCHUHMACHER H. (1976).- Korallenriffe - Ihre Verbreitung, Tierwelt und Oekologie.- BLV-Verlag Muenchen, Bern, Wien; 275 pp.- FC&P 10-2, p. 13, ID=6063^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[book reviewed by J. Geister (in 1977 in FC&P 6, 2: 31-32); * French edition of 1977: L'univers inconnu des coraux; by Elsevier, Paris, Brussels; 253 pp; * Spanish edition of 1977: Arrecifes coralinos; by Omega, Barcelona; 288 pp]^1";
- 5842 s[5839] = "SCHUHMACHER H. (1976).- Korallenriffe durch Recycling.- Umschau in Wissenschaft und Technik 76: 491-493.- FC&P 10-2, p. 13, ID=6064^Topic(s): coral reefs; coral reefs; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5843 s[5840] = "NUDDS J.R. (1982).- Catalogue of type and figured corals from the Geological Museum, Trinity College, Dublin.- FC&P 11, 1: 19-26.- FC&P 11-1, p. 19, ID=6115^Topic(s): collections of fossils; corals collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[catalogue of type and figured corals from the Geological Museum, Trinity College, Dublin, Ireland]^1";
- 5844 s[5841] = "LELESHUS V.L., PERMYAKOV V.V. (1981).- Ob odnoy zakonomernosti evolyucii korallov. [on a rule in evolution of corals; in Russian].- Paleontologicheskiiy Zhurnal 1981, 3: 3-14.- FC&P 11-1, p. 59, ID=6135^Topic(s): phylogeny; corals phylogeny; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5845 s[5842] = "PREOBRAZHENSKIY B.V. (1982).- Morfologiya i paleoekologiya tabulatormorfnykh korallov. [morphology and paleoecology of tabulatormorphous corals; in Russian].- Nauka, Moskva; 157 pp., 35 figs, 6 tabs.- FC&P 11-2, p. 33, ID=6168^Topic(s): tabulatomorpha; corals tabulatomorpha; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^A systematic structural analysis of the morphology in tabulatormorphous corals is presented. Main topics are: the classification of morphological characteristics, their correlated relationship, the correlation between tabulatormorphous coral features, homeomorphic lines in the tabulatormorphous coral system, coral morphology and its relation to reef facies, e.g. problems in the study of the reef's ecosystem, life-forms in corals, the system and the terminology of the life-forms, the contemporary reefs and their paleogeography, morphology and facies, the notion "reef"; and the Paleozoic coral life-forms of Eastern Asia.^1";
- 5846 s[5843] = "PICKETT J.W. et al. (1972).- Notes on paleontological collections from Australia, Bulgaria, Denmark, France, FR Germany, Great Britain, Poland, USA.- FC&P 1, 2: 26-36.- FC&P 1-2, p. 26, ID=6264^Topic(s): collections of fossils; paleontological collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[contains data from Australia (by J. Pickett),

- Bulgaria, Denmark (by S. Floris), France (by D. Brice), Federal Republic of Germany (by A. von Schouppe), Great Britain (by C.T. Scrutton and D.E. White), Poland (by Rozkowska & Fedorowski and by E. Roniewicz), USA (Alaska by C.L. Rowett; Ordovician to Devonian by W.A. Oliver jr and Carboniferous-Permian by W.J. Sando)]^1";
- 5847 s[5844] = "JELL J.S. et al. (1973).- Notes on paleontological collections from Australia, Belgium, Czechoslovakia, FR Germany, Great Britain, USSR.- FC&P 2, 1: 24-40.- FC&P 2-1, p. 24, ID=6271^Topic(s): collections of fossils; paleontological collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[continuation of compilations as presented by Pickett et al. (1972); contains data from Australia (by J.S. Jell and M. Wade), Belgium (by J. Foidart), Czechoslovakia (by F. Prantl), Federal Republic of Germany (by R. Birenheide), Great Britain (by I.F. Sime? and by D.E. White), USSR (anonymous)]^1";
- 5848 s[5845] = "anonymous (1973).- Notes on collections of fossil corals in Czechoslovakia.- FC&P 2, 2: 30.- FC&P 2-2, p. 30, ID=6274^Topic(s): collections of fossils; paleontological collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[new data and addenda to data (Pickett et al. 1972, Jell et al. 1973) on collections of fossil corals in Czechoslovakia]^1";
- 5849 s[5846] = "POTY E. (2010).- Morphological limits to diversification of the rugose and tabulate corals.- Palaeoworld 19, 3-4: 389-400.- FC&P 36, p. 63, ID=6455^Topic(s): morphology, phylogeny; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^At the family level, the evolution in the compound rugose corals is usually characterized by the progressive integration of corallites. This type of evolution corresponds to paedomorphic processes in the astogeny of colonies: the separation of the daughter polyp from the parent being progressively delayed as compared to the development of the other characters. At the end of the lineage, relations between mature polyps are similar to those existing in the first stages of the increase in the ancestor. * Tabulate corals are strictly colonial and usually have connections between polyp cavities. They can develop colonies similar to those known in the compound rugose corals (fasciculate or massive), but also other forms (such as cateniform, ramose and coenenchymal). However, a relative separation of growth habit exists between rugose and tabulate corals from their radiation during the Ordovician. Besides the differences in colony shapes, corallite diameters are generally larger in the Rugosa than in Tabulata. * Several crises affected Palaeozoic corals, and some of them caused the disappearance of major morphotypes. After these crises, neither the surviving tabulate nor the rugose corals gave rise to new taxa with these forms. The evolutionary processes in post-crisis coral recovery correspond mainly to heterochronic processes. These proceed within the limits of ontogenetic (or astogenetic) variability and do not allow innovations such as a type of colonial development that is not a usual type of increase within a taxon. Therefore, the replacement of extinct habits by an evolutionary convergence of taxa with other major habits does not occur in Palaeozoic corals. These evolutionary processes probably differ from those acting during an original evolutionary radiation. [original abstract]^1";
- 5850 s[5847] = "PROZ P.-A. (2002).- Les collections du d partement de g ologie et de pal ontologie du Mus um d'histoire naturelle de Geneve. 77. La collection g n rale (Coelenterata).- Revue de Pal obiologie 21, 2: 881-897. www.ville-ge.ch/mhng/paleo/index_auteur/palsom02.htm.- FC&P 36, p. 101, ID=6529^Topic(s): collections of fossils; corals, collections; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5851 s[5848] = "STANLEY G.D.jr, van de SCHOOTBRUGGE B. (2009).- The

- evolution of the coral-algal symbiosis.- Ecological Studies Series 205 [Coral Bleaching: Patterns, Processes, Causes and Consequences; M.J.H. van Oppen & J.M. Lough (eds)]: 7-19 [chapter 2].- FC&P 36, p. 133, ID=6595Topic(s): photosymbiosis; corals, photosymbiosis; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^1";
- 5852 s[5849] = "KLEEMANN K. (1983).- Othmar Kühn's fossile Steinkorallen (Madreporaria, Anthozoa).- Österreichische Akademie der Wissenschaften, mathematisch-naturwissenschaftliche Klasse, Anz. ---, 4: 35-43.- FC&P 15-2, p. 48, ID=6748Topic(s): new taxa; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^[list of Kühn's new taxa of fossil corals: complete original quotations of 91 names, including localities, geological formations and type material]^1";
- 5853 s[5850] = "DELESALLE B., GABRIE C., GALZIN R., HARMELIN-VIVIEN M., TOFFART J.-L., SALVAT B. (eds) (1985).- Proceedings of the Fifth International Coral Reef Congress, Tahiti, French Polynesia, 27th May - 1st June 1985.- Antenne du Museum National d'Histoire Naturelle et de l'Ecole des Hautes Etudes en Polynesie francaise; 6 volumes, 3486 pp.- FC&P 15-2, p. 52, ID=6750Topic(s): coral reefs; coral reefs symposium; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The Fifth International Coral Reef Congress held by the Antenne MUSEUM-EPHE in French Polynesia under the auspices of the Coral Reef Committee of the International Association for Biological Oceanography (IABO) was the largest of all the Coral Reef Symposia held every four years since 1971. The Tahiti Congress was attended by more than 600 scientists from 44 countries. [initial fragment of a note on Congress Proceedings; attached is a brief description of contents of six volumes]^1";
- 5854 s[5851] = "BIRENHEIDE R. (1994).- Historischer Werdegang der Nesseltier-Paläozoologie-Forschung (Paläozoologie I) im &Senckenberg&; von 1860 bis 1993. FC&P 23, 2.2: 3-27, 13 pls.- FC&P 23, 2.2: 3-27, 13 pls.- FC&P 23-2.2, p. 3, ID=6857Topic(s): research history; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Der Sektionsname &Paläozoologie I&; mit dem Forschungsschwerpunkt &Fossile Nesseltiere&; innerhalb der Geologischen Abteilung des Senckenberg-Instituts geht auf die in den späten sechziger Jahren dieses [XX] Jahrhunderts durchgeführte Neuabgrenzung der Kompetenzen für die verschiedenen Forschungssammlungen zurück; praktisch existiert sie seit dem Arbeitsbeginn des Autors als DFG-Assistent in der Geologischen Abteilung im August 1959 bei Dr. Wolfgang Struve, der als Projektleiter verantwortlich zeichnete. Der &Setzling&; zu dieser Forschungsrichtung geht aber auf Rudolf Richter zurück: Durch den Erwerb der Sammlung Wedekind im Jahre 1953, durch die Ausbeute der Eifeler Richtschnitte und die von seinen Schülern durchgeführten Neukartierungen der Eifeler Kalkmulden bereitete Rudolf Richter den Boden für das Wachstum dieser damals neuen senckenbergischen Pflanze vor. Nach nur vierzigjährigem Gedeihen ist ihr weiteres Schicksal ungewiß;, denn im Frühjahr 1994 nahm der Verfasser seinen Abschied, und es wird keinen Korallenspezialisten mehr in der Sektion geben. [introduction]^1";
- 5855 s[5852] = "VASCONCELLOS A.C.de (1995).- Geometric morphometry and fossil corals.- FC&P 24, 1: 50-53. [short note] - FC&P 24-1, p. 50, ID=6861Topic(s): morphometry; corals, morphometry; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Recently, two new approaches are being considered by morphometricians concerning the investigation of problems of form (Reyment 1991). They are Procrustes and Thin-Plate Spline analyses. Both are the chief procedures of the geometric morphometry or the &new morphometrics&; (Rohlf & Marcus 1993). Both procedures are particularly interested in analyse the displacement of specific points, namely landmarks, when comparing forms. Landmarks can

be summarized as specific points chosen for a group of organisms that will be compared from specimen to specimen. The displacement of homologous landmarks (not in an evolutionary sense) will be analysed and computed in an attempt to quantify transformations in form. [excerpt from a short note, introducing morphometric methods for corals]^1";

5856 s[5853] = "VASCONCELLOS A.C.de (1998).- Geometric morphometry: an example using *Lophophyllidium proliferum*.- FC&P 27, 1: 33-41.- FC&P 27-1, p. 33, ID=6915Topic(s): morphometry; corals; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^The results presented by the analysis of the thin-plate splines has suggested that *L. proliferum* appears to have had a development centered mainly in two areas, (1) the counter quadrants and (2) its columella. After an initial moment, with enlargement of the corallite following symmetrical growth rates (as suggested by w4 during early juvenile phase), subsequent stages contributed little energy to the development of the remaining regions of the corallite as a whole. That pattern explains clearly the bilateral symmetry of this specimen and when it was acquired. * Since most of the corals of *L. proliferum* type present a very similar pattern, the model of growth suggested here brings attention to two points, (1) the columella in lophophyllid corals seems to be a character of taxonomic value and worth further study, and (2) the counter acceleration, very often cited for these corals, seems to be closely related to the form of the columella. A survey of that acceleration among lophophyllids, in time and space, could possibly bring some new data to explain the great variability of the columellar structure in this lineage of simple solitary rugose corals. [conclusions of the paper]^1";

5857 s[5854] = "anonymous (2000).- History of the International Association for the Study of Fossil Cnidaria and Porifera.- FC&P 29, 1: 15. [short note] - FC&P 29-1, p. 15, ID=7011Topic(s): IASFCP history; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^Corals and sponges belong to the most important group of fossils - and of living animals as well - giving essential answers to lots of questions in paleontology, and especially geology, for example sedimentology. Constructing reefs - megalopoli of species - coral research played an important role in expanded geological mapping and exploration programs within the last fifty years. Especially in the former Soviet Union and in the USA fossil coral specialists became numerous enough to warrant formal and informal meetings for communication of current research. In the USSR, formal All-Union Symposia On Fossil Corals were organized on a four-year basis by Academician Boris S. Sokolov beginning in 1963 at Novosibirsk. In the USA, William A. Oliver Jr., organized topical sessions on corals for the Paleontological Society in 1965, leading to annual and other meetings of the Friends of the Corals, an informal group of North American specialists; (Sando 1997). * To promote the transparency of coral research and its scientific results as well as to open the possibility for an international exchange of ideas and reprints first steps have been done to establish an International Association for the Study of Fossil Cnidaria. At that time the Eastern colleagues were under severe restrictions on travel outside the USSR and the Eastern-block. Therefore, and as proposed at the Second All-Union Symposium at Tallin in 1967, Sokolov started the organization of an International Symposium to include specialists from outside the Eastern-block; e.g. the communist sphere. Then, the Third All-Union Symposium in 1971 in Novosibirsk became at the same time the First International Symposium on Fossil Corals (And Some Other Coelenterata). * Until 1999 seven symposia have been held.^1";

5858 s[5855] = "HLADIL J. (2001).- Changes of carbonate coral skeletons in deep burial and slight metamorphic conditions: eastern part of the Variscan Orogen in Europe.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and

Porifera]: 173-186.- FC&P 30-1, p. 20, ID=7069^Topic(s):diagenesis, metamorphism; corals; Systematics:Cnidaria; Anthozoa; Stratigraphy:; Geography:^Disconnected Devonian carbonate formations border many nappe and wedge units on the exterior of the Late Carboniferous Variscan Orogen of central Europe. Metamorphic gradient decreases sharply outwards, with disruptions by some nappes. Alterations of the Devonian carbonates range from amphibolite green schist facies to slight burial diagenesis, from inner to outer belts of nappes, respectively. The evolution of carbonate crystal fabrics (including ghosts and relic structures) correlates with thermal alteration of organic matter, illite crystallinity, the conodont alteration index and a leveling off of stable isotope amounts. Bioclasts, mainly the fragments of walls of tabulate corals (genera *Thamnopora*, *Remesia*, *Alveolites*, *Scoliopora* and *Favosites*), were studied to determine their response to the maximum paleotemperature, lithostatic pressure and oriented strain forming the host rocks. Resistance of these fragments to alteration is almost as high as that of low Mg calcite brachiopods or crinoid ossicles that have been rapidly depleted in magnesium. Specific conditions, such as the composition of sediment or early diagenesis of corals produce largely interwoven paths of alteration, but regular changes can be understood through analysis of large quantities of material. Eight typical crystal fabric patterns, here introduced, provide standardized indicators of differing maximum burial conditions. [original abstract]^1";

5859 s[5856] = "KRASNOV Ye.V., KOSTINA Ye.Ye. (2000).- Corals and reefs in ocean history. [in Russian, with English abstract].- Bulletin of the Far Eastern Branch, Russian Academy of Sciences 1: 89-104; Vladivostok.- FC&P 32-1, p. 18, ID=7140^Topic(s):reefs; corals, reefs; Systematics:Cnidaria; Anthozoa; Stratigraphy:; Geography:^A review of experimental and literature data is devoted to coral evolution and ecology. Anthozoa are known from Vendian deposits (up to 700 million years ago) to recent time. They adapted to depths from intertidal zone to abyssal area and populated regions from tropical to polar zones. Coral fauna and flora form different types of biorelief: bioherms, biostromes, reef massives. Their metabolites are drawn into natural biogeochemical processes. It is shown that solitary and colonial polyps have parallel evolution and their geological history is subdivided into several important stages fixed by the paleontological chronicle. [original abstract]^1";

5860 s[5857] = "VASCONCELLOS A.C.de (2003).- Anthozoa.- FC&P 32, 2: 77-78.- FC&P 32-2, p. 77, ID=7163^Topic(s):taxonomy, cladistic; Anthozoa; Systematics:Cnidaria; Anthozoa; Stratigraphy:; Geography:^This study attempts a revision of the Rugosa at ordinal level using phylogenetic systematics. Three major aims were (1) to test their monophyletic nature, (2) to define at which hierarchical taxonomic level the characters commonly used in rugose systematics were informative and (3) to formulate a hypothesis to demonstrate the position of the Rugosa in the tree of life. * To accomplish these goals a revision of the Orders Cystiphyllida and Stauriida sensu Hill (1981) was performed. The phylogenetic analysis was undertaken using the two orders of the Rugosa as ingroup, and a combination of fossil corals and extant Anthozoa as outgroup. A total of 126 characters were compiled of which 90 related to biomineralised features and 36 related to "soft tissues". Two phylogenetic analyses were performed. The first analysis used Alcyonaria as the prime outgroup yielding 6 trees that were merged into a single tree after optimisation. The second analysis used *Tabulaconus*, a Cambrian fossil coral, and yielded six trees. These trees were combined into a single tree after optimisation being that tree accepted as the most informative for the problem at hand. The Rugosa appeared as a monophyletic group but eight of the sixteen sub-orders of the Stauriida were dismissed. The Rugosa is the adelphotaxon of a group formed by fossil corals and the Scleractinia with cyclic septal

insertion. The major implications for the Anthozoa were (1) the subclass Zoantharia was dismissed and replaced by the subclass Hexacorallia, (2) the subclass Alcyonaria was dismissed and has now the status of a family within the Hexacorallia and (3) the time of origin of the Anthozoa is accepted as Early Cambrian. A new classification for the Anthozoa is provided. [full text of a short paleontological note; possibly description of a finished research project, concerning systematics of the Anthozoa]^1";

- 5861 s[5858] = "KULLMANN J., LOSER H. (1993).- Die Datenbanken PaleoTax und GoniAt - Vorstufen eines palaeontologischen Informationssystems.- Paläontologische Zeitschrift 67, 3-4: 397-405.- FC&P 23-1.1, p. 93, ID=4214^Topic(s): databases of fossils; fossils database systems; Systematics: Cnidaria Mollusca; Anthozoa Cephalopoda; Stratigraphy: ; Geography: ^The database systems PaleoTax and GoniAt provide detailed information on literature, taxonomy, morphology and occurrence of fossil invertebrate groups. PaleoTax is designed for Mesozoic corals, GoniAt for Paleozoic ammonoids, but both can be modified to cover other fossil groups. Both systems use dBASE format, but with different database structures. PaleoTax aims at the complete storage of all available objective data, GoniAt provides determinations based upon morphologic criteria, and includes information on geographic distribution and stratigraphic range of every taxon. A combination of both systems could lead to the establishment of a comprehensive paleontological information system useful for research and practical stratigraphic applications.^1";
- 5862 s[5859] = "WENDT J. (1990).- Corals and coralline sponges.- Skeletal biomineralization: patterns, processes, and evolutionary trends, v. 1 [J.G. Carter (ed.)]: 45-65; Van Nostrand Reinhold, New York.- FC&P 23-2.1, p. 47, ID=4378^Topic(s): ; corals, Porifera corallina; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5863 s[5860] = "GAUTRET P. (2001).- Biochemical features of intraskeletal organic matrices within sponge and coral aragonite: implications for diagenetic pathways.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 164-172.- FC&P 30-1, p. 20, ID=7068^Topic(s): organic matrices; corals, sponges; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: ; Geography: ^Amino acid compositions of organic matrices associated with modern demosponge (Astrosclera and Ceratoporella) and coral (Solenastrea and Porites) skeletons have been studied in different growth zones. Zones investigated in extant coralla range in age from newly mineralized areas in the uppermost parts to 3 or 4 hundred year old areas in their deeper parts. Starting from distinct primary amino acid compositions in living parts of sponge and coral skeletons, biochemical transformations visibly affect organic matrices, especially with regard to variation in aspartic acid concentrations. The influence of extracted organic matrices on in vitro rates of CaCO3 precipitation was tested experimentally. Both sponge and coral matrices proved to inhibit mineral formation, with a strength that is closely correlated with their amino acid compositions. During diagenesis there is first an increase in aspartic acid concentration, correlated with a marked efficiency of matrix to inhibit CaCO3 precipitation over 100 years at the most, and second, a reverse tendency, leading to progressive loss of both acidic amino acids and inhibitory strength. Timing of this double stepped diagenetic pattern differs between sponges and corals, and also varies among different species within each group according to their initial biochemical features. [original abstract]^1";
- 5864 s[5861] = "MELNIKOVA G.K. (1992).- Ranges of intraspecific variability in corals and spongiomorphids.- Nauka, Moskva; pp. 76-86.- FC&P 23-1.1, p. 41, ID=4117^Topic(s): variability intraspecific; corals spongiomorphids; Systematics: Cnidaria Porifera; Anthozoa; Stratigraphy: ; Geography: ^^1";

- 5865 s[5862] = "SCHULTZE L. (1896).- Beitrag zur Systematik der Antipatharia.- Abhandlungen der Senckenberg. natur-forsch. Gesellschaft [vol?]: 1-39. [Diss. Univ. Jena].- FC&P 24-2, p. 91, ID=4594^Topic(s): systematics; Anthozoa Antipatharia; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5866 s[5863] = "APPUKUTTAN K.K. (1972).- Coral boring bivalves of Gulf of Mannar and Palk Bay.- In C. Mukundan and C.S.G. Pillai (eds): Proceedings of the [first International] Symposium on Corals and Coral Reefs [Mandapam Camp, India, 12-16 January 1969]; published by The Marine Biological Association of India, Cochin, . December, 1972; pp 379-398.- FC&P 2-2, p. 13, ID=4778^Topic(s): coral boring bivalves; Bivalvia; Systematics: Mollusca Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5867 s[5864] = "ELIASOVA H. (1978).- Redefinition of the order Hexanthiniaria Montanaro-Gallitelli 1975 (Zoantharia).- Vestnik Ustredniho ustavu geologickeho 53: 89-101.- FC&P 10-1, p. 57, ID=6002^Topic(s): redefinition; Hexanthiniaria; Systematics: Cnidaria; Anthozoa; Stratigraphy: ; Geography: ^^1";
- 5868 s[5865] = "CAIRNS S.D. (1991).- Catalog of the Type Specimens of Stony Corals (Milleporidae, Stylasteridae, Scleractinia) in the National Museum of Natural History, Smithsonian Institution.- Smithsonian Contributions to Zoology 514: 59 pp.- FC&P 26-1, p. 68, ID=3638^Topic(s): collections of fossils; stony corals; Systematics: Cnidaria; Anthozoa Hydrozoa; Stratigraphy: ; Geography: ^The catalog gives a systematic account on all types and figured coral specimens in the collection of the United States National Museum (USNM).^1";
- 5869 s[5866] = "SCHUHMACHER H. (1973).- Steinkorallen - lebende Geologie.- Bild der Wissenschaft 1973: 1442-1449.- FC&P 10-2, p. 13, ID=6306^Topic(s): ; stony corals; Systematics: Cnidaria; Anthozoa Hydrozoa; Stratigraphy: ; Geography: ^^1";
- 5870 s[5867] = "SOKOLOV B.S., IVANOVSKIY A.B. (eds) (1992).- Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatoporoids].- Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 29, ID=3369^Topic(s): variability; corals stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 5871 s[5868] = "SCRUTTON C.T. (1994).- A ternary plotting routine for the representation of growth-form in corals and stromatoporoids.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 429-430.- FC&P 23-1.1, p. 27, ID=4099^Topic(s): growth forms, ternary diagrams; corals, stroms; Systematics: Cnidaria Porifera; Anthozoa Stromatoporoidea; Stratigraphy: ; Geography: ^A computer program for plotting ternary diagrams is described. The routine was designed for the visual representation of growth-form in heliolitid corals but can be adapted for corals in general and some other groups such as stromatoporoids. Provision is made for the input of data files, their management, listing and editing, ternary diagram configuration, plotting, overplotting, and printing the results. The program is available for IBM and compatible microcomputers.^1";
- 5872 s[5869] = "DEBRENNE F., VACELET J. (1983).- Archeocyatha: is the Sponge Model Consistent with their Structural Organization.- Palaeontographica Americana- FC&P 13-1, p. 47, ID=0508^Topic(s): sponge model; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5873 s[5870] = "ZHURAVLEVA I.T., SAYUTINA T.A. (1984).- Simbioz arkheotsiat i khasaktii [symbiosis of archaeocyathids and khasaktiids].- Problematiki Paleozoya i Mesozoya, Akad. Nauk SSSR, Sibirskoe Otd.

Inst. Geol. Geofiz., 597;33-38.- FC&P 15-1.2, p. 46, ID=0792^Topic(s): symbiosis with Khasaktiida; Archaeocyatha symbiosis; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";

5874 s[5871] = "DEBRENNE F., VACELET J. (1986).- Are Archaeocyatha Sponges?.- 82nd Annual Meeting, Cordilleran Section, G.S.A.; Abstracts with Programs 1986. [abstract] - FC&P 15-1.2, p. 47, ID=0801^Topic(s): sponge model; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^The arguments advanced previously to include the Archaeocyatha within the Phylum Porifera employed superficial morphological similarities which do not correspond to the present state of knowledge. Two major errors are frequently found in previous studies : 1) the emphasis on the presence or absence of spicules as a definitive argument, and 2) the direct comparison of fossilized skeletal structures with living, soft tissue. Although the skeletal microstructure of the Archaeocyatha is constant and does not correspond to any known type of microstructure in calcified sponges, there is such a great variety of microstructural types within calcified sponges that it is conceivable to consider archaeocyathan microstructure as one of their primitive forms. Recently some microgranules were discovered in one species of Verticillites. Direct comparison between Verticillites convexus (Sponge) and Korovinella sajanica (Archaeocyatha) attests a great similarity of skeletal morphology, microstructure, and morphogenesis.^1";

5875 s[5872] = "KRUSE P.D., DEBRENNE F. (1990).- Review of archaeocyath microstructure.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 133-141.- FC&P 19-1.1, p. 13, ID=2531^Topic(s): microstructures; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Archaeocyathan microstructure is uniformly microgranular, granules comprising the primary skeleton being typically larger (4-8µm) than those within the inverting laminated secondary skeleton (0.5-4 µm). Original calcite mineralogy is presumed. Microstructural examination of potentially allied group supports the categorizations deduced on the basis of gross morphology: archaeocyaths and cribricyaths with a well preserved microgranular fabric of original calcitic mineralogy; radiocyaths, receptaculitaceans and cyclocriniteans with a preserved fabric of coarser calcite spar after original aragonite.^1";

5876 s[5873] = "ZHURAVLEV A.Yu. (1989).- Poriferan aspects of archaeocyathan skeletal.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 387-399.- FC&P 19-1.1, p. 14, ID=2557^Topic(s): poriferan skeletons; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";

5877 s[5874] = "KRUSE P.D. (1989).- Are archaeocyaths sponges, or are sponges archaeocyaths? .- Geological Society of Australia Special Publication 16: 310-323.- FC&P 19-1.1, p. 18, ID=2564^Topic(s): poriferan affinities; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Discoveries of living sponges with a calcareous skeleton have led to reevaluation of the affinities of many fossil groups. Archaeocyatha have close similarities with sphinctozoan sponges. Exopore modifications of some sphinctozoans have analogues in the wall pores of certain Archaeocyatha. Some gross morphological comparisons between selected taxa of sphinctozoans and archaeocyaths show striking similarities. Recent discoveries in the Cambrian of Australia suggest a possible pathway for the derivation of

- sphinctozoans from monocyathine archaeocyaths via modification of pelta and skeletal microstructure.¹¹";
- 5878 s[5875] = "DEBRENNE F., ZHURAVLEV A.Yu. (1990).- New Irregular Archaeocyath taxa.- Geobios 23, 3: 299-305 [note breve].- FC&P 20-1.1, p. 81, ID=2883Topic(s): Archaeocyatha irregulares; Systematics: Porifera; Archaeocyatha; Stratigraphy: Geography: ^^1";
- 5879 s[5876] = "YAROSHEVITCH V.M. (1990).- Living tissue in Archaeocyaths.- Trudy Akademii Nauk SSSR, Sibirskoe Otdelenie, Institut Geologii i Geofiziki 783 [Sokolov B.S. & Zhuravleva I.T. (eds): Iskopaemye Problematiki SSSR]: 18-28.- FC&P 21-1.1, p. 62, ID=3282Topic(s): soft tissues; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Geography: ^^1";
- 5880 s[5877] = "BELAEVA G.V., ZHURAVLEVA I.T. (1990).- Cribricyaths and Archaeocyaths development stages.- Trudy Akademii Nauk SSSR, Sibirskoe Otdelenie, Institut Geologii i Geofiziki 783 [Sokolov B.S. & Zhuravleva I.T. (eds): Iskopaemye Problematiki SSSR]: 13-18.- FC&P 21-1.1, p. 62, ID=3283Topic(s): ontogeny; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Geography: ^^1";
- 5881 s[5878] = "DEBRENNE F. (1991).- Extinction of Archaeocyatha.- Historical Biology 1991, 5: 95-106 .- FC&P 21-1.1, p. 62, ID=3286Topic(s): extinctions; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Geography: ^^1";
- 5882 s[5879] = "WOOD R.A., ZHURAVLEV A.Yu., DEBRENNE F. (1992).- Functional biology and ecology of Archaeocyatha.- Palaios 7: 131-156.- FC&P 23-2.1, p. 63, ID=3297Topic(s): biomechanics; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: Geography: ^^A modular organization confers many ecological advantages in reef-building settings, such as indeterminate growth leading to larger size, greater powers of regeneration, and an ability to encrust and gain secure attachment to substrates. The Archaeocyatha, an early Cambrian group of calcified sponges, were the first skeletal metazoans to develop a modular habit and to be associated with reefs. Archaeocyaths show the predicted ecological changes with the appearance of modularity. Supposed species may be facultatively modular, with modular ecophenotypes always dominating biohermal settings. However, only genera possessing porous septa show any development of modularity, suggesting that an initially well-integrated soft-tissue is a prerequisite for acquisition of the habit. Increasing integration and simplification of the skeleton can be correlated with an increase in soft-tissue flexibility. Even though high integration, skeletally simple stromatoporoid-like forms developed in irregulars, low integration, branching morphologies were by far the most successful. Irregulars show a strongly progressive trend of increasing modularity right up to the final extinction of the group. This confirms the widespread adaptive significance of integration in clonal organisms. Modular archaeocyaths survived beyond the extinction of most solitary forms, suggesting a relative immunity to extinction presumably on account of ecological response. The solitary nature of many archaeocyaths explains many of their previously supposed apomorphies. Modularity is an advanced condition in sponges and we suggest that paedomorphosis facilitates its acquisition in archaeocyaths. The widespread appearance of low integration modularity in different lineages of archaeocyaths is suggested to represent adaptation to reef-building settings in areas of relatively high turbulence, sedimentation rate and nutrient levels which may have predominated in the early Cambrian.¹¹";
- 5883 s[5880] = "DEBRENNE F. (1992).- Diversification of Archaeocyatha.- In Lipps J.H. & Signor P.W. (eds): Origin and Early Evolution of the Metazoa; Plenum Press: 425-443.- FC&P 21-2, p. 10,

- ID=3298^Topic(s): diversification; Archaeocyatha;
Systematics: Porifera; Archaeocyatha; Stratigraphy: ;
Geography: ^^1";
- 5884 s[5881] = "STRUSZ D.L. (1992).- Catalogue of Type Figured and Cited specimens in the Commonwealth Palaeontological Collection - Archaeocyatha, Porifera, Colenterata.- Australian Geological Survey Organisation Report 307: iii + 1-72.- FC&P 21-2, p. 61, ID=3364^Topic(s): collections of fossils; Archaeocyatha, Porifera, Cnidaria; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^This catalogue, the third of a series, lists taxonomic, bibliographic, locality, horizon and age information for the published specimens of fossil archaeocyaths, sponges (which now include stromatoporoids and many include the archaeocyaths) and corals held in the Commonwealth Palaeontological Collection, which is administrated by the Bureau of Mineral Resources. This catalogue series will meet the international responsibilities of the Bureau of Mineral Resources under the Article 72, Recommendation 72G, of the International Code of Zoological Nomenclature, and similar requirements of the International Code of Botanical Nomenclature.^1";
- 5885 s[5882] = "SAVARESE M. (1992).- Functional analysis of archaeocyathan skeletal morphology and its paleobiological implications.- Paleobiology 18, 4: 464-480.- FC&P 22-1, p. 50, ID=3421^Topic(s): biomechanics; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^A biomechanical study of archaeocyathan (phylum Archaeocyatha) skeletal construction was undertaken in order to compare its function with that of poriferans. Flume experiments were conducted on three cylindrical, brass models of regular archaeocyathans. Two of these, the porous-septate and aporous-septate models (i.e., possessing septa either with or without pores), represent an ontogenetic series; regular archaeocyathans (phylum Regulares) typically exhibit a reduction in septal porosity as they grow and many have aporous septa as adults. The third model is aseptate and represents a morphology that is not found in fossil record. All models exhibit passive entrainment of flow during flume testing, a phenomenon on which modern sponges depend for suspension feeding. Flow direction through the models is consistent with predictions of the spongiomorph-affinity hypothesis. The three models behave quite differently, however. The aseptate model is least effective at passive entrainment. Although some fluid exits the top of the central cavity (or osculum), a great deal of fluid is entrained out the top of the intervallum and also leaks out the outer wall. Flow induction from the oscula of the septate models is augmented when compared to the aseptate model. The porous-septate model exhibits slight leakage from the outer wall, and a dye-rich plume exits the top of the intervallum. Alternatively, the aporous-septate model exhibits no outer-wall leakage and no entrainment from the intervallum. These differences in flow pattern between the porous- and aporous-septate models suggest a hitherto unknown function for septa. Imperforate septa prohibit the migration of fluid through the intervallum to the low-pressure, downstream side where leakage occurs. The ontogenetic shift in septal porosity, common to many archaeocyathan species, may be a mechanism by which outer-wall leakage is avoided later in life. Archaeocyathans would have encountered progressively higher ambient current velocities as their height increased through growth. Outer-wall leakage is not a problem at low velocities or small sizes, but leakage becomes serious at higher velocities when tall, adult morphologies are attained.^1";
- 5886 s[5883] = "DEBRENNE F., ZHURAVLEV A.Yu. (1992).- Irregular archaeocyaths. Morphology. Ontogeny. Systematics. Biostratigraphy. Palaeoecology.- Cahiers de paleontologie; 212 pp.- FC&P 22-2, p. 96, ID=3552^Topic(s): ; Archaeocyatha irregulares; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";

- 5887 s[5884] = "DEBRENNE F., ZHURAVLEV A.Yu. (1992).- Les calicules, structure intervallaire de type chaetetide chez les archeocyathes irreguliers.- Geobios 25, 5: 595-596.- FC&P 22-2, p. 96, ID=3554^Topic(s): structures, caliculae; Archaeocyatha irregulares; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5888 s[5885] = "ZHURAVLEV A.Yu. (1993).- A functional morphological approach to the biology of the Archaeocyatha.- N. Jb. Geol. Palaeont. Abh. 180, 2/3: 314-327.- FC&P 23-1.1, p. 84, ID=4195^Topic(s): biology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5889 s[5886] = "DEBRENNE F., ZHURAVLEV A.Yu. (1994).- Archaeocyathan affinities: How deep can we go into the systematic affiliation of an extinct group.- Sponges in Time and Space [R.W.M. van Soest, T.M.G. van Kempen, J.-C. Braekman (eds)]: 3-12; Balkema, Rotterdam.- FC&P 23-1.1, p. 84, ID=4196^Topic(s): affinities; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5890 s[5887] = "DEBRENNE F., LAFUSTE J.G. (1970).- Observation en lames ultra-minces de la microstructure d'Archéocyathes.- C. R. som. S. G. F. (1970): 224-225.- FC&P 1-2, p. 24, ID=4698^Topic(s): microstructures; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5891 s[5888] = "DEBRENNE F., ROZANOV A.Yu. (1972).- Murailles externes annulaires chez les Archéocyathes.- In Problèmes de biostratigraphie et paléontologie du Cambrien inférieur de Sibérie. Izdat. Nauka Moscou.- FC&P 1-2, p. 24, ID=4699^Topic(s): structures; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Structures rares, les véritables anneaux de la muraille externe existent cependant dans deux genres Sigmocyathus et Didymoteichus. Ces formations diffèrent des pseudo-anneaux de Stillicidocyathus qui ne sont que la jonction de bractées externes soudées. ^1";
- 5892 s[5889] = "BALSAM W.L., VOGEL S. (1973).- Water movement in Archaeocyathids: evidence and implications of passive flow in models.- Journal of Paleontology 47, 5: 979-984.- FC&P 2-2, p. 24, ID=4832^Topic(s): physiology; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Archaeocyathid models were tested in a flow tank and low speed wind tunnel to determine if their skeletal structure is adapted for passive flow; that is, flow induced by velocity differences. Fluid movement in these models always proceeded from the outer wall to the central cavity, exiting through the opening of the central cavity. The performance of our models suggests that passive flow may have been an important factor in the lives of archaeocyathids. Furthermore, the size distribution of archaeocyathid fossils is consistent with the size distribution predicted by the model system for passive flow; that is, their height is inversely proportional to current velocity. Unhindered fluid movement requires that the central cavity be free of living tissue and that the pores not be occluded by tissue. Thus the location of living tissue must have been in and around the intervallum. Their large excurrent opening suggests that archaeocyathids utilized predominantly passive flow; in contrast, animals with constricted ex-current openings, such as sponges, utilize predominantly active, pumped flow. However, this distinction is incomplete since many sponges have large excurrent openings while some archaeocyathids have constricted excurrent openings. Thus, no functional discontinuity exists between sponges and archaeocyathids.^1";
- 5893 s[5890] = "DEBRENNE F., ZHURAVLEVA I.T., ROZANOV A.Yu. (1973).- Planchers pectines chez les Archéocyathes et leur signification systématique.- In I.T. Zhuravleva (ed.): Problèmes de biostratigraphie et paléontologie du Cambrien inférieur de l'Extrême-Orient: pp

- 33-38. [en russe] Nauka, Novosibirsk.- FC&P 3-1, p. 34, ID=4910Topic(s): structures pectinate tabulae; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^1";
- 5894 s[5891] = "DEBRENNE F. (1974).- Report on A. Ju. Rozanov's book: Regularities in the morphological evolution of Regular Archaeocyatha and the problems of the Lower Cambrian stage division. (Trudy Geol. Inst. AN SSSR 241: 5-163, 24 pls, 142 figs).- FC&P 3, 2: 51-52.- FC&P 3-2, p. 51, ID=4989Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^In this book (the author's main thesis) Rozanov brings out the essential ideas he has previously expressed since 1962 concerning the evolution of the group, and the use of homological series at the level of the genus and their changes in time. [first part of an extensive review of a paper by A.Yu. Rozanov]^1";
- 5895 s[5892] = "HANDFIELD R.C., Mc KINNEY F.K. (1975).- Form and function in an atypical archaeocyathid.- Journal of Paleontology 49, 5: 799-807.- FC&P 4-2, p. 66, ID=5315Topic(s): feeding mechanisms; Archaeocyatha, Acanthopyrogus; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^The atypical archaeocyathid Acanthopyrgus may have gathered food particles by cilia tracts located on whorls of spines. Such an interpretation raises questions about the feeding mechanism of more typical archaeocyathids.^1";
- 5896 s[5893] = "DEBRENNE M., DEBRENNE F., ROZANOV A.Yu. (1976).- On the simultaneous presence of synapticalae and tabulae in regular archaeocyathids.- Geobios 9, 1: 101-105.- FC&P 5-2, p. 11, ID=5445Topic(s): structures synapticalae; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^L'association planchers-synapticales n'est pas commune chez les Archéocyathes Réguliers. La découverte récente de ce couple dans différentes familles permet d'envisager son utilisation dans la systématique au niveau du genre. Description des genres Axiculifungia Debrenne F. et M. et de Muchattocyathus Rozanov.^1";
- 5897 s[5894] = "DEBRENNE F., PRIEUR A. (1981).- Computerization of Regular Archaeocyathan files.- Proceedings Inter. Symp. Concept. Meth. Paleo. Barcelona: 313-317.- FC&P 11-1, p. 55, ID=6121Topic(s): databases, numerical research methods; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^1";
- 5898 s[5895] = "DEBRENNE F. (1984).- Archaeocyatha: biologie, systématique, distribution stratigraphique et géographique.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 25.1-25.26.- FC&P 13-1, p. 12, ID=6338Topic(s): biology, distribution; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Les Archéocyathes sont des organismes marins qui constituent un squelette minéralisé en utilisant le carbonate de calcium. On trouve leurs calices sur les plates-formes carbonatées et dans les environnements récifaux des mers du Cambrien inférieur. Quelques représentants de la famille Archaeocyathidae persistent au Cambrien moyen où quelques reliques sont signalées et s'éteignent au Cambrien supérieur (Debrenne, Rozanov & Webers, sous presse). * Les Archéocyathes sont parmi les premiers animaux à squelette connus. Leur utilisation pour la subdivision des couches du Cambrien inférieur, leur rôle dans l'édification des premiers récifs construits par les métazoaires sont d'une grande importance. [initial fragments of an introduction]^1";
- 5899 s[5896] = "BONDAREV V.I. (1982).- Archaeocyatha as environmental indicators in paleobasins. [in Russian].- Sreda i zhizn v geologicheskome proshlom, paleonlandshafty i biofatsyi [A.A. Betekhtina & I.T. Zhuravleva (eds)]; Nauka, Novosibirsk.- FC&P 13-1, p. 51, ID=6348Topic(s): ecology; Archaeocyatha;

- Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^[tests for hydrodynamism of discoid forms (Okulitchicyathus); the author considers the Archaeocyatha as algae and uses them as indicators of luminosity; there are no convincing arguments to prove this hypothesis]^1";
- 5900 s[5897] = "DEBRENNE F. (1983).- Archaeocyathids, morphology and affinities.- Sponges and Spongiomorphs [J.K. Rigby & C.W. Stearn (eds)]: 178-190; University of Tennessee.- FC&P 13-1, p. 51, ID=6349^Topic(s): morphology, affinities; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Notes prepared for a "short course" organised on behalf of the Paleontological Society of America. Restatement of the question in light of new results since the publication of the Treatise (Hill 1972).^1";
- 5901 s[5898] = "GRAVESTOCK D.I. (1983).- Structure and function of the exothecal tissue of Somphocyathus coralloides Taylor, and allied regular Archaeocyatha.- Mem. Ass. Australas. Palaeontol. 1, 1: 67-74.- FC&P 13-1, p. 51, ID=6351^Topic(s): structure & function; Archaeocyatha regulares; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^Exothecal tissue in the holotype of Somphocyathus coralloides Taylor forms concentric zones of non-porous outward radiating addition to each septal extremity, and each outer wall interpore lintel. These concentric zones form sheets or buttresses which extend down to the substrate, and are interpreted as having an anchoring function.^1";
- 5902 s[5899] = "BONDAREV V.I. (1984).- Problems in methods of study of Archaeocyathan microstructures.- Problematiki paleozoya i mezozoya; Nauka, Moskva, Trudy 597: 23-32.- FC&P 14-1, p. 59, ID=6621^Topic(s): ; Archaeocyatha, microstruc; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5903 s[5900] = "ZHURAVLEV A.Yu. (1985).- Recent Archaeocyaths?.- Problematiki pozdnego dokembriya i Paleozoya; Nauka, Moskva, Trudy 632: 24-32.- FC&P 14-1, p. 59, ID=6626^Topic(s): ; Archaeocyatha; Systematics: Porifera; Archaeocyatha; Stratigraphy: ; Geography: ^^1";
- 5904 s[5901] = "WENDT J. (1983).- Coenosteal and Spicular Mineralogy, Microstructure and Diagenesis of Non-spicular Calcareous Sponges.- Palaeontographica Americana- FC&P 13-1, p. 47, ID=0505^Topic(s): non-spicular mineralogy; sponges, non-spicular; Systematics: Porifera; Calcareae; Stratigraphy: ; Geography: ^^1";
- 5905 s[5902] = "GORBATCIK T.H., ALEKSANDROVA A.A. (2000).- Paleoeecology of Calcisponges (Inozoans, Thalamid Sponges, Sclerosponges).- Acta Palaeontologica Sinica 39, 4: 544-547.- FC&P 30-1, p. 37, ID=1549^Topic(s): ecology; Porifera, Calcispongiae; Systematics: Porifera; Calcareae; Stratigraphy: ; Geography: ^In Paleozoic calcisponge reefs calcisponges (inozoans, thalamids, sclerosponges) occurred not only at more than 10m but also at 0-10m water depth. In Permian and Middle and early Late Triassic (Carnian) calcisponge reefs, calcisponges were dominant reef-builders, being the most abundant at 0-10m deep part of the reefs. In post-Carnian reefs, the 0-10m deep parts were occupied by scleractinian corals, which won with calcisponges in the ecological competition; that may account for the extinction of the dominant reef-building calcisponges of Paleozoic and Middle - early Late Triassic reefs. A statistic study of mine shows that all calcisponge species of Permian and Middle - early Late Traissic reefs disappeared at end-Carnian and all calcisponges species in late Late triassic (Norian and Rhaetian) are new. The most striking evidences for the shallow water occurrence of calcisponges in Paleozoic and Middle - early Late Triassic reefs are (1) the association of calcareous algae such as Archaeolithoporella, which should live in the shallow photic

zone, (2) the occurrence of the cemented framestones which lack micritic matrix but have marine fibrous sparry cements, which indicates the occurrence of wave action. By comparison with the occurrence of scleractinian corals and calcisponges in modern reefs, I assume that calcisponge bioliestones (bioliestone = bio+lie+stone; composed overturned whole skeletons of main reef-building organisms) and biorudstones (composed of the skeleton fragments of main reef-building organisms) might have formed in a water depth 0-3m; cemented calcisponge framestones (i. e., the calcisponge framestones with sparry cements) formed in 3-10m; micritic calcisponge framestones formed in 10-20m; calcisponge bafflestone formed in 20-30m; calcisponge prebafflestone formed in 30- 40m.^1";

- 5906 s[5903] = "REITNER J. (1986).- Chaetetids, a problematic sponge group.- 4th North American Paleontological Convention.- FC&P 15-2, p. 45, ID=0751^Topic(s): polyphyly; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^All modern chaetetid-like sponges (Ceratoporella, Merlia, Acanthochaetetes) are demosponges. Fossil chaetetids are polyphyletic and the term should be used only to describe the calcareous skeleton.^1";
- 5907 s[5904] = "SOLOVYEVA V.V. (1980).- Proiskhozhdeniye psevdosept khetetid i puti razvitiya gruppy [origin of pseudosepta in the Chaetetida and the phylogeny of the group].- Paleontologicheskii Zhurnal 1980, 2: 44-51.- FC&P 9-2, p. 48, ID=1839^Topic(s): morphology, physiology; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^A thesis is put forward that the main function of the pseudosepta in chaetetids lies in the regulation of physiological interrelation between the soft part girth of the polyp and its active surface. This interrelation is reflected by the ratio of calyx diameter and the spatial extension. It is identical in related species and changes slightly in related genera. An evolutionary pattern is proposed based on the colonial architecture and the interrelation of the body volume against the reabsorbing surface.^1";
- 5908 s[5905] = "REITNER J., ENGESER T. (1983).- Contributions to the systematics and the paleoecology of the family Acanthochaetetidae Fischer, 1970 (Order Tabulospongida, class Sclerospongiae).- Geobios 16: 773-779.- FC&P 16-1, p. 12, ID=1920^Topic(s): systematics, ecology; Porifera, Acanthochaetetidae; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^^1";
- 5909 s[5906] = "FABRE C., LATHUILLIERE B. (2007).- Relationships between growth-bands and paleoenvironmental proxies Sr/Ca and Mg/Ca in hypercalcified sponge: A micro-laser induced breakdown spectroscopy approach.- Spectrochimica Acta Part B: Atomic Spectroscopy 62, 12: 1537-1545.- FC&P 35, p. 105, ID=2436^Topic(s): sclerochronology; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^Long classified as coral hydrozoans, Chaetetids are now considered as a group of very shallow marine hypercalcified sponges. As corals do, they grow by adding calcium carbonate under their pellicular living body in such a rhythmic and regular way that we suspect that sclerochronology is possible, based on the hypothetical annual growth bands of their skeleton. Regarding to its accurate lateral resolution of 5 µm by laser shot, micro-LIBS study was chosen to check its potential for such application. The LIBS apparatus is composed of a microscope coupled with a 266 nm Nd-YAG laser, delivering a 4 mJ-power per shot, and an ICCD camera. The acquisition of the spectra is made via the SE 200 spectrograph, on the large 190 nm to 1100 nm wavelength range. The entire longitudinal thin section of the specimen was analysed from the bottom to the top of the Ptychochaetetes section in a multi-elementary cartography for Ca-Mg-Sr elements. Sodium and Barium were also detected in trace amounts. The Mg/Ca concentrations are mainly between 400 and 600 mmol/mol considering an average value for each profile. This study shows that during the Ptychochaetetes growth, an obvious time-dependent

- heterogeneity in the chemical Mg/Ca and Sr/Ca composition can be observed. These variations demonstrate the possible use of this method for sclerochronological studies.¹¹";
- 5910 s[5907] = "KERSHAW S., WEST R.R. (1991).- Chaetetid growth form and its controlling factors.- Lethaia 24: 333-346.- FC&P 20-2, p. 74, ID=2980Topic(s): growth form, controlling factors; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^The skeleton begins as a laminar unit with many callicules starting at the same time. Several styles of early growth occur, but the profile remains simple. Similar morphologies develop to those of stromatoporoids, tabulates, colonial rugosans, etc. and are primarily influenced by sedimentation and turbulence. Columnar and branching chaetetids grew in quiet water; laminar and domical, in water of higher energies. Encrusting forms grew in a wide range of environments. No certain relationship can be demonstrated between taxonomy and growth form.¹¹";
- 5911 s[5908] = "WEST R.R. (1992).- Chaetetes (Demospongiae): its occurrence and biostratigraphic utility.- Oklahoma Geological Survey Circular 94: 163-169.- FC&P 21-2, p. 48, ID=3344Topic(s): distribution; Chaetetida Chaetetes; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^The stratigraphic distribution of the genus is described to clarify the widespread belief that it is an index fossil to early Pennsylvanian rocks. The genus ranges from Silurian into the early Mesozoic. The interval in which it is most abundant in North America includes Atokan and Desmoinesian stages.¹¹";
- 5912 s[5909] = "CUIF J.-P., GAUTRET P. (1993).- Microstructural features of fibrous tissues in the skeletons of some chaetetid sponges.- Courier Forschungsinstitut Senckenberg 164: 309-315. [P. Oekertorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 20, ID=3466Topic(s): microstructures; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^In the first part of this paper, a review of three classical terms ("water-jet", "penicillate", and "trabecular") used in microstructural analysis is presented. Examination of calcified fibrous tissues encountered in living sponges: the "water-jet" microstructure in a Merlia, and the "penicillate" microstructure in a Ceratoporella is compared with a "simple trabecular" structure (from a scleractinian coral) and leads us to propose criteria for separating these different organizations of skeletal tissues. Application of these criteria to different examples of chaetetid sponge skeletons ranging from Carboniferous to Recent, allows us to modify the usual pattern of their distribution through time. The synchronic changes observed in both mineralogic and microstructural characters are clearly consistent with previous data obtained by study of different "spherulitic" structures in sponges. These results indicate that oceanic conditions inhibit or promote the development of calcified nonspicular skeletons in sponges.¹¹";
- 5913 s[5910] = "STANTON R.J., LAMBERT L.L., WEBB G.E. (1997).- Positive geotropic growth in Chaetetes.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 197-207.- FC&P 26-2, p. 28, ID=3713Topic(s): geotropic growth; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^Specimens of Chaetetes (Porifera) in living position generally are oriented with growth directed upward and outward, away from the substrate. This is documented by convex upward growth surfaces denoted by tabulae and growth interruption surfaces, and by numerical increase in tubules from the initial growth nucleus towards the outer surface. Abundant Upper Carboniferous (Atokan) Chaetetes in the Hueco Mountains of West Texas, USA grew predominantly in this orientation, but many specimens grew downward, with the growth surface in contact

with the grainstone to packstone substrate. This growth habit is documented by two types of evidence - tubules of some large specimens in growth position grew only downward, or downward as well as upward and laterally, and small, subspherical nodular specimens display concentric growth without attachment surfaces, growth interruption scars and overlapping, cross-cutting growth layers indicative of sequential growth and rotation. Thus, that part of the Chaetetes in contact with the substrate was not killed nor was skeletal accretion interrupted. Growth to and against the substrate suggests either that Chaetetes was capable of efficient organism-wide transport of nutrients, oxygen, and metabolic waste, or that it possessed other novel means of acquiring nutrients, such as heterotrophic symbiosis or direct absorption of dissolved nutrients from substrate pore water.¹¹;

5914 s[5911] = "OSPANOVA N.K. (1996).- On the Chaetetida.- Izvestiya AN of Republic of Tajikistan, Otd. nauk o Zemle 2: 3-9. [imprint 1994].- FC&P 27-1, p. 28, ID=3796^Topic(s): tabulatan affinities; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^On the basis of numerous comparisons and reasonings a conclusion was made, that Chaetetida are the smallest forms of Tabulata and their pseudosepta are the real septa.¹¹;

5915 s[5912] = "WEST R.R. (1994).- Species in coralline demosponges: Chaetetida.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 399-409.- FC&P 23-1.1, p. 25, ID=4096^Topic(s): species concept; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^Skeletons of fossil coralline demosponges of the order Chaetetida exhibit little morphological variability. Differences in growth form are often obvious, but microscopic features are few in number, though highly variable. This skeletal conservatism is well illustrated by the, until now, number of phyla into which chaetetids have been placed. Studies of Carboniferous species, seven from North America and two from Europe, indicate that the two most commonly used variables, tubule (calicle) diameter and tubule (calicle) wall thickness, are not species specific. Additionally, the cross-sectional areas of the tubules (calicles), a more realistic parameter, also fails to discriminate between these currently recognized species. Intraspecific variability of these parameters is greater than interspecific variability. No doubt some of the observed variability is due to taphonomic (diagenetic) processes. Perhaps some of the variability is linked to the clonality of these simple invertebrates, a life style that has often been overlooked in taxonomic, and other, studies. Available data strongly suggests that perhaps a major amount of the variability noted is phenotypic plasticity (ecophenotypic), resulting from the association between Chaetetes and algal symbionts, and the resulting constrains of latitudinal position and water turbidity. The drastic decrease, possibly demise, of the genus Chaetetes at the end of the westphalian (Desmoinesian) may be related to the zooxanthellate association and climate warming in the Stephanian (Missourian).¹¹;

5916 s[5913] = "ERMAKOVA K.A., KACHANOV E.I. (1975).- Chaetetidae.- Trudy Vses. Neft. Nauchno-issled. Geologoraz. Inst. 383: 65-68.- FC&P 5-2, p. 10, ID=5441^Topic(s): taxonomy; Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^Describes and illustrates 11 species, 2 of them new.¹¹;

5917 s[5914] = "WEST R.R., KERSHAW S. (1991).- Chaetetid habitats.- Fossil and Recent Sponges [J. Reitner & H. Keupp (eds)]: 445-455; Springer-Verlag, Berlin.- FC&P 21-1.1, p. 60, ID=6819^Topic(s): ecology; Porifera, Chaetetida; Systematics: Porifera; Chaetetida; Stratigraphy: ; Geography: ^[a wide range of substrates and conditions were inhabited by chaetetids;

substrate geometry was an important control on growth form; tabular forms probably lived in shallow water and were capable of growing on muddy substrates; bioherms are dominated by these tabular forms but they may develop into high domical ones; the largest forms grew in light-free areas of little sedimentation]^1";

- 5918 s[5915] = "OEKENTORP K. (1985).- Book review: Chaetetida und Tabulate Korallen des Devon; by R. Birenheide (1985).- FC&P 14, 1: 71-72. [book review] - FC&P 14-1, p. 71, ID=6629^Topic(s): ; Chaetetida, Tabulata; Systematics: Porifera Cnidaria; Chaetetida Tabulata; Stratigraphy: ; Geography: ^[in his previous] book, "Devonian Rugosa";, R. Birenheide (1978) presented the first monographical description of Palaeozoic corals from the European Devonian, and [in] doing so, he closed a gap in the special literature (see review in FC&P 8, 1:). * His new work "Devonian Chaetetida and tabulate corals" appeared in [the] same shape and well-established principles as the "Devonian Rugosa";, as expected continuing the description of European corals. * [it is an] excellent piece of work. "Devonian Chaetetida and tabulate corals" is a modern standard work, not only for the European coral palaeontology. [excerpts from the review]^1";
- 5919 s[5916] = "VACELET J. (1985).- Coralline sponges and the evolution of Porifera.- Systematics Association Special Publication 28 [Conway Morris S. et al. (eds): The origins and relationships of lower invertebrates]: 1-13.- FC&P 15-2, p. 46, ID=0758^Topic(s): poriferan phylogeny; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: ; Geography: ^A continuous calcareous skeleton appeared in many types of sponges in the past. These should not be placed in a special class, the sclerosponges, but can be referred to informally as coralline sponges. Most of these sponges, including the stromatoporoids, can be referred to the families Astroscleridae and Calcifibrospongiidae of the Demospongiae.^1";
- 5920 s[5917] = "REITNER J. (1992).-'Coralline Spongien". Der Versuch einer phylogenetisch-taxonomischen Analyse.- Berliner geowissenschaftliche Abhandlungen E01: 1-352.- FC&P 21-2, p. 50, ID=3349^Topic(s): systematics, polyphyly; Porifera corallina; Systematics: Porifera; Corallina; Stratigraphy: ; Geography: ^Porifera with secondary calcareous skeletal elements are observed within all main taxa of the Pinacophora (Calcarea / Demospongiae) except the Homosclerophorida. within the Hexactinellida, taxa with calcareous skeletons are missing. The calcified sponges are normally called "Sclerospongia, coralline sponges, Pharetronida, Sphinctozoa, Chaetetida, and Stromatoporida". These different skeletal types developed independently several times. The ability to form secondary calcareous skeletons is linked with the cytoplasmatic Ca²⁺ control and the Ca²⁺ detoxification which is a vital effect of the cell. The secondary calcium salt skeletons are one possibility to eliminate the Ca-surplus, and the calcareous skeletons thus are to be regarded as a metabolic end product. The ability to form a calcareous skeleton is interpreted as a symplesiomorphy within the Pinacophora and is part of their basic pattern. It is a typical cryptotypic character which is developed in certain pinacophoran taxa as autoapomorphies. [first fragment of extensive summary]^1";
- 5921 s[5918] = "WOOD R.A. (1991).- Non-spicular biomineralization in demosponges.- Fossil and Recent Sponges [J. Reitner & H. Keupp (eds)]: 322-340; Springer-Verlag, Berlin.- FC&P 21-1.1, p. 61, ID=2814^Topic(s): non-spicular biomineralization; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy: ; Geography: ^These sponges form calcareous skeletons 1) by mineralization of a collagenous matrix (eg. Vaceletia, Calcifibrospongia); 2) through a secretory pinacoderm (eg. Ceratoorella. Merlia); 3) intracellularly (eg. Astrosclera).

- Mineralogy of the skeleton may be a response to water chemistry changing in the Sandberg cycle. Microstructure of the calcareous skeleton is likely to have taxonomic significance only at lower taxonomic categories. The calcareous skeleton is thought to be a passive response of the sponges to changing environmental conditions. It can be produced with relative ease by these sponges.¹¹;
- 5922 s[5919] = "CHOMBARD C., BOURY-ESNAULT N., TILLIER A., VACELET J. (1997).- Polyphyly of sclerosponges (Porifera, Demospongiae) supported by 28S ribosomal sequences.- The Biological Bulletin 193, 3: 359-367. www.biolbull.org/cgi/content/abstract/193/3/359.- FC;P 26-2, p. 54, ID=3732Topic(s): polymorphism, molecular data; Porifera Demospongiae; Systematics: Porifera; Demospongiae; Stratigraphy:; Geography:^To test the competing hypotheses of polyphyly and monophyly of sclerosponges, sequences from the 5' end of 28S ribosomal RNA were obtained for *Astrosclera willeyana*, *Acanthochaetetes wellsi*, and six other demosponge species. Phylogenetic relationships deduced from parsimony and neighbor-joining analyses suggest that these sclerosponges belong to two different orders of Demospongiae: *Astrosclera willeyana*, being closely related to the Agelasidae, belongs to the Agelasida, *Acanthochaetetes wellsi*, being closely related to the Spirastrellidae, belongs to the Hadromerida. These results contradict the hypothesis that sclerosponges are monophyletic and imply that a massive calcareous skeleton has evolved independently in several lineages of sponges.¹¹;
- 5923 s[5920] = "REITNER J., WORHEIDE G., LANGE R., SCHUMANN-KINDEL G. (2001).- Coralline demosponges - a geobiological portrait.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 219-235.- FC;P 30-1, p. 20, ID=7071Topic(s): skeletogenesis; Porifera Demospongia corallina; Systematics: Porifera; Demospongiae; Stratigraphy:; Geography:^The polyphyletic coralline demosponges possess a calcareous basal skeleton of 4 major morphotypes. Each has its own phylogenetic history, with different mechanisms of formation. One extant taxon of each skeletal type has been investigated, and its biochemical (e.g., intracrystalline organic matrix proteins), geochemical (e.g., stable isotopes), and histological properties described in detail. * The thalamid *Vaceletia* shows similarities in its skeletal features to extinct archaeocyathid sponges due to the presence of special Ca² waste deposit chambers in the lower part of the skeleton. In our opinion this type is phylogenetically the most important one because it represents one possible evolutionary way of Ca² detoxification and illustrates one function of basic biomineralization (Ca² -detoxification). More sophisticated biomineralization processes are developed in the agelasid *Ceratoporella*, the chaetetid hadromerid sponge *Spirastrella* (*Acanthochaetetes*) *wellsi*, and the stromatoporoid agelasid *Astrosclera willeyana*. Each of these taxa shows a distinct process of formation with a unique composition of its intracrystalline organic matrix and geochemical features, here characterized in detail. A model of phylogenetic relationships and grades of development is proposed. * The first metazoans with CaCO₃ biomineralization were the worm like Cloudinidae from the late Sinian, which form a tube with a foliated structure. However, the taphonomy controlled mode of basal skeleton formation in Archaeocyatha and Vaceletidae is the most ancient type of biologically controlled metazoan biomineralization. In general, basal skeletons of coralline sponges represent the simplest biologically controlled mineralization, intermediate between biologically induced type (e.g., organomineralization) and the fully enzymatically controlled mineralization of higher Metazoa. [original abstract]¹¹;
- 5924 s[5921] = "BONDARENKO O.B., SLADKOVSKAYA M.G. (1983).- Ob odnoy zakonomernosti evolyucii Geliolitoid.- Paleontologicheskii Zhurnal 1983, 1: 128-130.- FC;P 13-1, p. 42, ID=0490Topic(s):

- phylogeny; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^(On the regularity in the evolution of Heliolitids.)^1";
- 5925 s[5922] = "OSPANOVA N.K. (1981).- Rod Helioplasmolites (Heliolitoidea) i ego sistematicheskoe polozhenie. [genus Helioplasmolites (Heliolitoidea) and its systematic position; in Russian].- Paleontologicheskii Zhurnal 1981, 3: 15-22.- FC&P 11-1, p. 50, ID=1774^Topic(s): systematics; Heliolitida, Helioplasmolites; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^^1";
- 5926 s[5923] = "OSPANOVA N.K. (1987).- Zavisimost stroeniya kolonii geliolitid (Anthozoa) ot odnositel'noy skorosti rosta [dependence of colony growth in Heliolitida (Anthozoa) from its growth tempo; in Russian].- Doklady Akademii Nauk Tadzhikskoy SSR 30, 3: 185-188.- FC&P 17-1, p. 27, ID=2139^Topic(s): colony structure, growth tempo; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^^1";
- 5927 s[5924] = "LOBANOV Ye.Yu. (1991).- Heliolitoids coloniality and their possible links with other groups of coelenterates.- [journal?]: 47-52.- FC&P 20-2, p. 72, ID=2976^Topic(s): systematics, coloniality; Heliolitida, coloniality; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^^1";
- 5928 s[5925] = "BONDARENKO O.B. (1992).- Vnutrividovaya izmenchivost Geliolitoidej [intraspecific variability in Heliolitida].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korall'ov i stromatomorfid [intraspecific variability in corals and stromatoporoids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3373^Topic(s): variability; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^^1";
- 5929 s[5926] = "HUBMANN B. (1997).- Remarks on the history of Heliolites barrandei Penecke 1887, type species of Pachycanalicula wentzel 1895.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 231-243.- FC&P 26-2, p. 15, ID=3687^Topic(s): taxonomy, nomenclature; Heliolitida, Pachycanalicula; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^Heliolites barrandei Penecke 1887 is the type species of Pachycanalicula wentzel 1895. The many confusing circumstances concerning our knowledge of this species are clarified. A "topotype" from the "type locality" which clearly shows the diagnostic features is designated.^1";
- 5930 s[5927] = "OSPANOVA N.K. (1999).- Novye dannye o strukture skeletnoj tkani korall'ov geliolitid.- Voprosy geologii i tekhnologii mineral'nogo syrya Respubliki Tadzhikistan: 90-92, 1 Tab.; Dushanbe.- FC&P 31-1, p. 11, ID=4011^Topic(s): skeletal structures; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^[macrostructural-textural characteristics of heliolitid skeleton is presented]^1";
- 5931 s[5928] = "BONDARENKO O.B. (1992).- The system of heliolitoids.- Bulletin Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii ...: 205 pp.- FC&P 23-1.1, p. 67, ID=4147^Topic(s): systematics; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^^A new system of heliolitoids is presented on the basis of astogenetic and morphogenetic methods. The diagnoses of 4 orders, 7 superfamilies, 25 families, 4 subfamilies, 122 genera are given. The 32 categories are new. About 1000 species are analysed.^1";
- 5932 s[5929] = "BONDARENKO O.B. (1975).- Ob astogeneticheskom metode izucheniya kolonial'nykh kishchnopolostnykh (na primere Geliolitoidej). [on the astogenetic method of studying colonial coelenterates (Heliolitoidea taken as example)] .- Paleontologicheskii Zhurnal 1975, 2: 17-27.- FC&P 5-1, p. 34, ID=5390^Topic(s): astogeny; Heliolitida; Systematics:

- Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^The author gives a review on the history of research of the astogenesis of colonial coelenterates. The astogenesis in heliolitids with vesicular tissues is described. The different appearances of the astogenesis in Heliolitoidea show an analogous development to those of recent coelenterates. Possibilities are shown using the astogenetic method in phylogeny.^1";
- 5933 s[5930] = "BONDARENKO O.B. (1975).- Tipy morfogeneza geliolitoidej. [kinds of morphogenesis in Heliolitoidea; in Russian] .- Paleontologicheskii Zhurnal 1975, 3: 3-10.- FC&P 5-1, p. 35, ID=5391^Topic(s): morphogeny; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^General features of skeletal morphogenesis in Heliolitoidea are described, as well as the main types of structure and formation of the coenenchyme and the corallites. A great variety of analogous structures developing in the evolution of Heliolitoidea is shown to occur parallel, but as a rule, there is an asynchronous feature in different systematic categories.^1";
- 5934 s[5931] = "BONDARENKO O.B. (1980).- Metodika i rezultaty izucheniya asto-filogenezy geliolitoid. [methods and results of research of asto-phylogeny of heliolitids; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 41, ID=5804^Topic(s): asto-phylogeny; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^1";
- 5935 s[5932] = "OSPANOVA N.K. (1980).- Novoye o sistematikie geliolitoidoi. [new data on systematics of heliolitids; in Russian].- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: 80-84.- FC&P 9-1, p. 42, ID=5821^Topic(s): systematics; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^1";
- 5936 s[5933] = "OSPANOVA N.K. (1980).- Yavleniya vnutrikolonialnoy konkurenciyi v koloniyakh geliolitoidoy. [intracolony competition in heliolitid colonies; in Russian].- Dokl. AN Tajik SSR 1980, 23, 12: 722-725.- FC&P 10-1, p. 41, ID=5964^Topic(s): intracolony competition; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^1";
- 5937 s[5934] = "VULYKH P.Ye. (1980).- Morfogeneza Yanetella gen. nov., novogo semeystva geliolitid. [morphogenesis of Yanetella gen. nov. of a new heliolitid family; in Russian].- Paleontologicheskii Zhurnal 1980, 4: 39-44.- FC&P 10-1, p. 53, ID=5995^Topic(s): morphogenesis; Heliolitida, Yanetella; Systematics: Cnidaria; Heliolitida; Stratigraphy: ???; Geography: ^[morphogenesis of the type species of a new genus Yanetella - Y. uralica (Yanet) is studied; charactersitics of a new family Yanetellidae is given; discussed are relationships of the genera Thaumalolites and Yanetella]^1";
- 5938 s[5935] = "OSPANOVA N.K. (2010).- Remarks on the classification system of the Heliolitida.- Palaeoworld 19, 3-4: 268-277.- FC&P 36, p. 76, ID=6480^Topic(s): classification; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^The concept of the sum of common features has been used in order to compare the Heliolitida with the Tabulata and Rugosa and determine the position of Heliolitida in the classification system of Palaeozoic corals. Such morphological characters as the number of septa, septa of the second order, epitheca, coenenchyme and multiplicity by four have been considered. Coenenchyme is present in many taxa and there are no more compelling reasons for the integration of Heliolitida and Halysitida than for the integration of Heliolitida with other taxa containing coenenchyme. The dynamics of some features shows that the differences between three main groups of Palaeozoic corals are within the limits of variation of relative organisms. A high degree of similarity testifies to the close relationship of the Heliolitida and the different qualitative and quantitative expression of similar features testifies to their early divergence from a common

- ancestor and subsequent independent evolution. Asto-phylogeny and morphological homogeny of all Heliolitida confirm their evolution as a separate, unitary group. Heliolitida is a monophyletic group of corals that is equal to the Tabulata and Rugosa in rank. A common origin requires that the orders should be united into one subclass Paleosclerocoralla of the class Anthozoa. [original abstract]^1";
- 5939 s[5936] = "OSPANOVA N.K. (2000).- Ob odnom iz napravlenij evoliucii geliolitidnykh korallov.- Geologicheskije i ekologicheskije problemy Respubliki Tadjikistan: 51-53; Dushanbe.- FC&P 31-1, p. 12, ID=7088^Topic(s): phylogeny; Heliolitida; Systematics: Cnidaria; Heliolitida; Stratigraphy: ; Geography: ^Some investigators consider that increase of quantity of coenenchyme and decrease of number of corallites appeared in all Heliolitida. But study of concrete lines of development shows that density of corallites in coenenchyme of ancestors is in accordance with the density of corallites in coenenchyme of derivative forms. Increase of quantity of coenenchyme are only particular cases of morpho- and phylogenesis. Concrete lines of development of Heliolitida from Lichenariida not established still and their morphology not explained to characteristic features of Order Heliolitida.^1";
- 5940 s[5937] = "LAFUSTE J. (1988).- Sous classe des Heterocoralliaires (Heterocorallia Schindewolf 1941).- In Grasse P. P. (dir.): Traite de Zoologie Ill: Cnidaires, Anthozoaires, fasc. 3: 811-814.- FC&P 21-1.1, p. 46, ID=3229^Topic(s): traite de zoologie; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: ^^1";
- 5941 s[5938] = "LIN YINGDANG, HUANG ZHUXI, WU SHIZHONG, PENG XIANGDONG, QIU CUIZHEN, (1992).- The Classification and geological significance of the Heterocorals.- In Lin Yindang et al. (eds): Professional papers of Carboniferous corals from China: 1-63.- FC&P 21-2, p. 35, ID=3316^Topic(s): classification; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: ^The following classification is given, containing 6 families (1 new), 2 subfamilies (1 new) and 16 genera (5 new): Order Heterocorallia Schindewolf 1941; Family Heterophylliidae Dybowski 1867; Subfamily Heterophylliinae Dybowski 1873; Genus Heterophyllia McCoy 1849; Heterophylloides Schindewolf 1941; Heptaphyllia Huang & Ma 1986; Subfamily Dichophylliinae subfam. nov.; Genus Dichophyllia Lin & Peng 1990; Pristiophyllia gen. nov.; Family Crepidophylliidae Yu et al. 1983; Genus Crepidophyllia Yu et al., 1976; Family Fossaphylliidae fam nov.; Genus Fossaphyllia gen. nov.; Paradoxaphyllia gen. nov.; Pentaphyllia Yu et al. 1976; Triaphyllia Lin, Wu & Qiu gen. nov.; Family Hexaphylliidae Huang & Ma 1986; Genus Hexaphyllia Stuckenberg 1904; Quadratiphyllia Lin, Wu & Qiu gen. nov.; Family Longlinophylliidae Lin & Wu 1985; Genus Longlinophyllia Lin & Wu 1985; Radiciphyllia Sugiyama 1984; Oligophylloides Rozkowska 1969; Family? Tetrphylliidae Yoh et al. 1984; Genus Tetrphyllia Yoh et al. 1984.^1";
- 5942 s[5939] = "LIN YINGDANG, WU SHIZHONG, QIU CUIZHEN (1992).- New advances in study of Heterocorals.- Acta Palaeontologica Sinica 31, 4: 489-500.- FC&P 22-1, p. 35, ID=3391^Topic(s): recent research; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: ^Recently, the writers collected abundant materials of heterocorals from some places in Guizhou and Guangxi, with some advances in the study of the Heterocorallia proposed as follows: 1. Two or three septa were first found in the heterocorals. There are only two septa, in the earliest stage of individual development, there are 3, 4, 5, 6 and even more than 6 septa in the later stage. 2. New septa were inserted in the four original interseptal loculi. The septa extend from the theca to the axis and attach the preceding septa at their ends. They are arranged in bundles and may be developed on the auloslike tube in the central area of the corallite. Based on the different numbers and system arrangement

- of the septa, six septal models in the evolution of heterocorals may be recognized. [first fragments of extensive summary]^1";
- 5943 s[5940] = "WRZOLEK T. (1993).- Affinities of the Heterocorallia.- Acta Palaeontologica Polonica 38, 1-2: 119-120.- FC&P 22-2, p. 29, ID=3489^Topic(s): systematics; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: ^[review of the paper by J. Fedorowski 1991: Dividocorallia, a new subclass of Palaeozoic Anthozoa. Bulletin de l'Institut royal des Sciences Naturelles de Belgique, Sci. Terre 61: 21-105.] ^1";
- 5944 s[5941] = "LIN Y., WU S. (1996).- Septal variety and classification of Heterocorallia.- Journal Changchun Univ. Earth Sci. 26 [spec. issue]: 7-11.- FC&P 27-1, p. 88, ID=3831^Topic(s): septal numbers; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: ^Since the discovery of new heterocoral with 3 septa, the septal variety of the different genera of heterocorals has been clearly revealed. According to the developmental model of the new septa, the heterocorals can be divided into two types, one with fossula and the other without fossula. The fossula - bearing type can be developed from the genus Triphyllia with 3 septa to the genus Pentaphyllia with 5 septa and furtherly to the genus Fossaphyllia of multisepta. The non-fossula type can be developed from the genus Quadratiphyllia with 4 septa to the genus Hexaphyllia with 6 septa and furtherly to the genus Heterophyllia with multisepta. Besides, the family Crepidophylliidae with the aulos structure and the family Longlinophylliidae with special wall structure have been found. This paper has suggested a systematic classification of the known 19 genera of the heterocoral, and placed the Heterocorallia as subclass of the Anthozoa which is equivalent to the subclass Rugosa.^1";
- 5945 s[5942] = "LAFUSTE J. (1979).- Asymetrie de l'appareil septal des Heterocoralliaires.- C. R. som. S. G. F. 3: 111-113.- FC&P 9-1, p. 15, ID=5765^Topic(s): ; Heterocorallia; Systematics: Cnidaria; Heterocorallia; Stratigraphy: ; Geography: ^Une courte lame verticale constitue la partie centrale du système septal des Hétérocoralliaires. Elle traduit l'asymétrie fondamentale de ces organismes.^1";
- 5946 s[5943] = "SALOMON D. (1988).- Phylogenetic problems in Hexactinellida.- Berliner geowissenschaftliche Abhandlungen A100: 33-34.- FC&P 18-1, p. 14, ID=2317^Topic(s): phylogeny; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: ; Geography: ^^1";
- 5947 s[5944] = "MOSTLER H., MEHL D. (1990).- On the origin of Hexasterophora and Amphidiscophora (Hexactinellida). A further discussion of their phylogenetic significance.- FC&P 19, 2.1: 13-15. [short note] - FC&P 19-2.1, p. 13, ID=6790^Topic(s): phylogeny, monophyly; Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: ; Geography: ^Mostler (1986) published a rich collection of Paleozoic hexactinellid spicules from different localities of the world. We want to draw the attention of spongiologists to this publication, because it has been practically ignored so far (maybe due to the fact that they were published in a geological journal). It can be shown that the main taxa of living hexactinellid sponges (Hexasterophora and Amphidiscophora) can be traced back even to the Cambrian. [...] The fact that Hexasterophora and Amphidiscophora are very old in origin, and that they have been developing independently at least since the early Paleozoic, of course does not infer that the Hexactinellida are polyphyletic in origin. The Hexactinellida are a well-established monophylum. [excerpts from the short note]^1";
- 5948 s[5945] = "TABACHNICK K.R, MENSHENINA L.L. (1999).- An approach to the phylogenetic reconstruction of Amphidiscophora (Porifera: Hexactinellida).- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]:

- 607-616.- FC&P 28-2, p. 10, ID=6992Topic(s):phylogeny; Porifera, Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Geography:^^1";
- 5949 s[5946] = "JANUSSEN D., REISWIG H.M. (2003).- Re-description of *Cyathella lutea* Schmidt and formation of the new subfamily Cyathellinae (Hexactinellida, Aulocalycoidea, Aulocalycidae).- *Senckenbergiana biologica* 82, 1/2: 1-10.- FC&P 33-1, p. 77, ID=7223Topic(s): Porifera Hexactinellida; Systematics: Porifera; Hexactinellida; Stratigraphy: Geography:^Cyathella is a monospecific hexactinellid sponge genus, whose systematic position within the Hexactinellida has been so far unresolved. The original material of the type species, *C. lutea* Schmidt 1870, which has been reexamined, is here re-described and the genus is revised. The dictyonal skeleton of *C. lutea* is investigated, and a new sub-family Cyathellinae is erected to comprise this special type of skeletal architecture. *C. lutea* is compared with fossil hexactinellid species attributed to this new sub-family. [original abstract]^1";
- 5950 s[5947] = "STASINSKA A. (1982).- Colony structure and systematic assignment of *Cladochonus tenuicollis* McCoy 1874 (Hydrozoa).- *Acta Palaeontologica Polonica* 27, 1-4: 59-64.- FC&P 12-1, p. 22, ID=1887Topic(s):systematic position; Hydrozoa, Cladochonus; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Geography:^Colony and corallite structure of *Cladochonus tenuicollis* such as: the lack of tabulae and septal apparatus, presence of diaphragms between corallites, as well as the sympodial mode of budding, are different than in tabulates. These features make *Cladochonus* close to Hydrozoa. Analysis of structure of the Carboniferous species *C. parasitica* Vassiljuk proves that it is a junior synonym of *C. tenuicollis* McCoy.^1";
- 5951 s[5948] = "STANLEY G.D.jr (1986).- Chondrophorine hydrozoans as problematic fossils.- *Oxford Monographs on Geology and Geophysics* 5 [Problematic Fossil Taxa; Hoffman A. et Nitecki M. H. (eds.)]: 68-86.- FC&P 17-1, p. 17, ID=2111Topic(s):enigmatics; Hydrozoa, Chondrophorina; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Geography:^^1";
- 5952 s[5949] = "STEUL H. (1984).- Die systematische Stellung der Conularien.- *Giessener geologische Schriften* 37: IV + 117.- FC&P 15-2, p. 40, ID=0728Topic(s):systematics; Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Geography:^^1";
- 5953 s[5950] = "BISCHOFF G.C.O. (1978).- Internal structure of conulariid tests and their functional significance, with special reference to *Circonulariina* n. suborder.- *Senckenbergiana lethaea* 59, 4/6: 275-327.- FC&P 8-2, p. 52, ID=5734Topic(s): Conulata; Systematics: Cnidaria; Hydrozoa; Stratigraphy: Geography:^Several new types of conulariid septa are described. They grew in adaperatural direction with the growth of the animal, supported mesenteries, and served for the attachment of longitudinal muscles. One septal type indicates the presence of peristomial pits. Cessation of septal growth, followed by the onset of new septal portions, is interpreted to have been caused by processes linked with strobilation. From observations made on skeletal structures, the conulariid animal, a true scyphozoan, is reconstructed. Its relation to the Scyphomedusae, in particular to test-bearing scyphopolyps, is discussed. * Conical conulariid tests with a circular cross-section, recovered from Silurian and early Devonian strata of New South Wales, are placed in the new suborder *Circonulariina*. It comprises one new family, two new subfamilies, four new genera, and five new species that are described. [original summary]^1";
- 5954 s[5951] = "CAIRNS S.D., MACINTYRE I.G. (1992).- Phylogenetic implications of calcium carbonate mineralogy in the Stylasteridae (Cnidaria: Hydrozoa).- *Palaios* 7: 96-107.- FC&P 21-1.1, p. 54, ID=3262Topic(s):mineralogy; Hydrozoa, Stylasteridae;

Systematics: Cnidaria; Hydrozoa; Stratigraphy: ;
 Geography: ^The carbonate mineralogy of this calcified hydrozoan family is controlled largely by phylogenetic rather than environmental factors. X-ray diffraction analysis of 24 of 25 genera (almost the entire family) indicate that the skeletons of most species analyzed (54 species in 20 genera) were aragonite; only 7 species in 4 genera were calcite. In addition, several species contained coexisting polymorphs: 7 calcitic species with traces of aragonite; 1 aragonitic species with traces of calcite and 2 species with variable percentages of both polymorphs, which is dependent on the distance from the growing tip. Mole % magnesium carbonate in the calcite ranged from 6.5 to 10.0, but had no correlation to any known variable. Likewise, no correlation was found between polymorph type and any morphological or environmental variable, except for a generalized temperature effect, wherein genera with calcitic coralla are restricted to water colder than 13°C; aragonitic coralla occur at temperatures from -1.5 to 30°C. However, there is a close correlation of the polymorph type to the generic phylogeny of the family, according to the cladogram.^1";

- 5955 s[5952] = "GRUBER G. (1994).- Phylogenetic relationships of desma-bearing demosponges (Porifera, "Lithistida").- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 293-297.- FC&P 23-1.1, p. 22, ID=4086^Topic(s): polyphyly; Porifera Lithistida; Systematics: Porifera; Lithistida; Stratigraphy: ; Geography: ^The Lithistida sensu Schmidt (1870) are a polyphyletic group of sponges. They were separated because of their special morphologic criteria: the desmata, a peculiar type of spicule. In the fossil record they range from the Middle Cambrian to Recent. Based on phylogenetic characters the desma-bearing demosponges are divided into monophyletic groups. It is obvious that the character desmata must have been a plesiomorphic feature for all demosponges. The main characters used for defining relationships are the different microscleres (aster-bearing forms and sigma-bearing forms), the skeleton architecture and the larval strategy. A possible phylogenetic relationship shows a monophylum Aster - Tetractinellida - Hadromerida pars and a monophylum Ceractinomorpha pars - Halichondridae generic groups (after van Soest et al. 1990). ^1";
- 5956 s[5953] = "GRASSHOFF M. (1981).- Polypen und Kolonien der Blumentiere (Anthozoa) II. Die achtstrahligen Korallen (Octocorallia).- Natur und Museum 111, 2: 29-45.- FC&P 13-2, p. 9, ID=0623^Topic(s): ; Octocorallia; Systematics: Cnidaria; Octocorallia; Stratigraphy: ; Geography: ^^1";
- 5957 s[5954] = "GRASSHOFF M., ZIBROWIUS H. (1983).- Kalkkrusten auf Achsen von Hornkorallen, rezent und fossil (Cnidaria, Anthozoa, Gorgonaria).- Senckenbergiana maritima 15, 4/6: 111-145.- FC&P 13-2, p. 58, ID=0605^Topic(s): skeletogeny; Octocorallia, Gorgonacea; Systematics: Cnidaria; Octocorallia; Stratigraphy: ; Geography: ^Many species of Gorgonacea are able to cover their horny axes with additional layers of calcium carbonate. In these species the axis building layer produces alternately horny material (scleroprotein) as well as calcium carbonate.^1";
- 5958 s[5955] = "SANDBERG P. (1975).- Bryozoan diagenesis: bearing on the nature of the original skeleton of rugose corals.- Journal of Paleontology 49, 4: 587-606.- FC&P 4-2, p. 61, ID=5290^Topic(s): rugosan skeletal mineralogy; Bryozoa diagenesis; Systematics: Bryozoa Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The nature of the textural alterations of the biminerale bryozoan skeletons and the characteristic mode of alteration of known aragonites throughout the geologic record argue most strongly that rugose corals must have been originally calcite, and that lamellar calcite is one of several ultra-structures of rugosan skeletons.^1";

- 5959 s[5956] = "BESPROZVANNYKH N.I., MYAGKOVA E.I. (1978).- Arkheotsyaty, Stromatoporoidei, Rugozy, Krinoidei. Katalog originalov.- Akademiya Nauk SSSR, Siblrsk-Otdel. Inst. geol. i geof. ?????.- FC&P 9-1, p. 50, ID=0292^Topic(s): index of types; Porifera, Stroms, Rugosa; Systematics: Porifera Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Original catalog of Archeocyatha, Stroms, Rugosa and Crinoids.^1";
- 5960 s[5957] = "LATYPOV Yu.Ya. (1975).- Rugosa or tetraradiate corals?.- Paleontologicheskii Zhurnal 1975, 3: 133-135.- FC&P 6-1, p. 20, ID=0007^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5961 s[5958] = "IVANOVSKIY A.B. (1977).- Quelques aspects de l''evolution des rugueux.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 62-64.- FC&P 6-1, p. 26, ID=0055^Topic(s): phylogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Divergence, convergence, parallelism, and iteration in rugose coral evolution.^1";
- 5962 s[5959] = "FLUGEL H.W. (1977).- Rugae und Wachstumszonen bei Korallen.- Paläontologische Zeitschrift 51: 117-130.- FC&P 6-2, p. 7, ID=0114^Topic(s): growth bands; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Rugae are more or less horizontal, fine ridges of the epitheca of corals. Therefore, they are rare in modern scleractina who seldom have an epitheca. Following the studies of Barnes (1972) the rugae are a sign for the daily increment of the skeleton. Besides the rugae there are also other zones of growth. They are shown by the radiography as an alternation of dark and light bands. These zones of different density are interpreted as a seasonal change of zones of different thickness (? and arrangement) of trabeculae. It seems possible that there is also a monthly rhythm of the growth the causes of which are unknown. * In rugosa there are rugae in solitary corallites as well as in colonial coralla. The rugae of the cerioid specimen of "Columniphyllum" sulcatum described by Quenstedt 1879 have a width up to 0,3mm. In spite of this unusual width it seems probable that these rugae are also the product of the daily increment. * The difficulties of interpretation, identification and combination of rugae in determined time periods are great handicaps for their use as "geochronometric clocks". But with more knowledge about the growth of recent corals in regard to the diverse factors of the environment, the rugae would be a possible important feature for paleologic evidences. [original abstract]^1";
- 5963 s[5960] = "SYTOVA V.A. (1980).- O proiskhozhdenii rugoz i ikh taksonomicheskii range. [on the Origin of Rugosa and their taxonomic range; in Russian].- Paleontologicheskii Zhurnal 1980, 1: 14-19.- FC&P 9-2, p. 44, ID=0349^Topic(s): origins, classification; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^It is demonstrated that two stages are existing in the evolution of rugose corals. During the first stage (Proterozoic time - Early Ordovician) the polyps were lacking a skeleton but during the second stage (Middle Ordovician - Permian) they obtained the ability in building a skeleton. Regarding their taxonomy, it is proposed to classify them into two orders of the subclass Tetracorallia: the Rugosa and the Heterocorallia.^1";
- 5964 s[5961] = "ULITINA L.M. (1980).- Nekotorye zakonomernosti kolonialnogo razvitija Rugoz. [some regularities in the colonial development of the Rugosa; in Russian].- Paleontologicheskii Zhurnal 1980, 2: 32-43.- FC&P 9-2, p. 45, ID=0350^Topic(s): colonial, phylogeny; Rugosa colonial; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Peculiarities in colonial development of three rugose genera are discussed: Veraephyllum gen.nov., Evenkiella Soshkina and Minusiella Bulvanker. Polymorphism and a regular morphological diversity of corallite frames can be

- observed. The new genus *Veraephyllum* is described as well as two additional new species: *V. sytovae* and *Evenkiella cincta*. A specified redescription is given for *Minusiella beljakovi* Bulvanker.¹¹;
- 5965 s[5962] = "COTTON G. (1983).- The rugose coral species.- Blackwell, Oxford; 278 pp.- FC&P 13-1, p. 19, ID=0392^Topic(s): index of species; Rugosa, species; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Cotton has provided in his book a second great service to rugose coral workers. Having previously published an index with supplements to the rugose coral genera, he has now compiled a guide to the locations of original descriptions of rugose coral species. In the first section species are listed alphabetically under the genus to which they were originally or have been subsequently referred, the genera also being listed alphabetically. In the second section all species are listed alphabetically followed by the genus under which they were originally described only, together with author and date. The book concludes with a list of references. [extract from a book-review by C. T. Scrutton]¹¹;
- 5966 s[5963] = "YAN YOUYING, WU YAOCHENG (1983).- Application of mathematical methods to classification of Tetracorals.- Chinese Academy of Geological Sciences Bulletin 1983, 5: 71-79.- FC&P 13-1, p. 24, ID=0403^Topic(s): classification numerical; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Although Tetracorals have formed the object of specific study for two hundred years, the results of previous investigations show certain degree of incongruity due to different personal experiences and different viewpoints. While identifying and classifying similar genera and species, it was not uncommon to emphasize a certain character and ignore other features to such an extent that even individual variations were mistaken for specific variations thus artificially increasing the number of new taxa and causing confusions in the taxonomy of corals. In this paper, four genera -- *Yuanophyllum*, *Lophophyllum*, *Koninckophyllum* and *Arachnolasma* -- are studied by means of multivariate methods; namely: theory of quantification transforming the descriptive features into qualitative variables; characteristic analysis selecting variables; correspondence analysis and discriminative analysis distinguishing the different genera and ascertaining a mathematical model of classification. It is concluded that *Arachnolasma* is apparently independent, *Koninckophyllum* and *Yuanophyllum* have common transitional forms which show their affinity close to *Lophophyllum* and *Yuanophyllum* are different evolutionary stages of the same series and, finally, that *Lophophyllum* is by no means an independent genus. (Original abstract)¹¹;
- 5967 s[5964] = "LAKHOV G.V. (1982).- O sistematiceskome polozenii rugoz Disphyllum geinitzi i blizkikh vidov. [on the systematic position of the rugose coral *Disphyllum geinitzi* and related species; in Russian].- Paleontologicheskii Zhurnal 1982, 3: 15-24.- FC&P 13-1, p. 33, ID=0442^Topic(s): systematics; Rugosa, *Disphyllum*; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^ Morphological and ecological peculiarities of the colonial rugose genus *Disphyllum* and its evolution in the Devonian are investigated. The new genus *Pantophyllum*, together with the type species *P. geinitzi* (Lang & Smith 1935) are presented. The new species *P. pedderi* and the new subspecies *P. geinitzi aequiseptatum* are described.¹¹;
- 5968 s[5965] = "ULITINA L.M. (1982).- Astogeny in some colonial Rugosa.- Acta Palaeontologica Polonica 27, 1-4: 137-146.- FC&P 13-1, p. 37, ID=0453^Topic(s): blastogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Differentiation of corallite morphology and ability and rate of gemmation observed in colonies of *Veraephyllum sytovae*, *Evenkiella cincta* and *Minussiella beljakovi* have been regarded as a manifestation of polymorphism. Three corallite morphes in a colony have been distinguished: protocorallites, mature corallites and immature,

- underdeveloped corallites.^1";
- 5969 s[5966] = "COTTON G. (1984).- The revised rugose coral genera.- published by the author [Cotton G.], Kidderminster, England.- FC&P 13-2, p. 39, ID=0546^Topic(s): index of genera; Rugosa genera; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5970 s[5967] = "KOSSOVAYA O.L. (1983).- Naik-struktura u rugoz i ee taksonomicheskoe znachenie [naotic structure in Rugosa and its taxonomic significance].- Vestnik Leningradskogo Universiteta 1983, 18: 75-78.- FC&P 13-2, p. 40, ID=0552^Topic(s): structures naotic septa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5971 s[5968] = "WANG HONGZHEN, HE YUANXIANG (1985).- On the fundamental pattern of the minute skeletal structure of rugose corals.- Acta Palaeontologica Sinica 24, 2: 134-149.- FC&P 14-2, p. 36, ID=0918^Topic(s): microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The authors classify the microstructures of coral skeletons into the following two types: 1. the fibrous, either fibro-normal or trabeculate, in which the crystallites are perpendicular to the secreting surface, and 2. the lamellar, in which the crystallites in the flakes are parallel to the secreting surface.^1";
- 5972 s[5969] = "SCRUTTON C.T. (1985).- Rugosa.- Atlas of Invertebrate Macrofossils [J.W. Murray (ed.)]: 13-31; Longman & The Palaeontological Association. [atlas of fossils] - FC&P 14-1, p. 47, ID=0982^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5973 s[5970] = "FEDOROWSKI J. (1984).- Subjectivity in the evaluation of diagnostic characters and its influence on the taxonomy of the rugose corals.- Palaeontographica Americana 54: 86-91 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 49, ID=0994^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5974 s[5971] = "FEDOROWSKI J. (2003).- Some remarks on diagenesis of rugose coral skeletons.- Geologos 6: 89-109.- FC&P 33-1, p. 51, ID=1100^Topic(s): diagenesis; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Rugose coral microstructure exhibits striking similarity to that in Scleractinia. The main difference lies in the mineral composition: calcitic in the former and aragonitic in the latter. Calcitic skeletons of the Rugosa are commonly better preserved than those in the Scleractinia, and therefore some of them have been interpreted as unaltered, a position rejected in this paper. The dual nature of septa, which commonly consist of a primary trabecular septum and secondary fibrous sheets, results in differently expressed diagenetic alteration in comparison of other structural elements. It has been postulated that both early and advanced diagenesis may, in some circumstances, be distinguished in the Rugosa. In most instances the early diagenetic features were destroyed by the post-burial alterations. Replacement and recrystallization are the most important processes among the advanced chemical alterations. Both may either facilitate the recognition of original macro- and microstructures or obscure them. Surface replacement by silica promotes perfect preservation of shape and inner morphology, whereas pervasive replacement may destroy both. Selected replacement by hematite may help in exposing the trabecular microstructure of septa, whereas deep replacement may destroy the entire morphology. Physical alteration, such as crushing and flattening of skeletons are always destructive. The result from compaction, and their scale depends on skeletal morphology and on the relationship between the rate of infilling of intra-skeletal spaces and the accumulation of surrounding sediment. Pre-burial events, such as overgrowth and

- penetration by borrowing organisms, their holdfasts or roots may aid in the recognition of early diagenesis, but may also led to substantial pre- or postburial skeletal alteration, resulting sometimes in total destruction. This depends mostly on the pH of pore fluids.¹";
- 5975 s[5972] = "LIN YINGDANG, LIU PENGYU (1999).- The systematic position of the solid column of Rugose corals.- Acta Palaeontologica Sinica 38, 2: . [pp?].- FC&P 29-1, p. 57, ID=1446Topic(s): structures columella; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The systematic position of the solid column of Rugosa has been a controversial issue for a long time. The solid column consists of fibrous tissue and clearly differs from the axial column or protoaxial column. Its axial structure has no relationship with the cardinal septum or counter septum and inner ends of the septa. It is an indepently developed structure in the rugose coral. So, the Rugosa with solid column could constitute a new order - Cyathaxoniida ord. nov. According to the unique fibrous tissue and the shape of solid column, this order could be further subdivided into three families: Cyathaxoniidae Edwards & Haime, 1850, Amygdalophyllidae Grabau, 1935, and Ekvasophyllidae Hill, 1981. There are abundant solid column corals in Early Carboniferous of China. In this paper, three genera (including 1 new genus) and five species (including four new and 1 uncertain species) are described. They were found from Datangian to Early Carboniferous in Qinghai and Yunnan provinces. [original summary]¹";
- 5976 s[5973] = "VASCONCELLOS A.C.de (2001).- Homeomorphy and levels of generality in Rugose corals (Anthozoa, Rugosa).- Journal of Comparative Biology 3, 1: 103-108.- FC&P 30-1, p. 22, ID=1545Topic(s): homeomorphy; Rugosa, homeomorphy; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Homeomorphy has been considered as one of the chief problems in rugose systematics because it affects the whole form of the organism, in contrast to homoplasy that acts only against some features. However, it is observed in traditional rugose systematics that all features used to diagnose forms are also usually employed to define groups of different levels of universality. That practise leads to a situation where many characters appear more than once in related and unrelated groups causing a false feeling of homeomorphy as the main process acting during the development of the Rugosa. In an attempt to observe order in this group, it should be observed that characters of higher generality be used to define lareger groups while those of lower generality be employed at lower levels of universality. Characters like form of the coralla, in colonial forms, or corallite shape, in solitary forms, are fitted to define groups immediately after the great group Rugosa, that is, suborders or maybe families, but they cannot be used at specific level since they are of higher order. The same can be said of some skeletal elements like tabulae, dissepiments and axial structure in general. The derived states of those characters can only be used to define groups, in lower level of universality, after proved to be synapomorphous among them. Using of non-biotic data, like stratigraphy and biogeography, to test trees can just be accepted when used a posteriori. An example of character distribution is presented with some Carbonifeorus rugose corals from the Siphonodendron-group. ¹";
- 5977 s[5974] = "GUDO M. (2001).- Konstruktion, Evolution und riffbildendes Potential der rugosen Korallen.- Courier Forschungsinstitut Senckenberg 228: 1-153.- FC&P 30-1, p. 23, ID=1546Topic(s): constructional morphology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[English summary is presented by Gudo, 2001 in FC&P 30, 1: 39-46]¹";
- 5978 s[5975] = "WEBB G.E., SORAUF J.E. (2002).- Zigzag microstructure in rugose corals: a possible indicator of relative seawater Mg/Ca ratios.- Geology 30, 5: 415-418.- FC&P 31-2, p. 41, ID=1657Topic(s): microstructures, environmental indicators?; Rugosa, microstructures; Systematics: Cnidaria; Rugosa;

Stratigraphy:; **Geography:** ^Low-Mg calcite (LMC) and high-Mg calcite (HMC) have been identified confidently as original biominerals in different rugose corals. Devonian Tabulophyllum had a LMC skeleton, whereas Pennsylvanian Lophophyllum had a HMC skeleton. Zigzag microstructure, a diagenetic microstructure in rugose corals, may be related to early migration of Mg²⁺ ions during transformation of HMC into LMC. Therefore, zigzag microstructure may indicate that the original mineral was HMC even in specimens that subsequently converted to LMC. Stratigraphically, corals with zigzag microstructure are confined to the late Paleozoic, which is coincident with the "aragonite sea" of P.A. Sandberg. Hence, fluctuating Mg/Ca ratios may have directly controlled oscillations in marine carbonate chemistry and the mineral composition of rugose corals so that HMC skeletons (as indicated by zigzag microstructure) formed during intervals with "aragonite seas" and LMC skeletons (e.g., Tabulophyllum) formed during intervals with "calcite seas".

5979 s[5976] = "GUDO M. (2002).- Structural-functional aspects in the evolution of operculate corals (Rugosa).- Palaeontology 45, 4: 671-687.- **FC#038;P 31-2**, p. 39, ID=1675^**Topic(s):** **constructional morphology; Rugosa; Systematics:** Cnidaria; Rugosa; **Stratigraphy:**; **Geography:** ^Among the Rugosa operculae were developed by only few genera. One is the slipper-shaped Calceola and another is the pyramidal shaped Goniophyllum. On the basis of biological and morphological knowledge of recent corals, the two different bauplans of the soft bodies of Calceola and Goniophyllum have been reconstructed. The soft body (i.e. the polyp) of a rugose coral is thought to have all the basic structures of anthozoan polyps: a barrel-like body shape, a flat oral disc with tentacles, and the mouth from which the pharynx reaches inside the gastric cavity. Furthermore, as in all Anthozoa, Rugosa had internal mesenteries that act as tensile cords; during growth in diameter further mesenteries were inserted. In contrast to all other Anthozoa, in the Rugosa new single mesenteries were added in four insertion sectors. The bauplans of Calceola and Goniophyllum differ in the pattern of mesentery insertion into these four sectors. Calceola had a serial, insertion pattern and Goniophyllum had a symmetrical insertion pattern. They are representatives of the two different bauplans within the Rugosa. The lid corals are examples of convergence evolved genera; Calceola as well as Goniophyllum originated by quite simple modifications of the ancestral type. The peculiar shapes, the operculae and especially the straight hingers between the calyx and the lid(s) result only from mechanical necessity. Under special conditions (such as high sedimentation rates) these modifications of the corallum represent suitable tactics for survival."

5980 s[5977] = "POTY E. (2002).- Interstitial tabellae: a new type of tabellae developed between highly thickened septa in Rugosa.- Coral Research Bulletin 7: 167-173. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- **FC#038;P 31-2**, p. 44, ID=1688^**Topic(s):** **structures interstitial tabellae; Rugosa; Systematics:** Cnidaria; Rugosa; **Stratigraphy:**; **Geography:** ^Interstitial tabellae developed in very narrow interseptal loculi (0,04-0,06 to 0,2-0,3 mm) resulting in a large amount of thickening of septa. They occur commonly in genera developing septal stereozones and are described here in six Lower Carboniferous species: Siphonophyllia cylindrica hasteriensis, S. rivagensis, Uralina gigantea, Keyserlingophyllum obliquum, Caninophyllum skouraense and Eocaninophyllum yitzanghense. They differ from tabulae which develop usually in wider interseptal loculi by their higher density (from 3-5 up to 10-20 times more numerous) and more complex and various patterns. The minimum widths (0,04 to 0,06 mm) for the interseptal loculi allowing their construction and therefore the presence of the folds of

- the body wall, provide insight into the thickness of the wall of the polyp, but raise the question if there would remain enough space to allow the presence of mesenteries in the lower part of the gastrovascular cavity. ^1";
- 5981 s[5978] = "LELESHUS V.L. (1978).- Ob odnoy zakonomernosti evolucyi Rugoz.- Paleontologicheskii Zhurnal 1978, 1: 31-35.- FC&P 11-1, p. 46, ID=1759^Topic(s): phylogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5982 s[5979] = "FEDOROWSKI J. (1979).- Korale Rugosa jako skamienialosci przewodnie [Rugose corals as guide fossils].- Geologia 9: 53-68 [Adam Mickiewicz University in Poznan].- FC&P 11-1, p. 53, ID=1783^Topic(s): biostratigraphy; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5983 s[5980] = "SANDO W.J. (1982).- Revision of the Rugose coral genus Lithostrotionella Yabe and Hayasaka.- Journal of Paleontology 56, 1: 236-239.- FC&P 11-1, p. 53, ID=1793^Topic(s): revision; Rugosa, Lithostrotionella; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5984 s[5981] = "CHEN JIANQIANG, WANG HONGZHEN (1986).- A SEM study of the microskeletal structures of Gyalophylloides Cao 1975.- Earth Sci. - J. Wuhan Coll. Geol. 11: 481-466.- FC&P 16-1, p. 57, ID=1947^Topic(s): microstructures, SEM study; Rugosa, Gyalophylloides; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5985 s[5982] = "WANG HONGZHEN, HE XINYI, CHENG JIANQIANG (1986).- On the taxonomic position and evolutionary trend of Pilophyllia Ge et Yu, 1974.- Bulletin Chinese Academy geological Sciences 12: 95-103.- FC&P 16-2, p. 21, ID=1957^Topic(s): systematics, phylogeny; Rugosa, Pilophyllia; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The diagnosis of the genus is supplemented in terms of septal type and minute skeletal structures. The septa of Pilophyllia are clearly amplexoid, and are composed mainly of lamellar sclerenchyme in the proximal part of the corallum, but are characterized by development of trabeculae in the upper part. The outer part of the septa in the peripheral stereozone are thick and contiguous, containing stout rhabdacanth trabeculae invested with lamellar tissue. The septa grow suddenly thin beyond the stereozone, but still comprise rhabdacanth trabeculae that are developed upon the successive tabular floors. The clear boundary and evident difference between the juxtaposed and well-preserved lamellar and fibrous tissue as seen within the septa indicate that the idea of secondary origin of the lamellar structure of the skeleton is not tenable. * There are altogether 14 species and subspecies of the genus, among which, the three new ones, Pilophyllia simplex Chen, P. alternata Chen and P. densitabulata Chen are described here. Only three species occur in the Lower Silurian. A comparison of the various species show that a clear tendency existed for the fibrous structure, i.e. the trabeculae, to develop at the expense of lamellar structures at higher horizons (p.I. II, fig. 1-4). Other evolutionary trends include thickening of the septa and increasing width of the stereozone. * On the basis of skeletal structures, Pilophyllia is attributed to Family Amplexidae, which is characterized by amplexoid septa and progressive development of fibrous skeletal structures. Two groups may be recognized in the family, a primary group dominated by the lamellar tissue of septa throughout, including Amplexoides, Lindstroemophyllum, probably also Zelophyllum and the Late Ordovician compound form Crenulites, in addition to the Carboniferous Amplexus and Bordenia, and an advanced group with a progressive development of trabeculae septa, including Pilophyllia and Protopilophyllum. The Devonian Siphonophrentis and Heterophrentis with complete septa may not be included in this family.^1";
- 5986 s[5983] = "OSPANOVA N.K. (1985).- O sushchnosti polymorfizma rugoz [on

- nature of polymorphism in Rugosa; in Russian].- Doklady Akademii Nauk Tadzhijskoy SSR 28, 7: 419-421.- FC&P 17-1, p. 23, ID=2130^Topic(s): polymorphism; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5987 s[5984] = "RODRIGUEZ S. (1986).- Los corales rugosos y el uso de indices de semejanza Faunistica en Estudios Paleobiogeograficos.- Paleontologia i Evolucio 20: 297-307 [in Spanish].- FC&P 17-1, p. 23, ID=2131^Topic(s): biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Los corales rugosos constituyen un grupo que puede ser de gran utilidad en estudios paleozoogeograficos. Sin embargo, su uso en estudios comparativos de diferentes cuencas ha de hacerse con precauciones, debido al distinto nivel de conocimiento de cada area. Esto que puede ser un inconveniente en ciertos casos, permite, sin embargo, hacer un analisis de la validez y de las cualidades de algunos de los numerosos indices que han sido definidos con el objeto de comprobar la mayor o menor relacion faunistica entre diversas areas por media de la presencia o ausencia de taxones. Se nan recopilado mas de cuarenta indices, entre los que se han seleccionado doce que se han utilizado para realizar matrices de semejanza entre las diversas areas. Las zonas seleccionadas son generalmente aceptadas como divisiones zoogeograficas en la paleogeografia del Moscoviense, que es el periodo elegido para este analisis, aunque su extension es muy variada. Los resultados de la aplicacion de estos indices muestran la relatividad de su uso, y la necesidad de fijar unos objetivos previos a la seleccion del modulo de comparacion en cualquier estudio biogeografico.^1";
- 5988 s[5985] = "ILYINA T.G. (1986).- Septal micro- and ultrastructure in some rugosans.- Phanerozoic reefs and corals of the USSR [Sokolov B. S. (ed.), Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam, Dushanbe 1983]: 81-83 [in Russian].- FC&P 18-1, p. 37, ID=2249^Topic(s): microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5989 s[5986] = "ILYINA T.G. (1987).- Morphogenesis and microstructure of carinae in coral genus Lophocarinophyllum.- Paleontologicheskyy Zhurnal 1987, 2: 41-51 [in Russian].- FC&P 18-1, p. 37, ID=2250^Topic(s): microstructures; Rugosa, Lophocarinophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5990 s[5987] = "LIN YINGDANG, ZHANG LIANG (1986).- Notes on the genus Kwangsiphyllum and its evolution.- Journal of Changchun College of Geology 1986, 1: 5-11 [in Chinese, with English summary].- FC&P 18-1, p. 38, ID=2257^Topic(s): phylogeny; Rugosa, Kwangsiphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5991 s[5988] = "PORTER D.R., ELIAS R.J., YOUNG G.A. (2007).- Biometric analysis of corallite size in the colonial rugosan Crenulites.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 43-50.- FC&P 35, p. 55, ID=2344^Topic(s): biometry; Rugosa, Crenulites; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5992 s[5989] = "SORAUF J.E. (2007).- The function of dissepiments and marginaria in the Rugosa (Cnidaria, Zoantharia).- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 11-29.- FC&P 35, p. 58, ID=2352^Topic(s): function, dissepiments, marginaria; Rugosa, physiology; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5993 s[5990] = "LUO JINDING, WANG MINGQIAN (1988).- SEM-Studies on Microstructure of Clisiophyllum.- Kexue Tongbao 33, 6:.- FC&P 18-2, p. 16, ID=2460^Topic(s): microstructures, SEM study; Rugosa, Clisiophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";

- 5994 s[5991] = "WANG HONGZHEN, CHENG JIANQIANG (1988).- A SEM study of the microskeletal structures of Aulophyllum fungites (Rugosa).- Geoscience 2, 3: 293-298. [in Chinese, with English summary].- FC&P 18-2, p. 33, ID=2480^Topic(s): microstructures, SEM study; Rugosa, Aulophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^A SEM study of Aulophyllum fungites (Fleming 1828) reveals that both the longitudinal and transverse structure of the skeleton is fibrous in nature and is composed of calcite needles. The needles are of two sizes, those composing the septa and tabellae show an average length of 32 µm and those forming the dissepiments, axial tabellae and column septa (lamella), 10 µm and 2 µm respectively. Within the septum, only one series of slender trabeculae develop along the axis, with an average diameter of 30-60 µm, while the lateral parts are composed of long, subparallel needles, some of which being grouped into tufts. No clear boundary exists between the axial and lateral parts. Clear growth-lines are evidently continuous across the connecting parts of adjacent septa and tabulae. This means that skeletal structures in both elements are synchronous and syntaxial in nature.^1";
- 5995 s[5992] = "SORAUF J.E., MACKEY J.E. (1989).- Variation and biometrics in rugose corals.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 23-31.- FC&P 19-1.1, p. 12, ID=2519^Topic(s): variation, biometrics; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5996 s[5993] = "WANG HONGZHEN, CHENG JIANQIANG (1989).- Microskeletal structures and classification of rugose corals.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 179-190.- FC&P 19-1.1, p. 13, ID=2536^Topic(s): systematics, microstructures; Rugosa classification; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5997 s[5994] = "LUO JINDING, WANG MINGQIAN, HE XINYI (1989).- skeletal structure and classification of the Order Caniniida (Rugosa).- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 191-198.- FC&P 19-1.1, p. 13, ID=2537^Topic(s): structures, classification; Rugosa, Caniniida; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 5998 s[5995] = "FEDOROWSKI J. (1989).- Redescription of the original collection of Zaphrentis calyculus Miller 1891, Rugosa.- Acta Palaeontologica Polonica 34, 4: 275-325.- FC&P 20-1.1, p. 53, ID=2606^Topic(s): revision; Rugosa, Zaphrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The type material of the Tournaisian Zaphrentis calyculus from the Miller's (1891) collection, redescribed by Easton (1944) has been re-investigated. The better preserved specimens are assigned to 5 species and 5 genera (among them Rotiphyllum diutinum sp. n., Petraia (?) milleri sp. n. and Patularima gen. n.). Some forms are described in open nomenclature. The taxa are discussed in terms of morphology, ontogeny, intraspecific variability and relationships. Environmental and / or genetic control of straight, widely-flaring and horn shapes and of stereoplasmic infilling is discussed.^1";
- 5999 s[5996] = "FEDOROWSKI J., SANDO W.J. (1989).- Morphogenesis and relationships of Trochophyllum Milne-Edwards and Haime 1850 (Coelenterata, Anthozoa).- Acta Palaeontologica Polonica 34, 1: 3-46.- FC&P 20-1.1, p. 53, ID=2607^Topic(s): ; Rugosa, Trochophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Detailed study of the holotype and topotype of the type species of Trochophyllum Milne-Edwards and Haime reveals that

this genus has a unique internal morphology most similar to Neaxon Kullmann. Although the systematic relationships of small, aulate solitary corals remain dubious, Trochophyllum is referred provisionally to the family Petraiidae de Koninck. The genus is represented by the type species, *T. verneuillanum* Milne-Edwards and Haime, and the informal taxon *T. sp. 1*, which are known only from Tournaisian (early Osagean) strata in Kentucky and Indiana, USA. Previously published records of Trochophyllum outside the type locality of its type species are either invalid or unconfirmable on present published information. Trochophyllum is distinguished by a highly variable aulos that is typically of the stereotheca-type, filled with stereoplasm at maturity; axial tabulae absent or not preserved at maturity; cardinal septum shortened in the calice; and minor septa developed only as foundations.^1";

- 6000 s[5997] = "WANG HONGZHEN, CHENG JIANQIANG (1989).- Skeletal structures and systematic classification of the Subclass Rugosa.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 004-048 (chapter 2); Science Press, Beijing.- FC&P 19-1.1, p. 44, ID=2624^Topic(s): systematics, skeletal structures; Rugosa classification; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6001 s[5998] = "COCKE J.M., HAYSE K. (1988).- Methods for determining septal formula in solitary Rugosa.- Journal of Paleontology 62, 1: 144-145.- FC&P 19-1.1, p. 41, ID=2625^Topic(s): solitary, septal formula; Rugosa, solitary; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6002 s[5999] = "WANG HONGZHEN, WANG XUNLIAN, CHENG JIANQIANG (1989).- Evolutionary stages and biogeography of the rugose corals.- Classification, evolution, and biogeography of the Palaeozoic corals of China [Wang Hongzhen, He Xinyi, Chen Jianqiang et al. (eds)]: 174-225 (chapter 10); Science Press, Beijing.- FC&P 19-1.1, p. 44, ID=2632^Topic(s): phylogeny, biogeography; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6003 s[6000] = "WANG HONGZHEN, CHENG JIANQIANG (1990).- Microskeletal structures of the genus Lophocarinophyllum with a discussion on the family Lophophyllidiidae.- J. China Univ. Geosc., Earth Sci. 15, 3: 257-262. [in Chinese, with English summary].- FC&P 19-2.1, p. 33, ID=2751^Topic(s): microstructures; Rugosa, Lophocarinophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Among the family Lophophyllidiidae Moore et Jeffords 1945, Lophocarinophyllum Grabau 1922 possesses well developed septal flanges. The microskeletal structures of the septa are either composed of distinct monacanth trabeculae with clearly radiating needles, or of an axial zone of irregular slender trabeculae with diverse needles and lateral zones with subparallel needles or tufts. The flanges have slender trabeculae in the axial zone and parallel needles in the lateral zones, but no regular trabeculae with radiating needles were observed. In several specimens of Lophocarinophyllum acanthiseptum collected from the Upper Carboniferous in the North China, weakly developed convex tabulae are present. Thus it may be held that the genotype is possessed of tabulae, and the genus Lophotabularia Shi, established on the presence of tabulae, may better be considered as a synonym of Lophocarinophyllum. So far 8 species of Lophocarinophyllum, *L. acanthiseptum* Grabau, *L. major* Heritsch, *L. yakovlevi* Fomichev, *L. karpinski* Fomichev, *L. suetomi* Minato, *L. lophophyllidium* Liao et Xu and *L. abnome* Shi may be recognized, including the new species *L. stereoseptum* described herein. In our revised classification of the rugose corals (Wang et al 1989), 10 genera were assigned to Lophophyllidiidae, but Lophophyllum was tentatively included therein. Actually the latter genus (genotype *L. konincki*) is a monozonal coral of zaphrentoidid affinity probably akin

- to Claviphyllum and may therefore better be transferred to the family Bradyphyllidae under the suborder Zaphrentitoidina. Thus the family Lophophyllidiidae includes 8 genera: Lophophyllidium Milne-Edwards et Haime, Sugiyamaella Yabe et Minato, Lophocarinophyllum Grabau, Stereostylus Jeffords, Neostereostylus Lin, Tlmorphyllum Gerth, Lophamplexus Moore et Jeffords and Paralophophyllidium Lin.¹;
- 6004 s[6001] = "LUO JINDING, WANG MINGQIAN, WU FUBAO (1990).- SEM Studies on Microstructures of Siphonophyllia.- Acta Palaeontologica Sinica 29, 2: 154-159.- FC&P 20-1.1, p. 56, ID=2825^Topic(s):microstructures, SEM study; Rugosa, Siphonophyllia; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography:^There have been diversified views on the systematic significance of the rugose coral's minute skeletal structure. In this work attempt is made through the microstructures of the typical genera of 14 families to reveal the value for the systematic Rugosa of the Carboniferous period, with only a species of Siphonophyllia from the Lower Carboniferous of the Qilian Mountain described as an example.¹;
- 6005 s[6002] = "LELESHUS V.L. (1995).- Colonial Rugosans as precursors of crises in the coral evolution.- Paleontologicheskii Zhurnal 1995, 4: 26-33.- FC&P 25-2, p. 38, ID=3120^Topic(s):colonial, extinctions; Rugosa colonial; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography:^The relation between the rugose morphology and Paleozoic global events in the evolution of the group is demonstrated. Solitary forms dominated before every outburst whereas colonial forms prevailed before mass extinction.¹;
- 6006 s[6003] = "FEDOROWSKI J. (1991).- Principles of early ontogeny in the rugose corals: a critical review.- Hydrobiologia, 216/217 [Williams R.B., Cornelius P.F.S., Hughes R.G. & Robson E.A. (eds): Coelenterate Biology: Recent Research on Cnidaria and Ctenophora]: 413-418.- FC&P 21-1.1, p. 43, ID=3214^Topic(s):ontogeny; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography:^It has been suggested that the septal furrows in the Palaeozoic rugose corals are secondary in comparison both to growth lines and to the septal blades inside calices. The leading role of furrows as an indicator of septal increase is thus questioned. Septa are always grouped in quadrants but their increase is generally towards the cardinal septum. The arrangement of the contrasting minor septa seems to be independent of the increase in septal furrows. Hence, the growth of the polyp's skeleton may have started from an aseptal cup.¹;
- 6007 s[6004] = "SEMENOFF-TIAN-CHANSKY P. (1987).- Sous-classe des Tetracoralliaires.- In Beauvais L. et al. (eds): Traite de Zoologie, tome III, Cnidaires, Anthozoaires, fasc. 3: 765-781.- FC&P 21-1.1, p. 48, ID=3240^Topic(s): ; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography:^^1";
- 6008 s[6005] = "IVANOVSKIY A.B. (1992).- O vnutrividovoy izmenchivosti u rugoz [on intraspecific variability in Rugosa].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatoporoids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3374^Topic(s):intraspecific variability; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography:^^1";
- 6009 s[6006] = "ULITINA L.M. (1992).- Izmenchivost korallov vida Entelophyllum articulatum (Wahlenberg) [variability in the coral Entelophyllum articulatum (Wahlenberg); in Russian].- ???.- FC&P 22-1, p. 30, ID=3375^Topic(s):variability; Rugosa, Entelophyllum; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography:^^1";
- 6010 s[6007] = "IVANOVSKIY A.B. (1992).- Nekotorye zamechanija o Cyathaxonia cornu [some remarks on Cyathaxonia cornu].- In Sokolov B.S. &

- Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatoporoids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3379^Topic(s): Rugosa, Cyathaxonia; Systematics: Cnidaria; Rugosa; Stratigraphy: Geography: ^^1";
- 6011 s[6008] = "NEUMAN B.E. (1993).- Taxonomic reliability of morphological structures in rugose corals.- Courier Forschungsinstitut Senckenberg 164: 119-125. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 13, ID=3445^Topic(s): morphology, taxonomic reliability; Rugosa, morphology; Systematics: Cnidaria; Rugosa; Stratigraphy: Geography: ^Rugose coral taxonomy is based on morphological features which vary in reliability for taxonomic purposes. Microstructures are interpreted as having a calcitic origin and only faintly altered by diagenesis. Thus fibro-normal and trabecular septal structures as well as septal dilations are important taxonomic features. The presence or absence and type of holdfasts and genuine fossular structures reveals special modes of life strategies and are also very important taxonomic signatures. Biometry must be critically applied as intraspecific variation and is dependent on various life strategies and ecological influence.^1";
- 6012 s[6009] = "IVANOVSKIY A.B. (1993).- Istorija izuchenchenija Rugoz (1983-1991) [history of research of the Rugosa (1983-1991); in Russian].- Nauka, Moskva; 80 pp.- FC&P 22-2, p. 80, ID=3505^Topic(s): research history; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Geography: ^This book deals with the knowledge on rugose corals - which has been gained during the last years - as well as references of publications containing topics on corals.^1";
- 6013 s[6010] = "WEYER D. (1997).- Hyposepta and diplosepta in the septal apparatus of Rugosa.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 037-052.- FC&P 26-2, p. 8, ID=3670^Topic(s): structures, third order septa; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Geography: ^Different types of "third order" septa are fairly widely distributed among Rugosa in addition to major septa (protosepta, metasepta) and minor septa (catasepta). The initial standard septal apparatus of Middle Ordovician time included hyposepta, which are recorded from 32 species of 12 suborders during lower Caradocian to Serpukhovian and became steadily less abundant from the Caradocian to their final disappearance in the late Palaeozoic. Hyposepta (based on the Givetian *Stereolasma rectum* (Hall 1843) appear as a very small third septal cycle (only active at the upper calicular margin), intercalated between all major and minor septa, and best discernible from special weaker septal furrows on the external archaeotheca. The term diplosepta [based on the Ludlowian *Sutherlandinia petaloides* (Ball & Grove 1940] refers to major and minor septa, which bifurcate at the periphery of the upper calice (but always originate from only one septal furrow of the wall). This specialization affects one (counter) or nearly all septa, and characterizes mainly the Silurian-Devonian Ditoecholasmatinae and Sutherlandiniinae, and some Lower Carboniferous pleonophorous taxa (*Cyathoclisia*).^1";
- 6014 s[6011] = "FALCES S. (1997).- Borings, embeddings and pathologies against microstructure. New evidences on the nature of the microstructural elements in rugose corals.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 99-116.- FC&P 26-2, p. 25, ID=3706^Topic(s): bioerosion vs microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: Geography: ^The principal aim of the present study has been to consider the moment of production of the different skeletal anomalies (borings, embeddings and pathologies) for

obtaining an accurate datation of the affected microstructures. The use of this textural criterion has usually been accepted in those research studies interested in the moment of production of the texture, such as carbonate petrology and genesis of submarine cements. The material studied in this report comes from the collections of solitary rugose corals without dissepiments, from Upper Visean of Northwestern Ossa-Morena region (Los Santos de Maimona and Guadiato Basin) except some specimens supplied by Prof. J. Kullmann from the Emsian of Bostanci at Istanbul (Turkey) which are totally recrystallized and previously drilled as well. This study is based on the occurrence of three kinds of evidences: Borings: Boring action penetrates and dislodges coral structures, providing a source for dating, since boring action must be posterior to these structures. Its study is based on the analysis and the interpretation of morphology of borings, and also it is completed with the description of their borders, and the different alteration processes which occur in this areas. Embeddings and pathologies: Both anomalies are contemporary with the biocrystallization, generating borders with concordant microelements. Description of complete diagenetic alterations in drilled specimens and comparison with the described borders. The possibility of describing rugose corals perforated and totally recrystallized (i.e. with a previously well known microstructure) constitutes finally an excellent reference for comparing the realized observation in the other paragraphs.^1";

6015 s[6012] = "NEUMAN B.E. (1997).- Evaluation of rugose coral potentials as index fossils.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 92, 1/4: 303-309.- FC&P 26-2, p. 32, ID=3722^Topic(s): Rugosa as index fossils; Rugosa, stratigraphy; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Rugose corals were epifaunal benthos, most profuse and diverse in carbonate perireefal and reefal environments. Like modern scleractinian corals they were sensitive to several ecological factors like water temperature, depth, salinity, bottom conditions, nutrient supply and probably illumination. Rugose corals showed highest diversity in subtropical and tropical realms. In cooler realms their diversity was low and solitary lambelasmatic forms dominated. At different times plate movements have brought the continental plates with including shallow sea areas into different climatic zones. This has often caused successions of different coral provinces on the various plates. Areas with overlapping faunas between these plates are often difficult to find. Rugose corals are mainly useful for correlation on the stage level within the same confacies belt as most species are comparatively short-ranging. Correlation based on Baltoscandian rugose corals from Rarhthyea - Hirnantian times clearly indicates that very few species cross sharp lithofacial boundaries. Morphologic trends observed in the succession of rugose coral assemblages give valuable support to a more reliable biostratigraphy. In order to improve the possibilities of using rugose corals as biostratigraphical tools we need more detailed and uniform taxonomic descriptions and more information about the strata where these taxa are found. Regular workshop meetings where taxonomic problems can be discussed by specialists are highly recommended.^1";

6016 s[6013] = "GUDO M. (1997).- Konstruktionsmorphologische Rekonstruktion rugoser Korallen.- Profil 11, 325-340.- FC&P 26-2, p. 57, ID=3734^Topic(s): constructional morphology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The rugose corals known from the Paleozoic era are comparable to the skeletons of fossil and recent scleractinians. The reconstruction of the rugose soft body is based on the assumption that polyp-like organisms produced the skeletons of the rugosa. Analyzing the construction of anthozoan polyps indicates a conception of a general soft body for coral polyps. This soft body is characterized by hydraulic filling, by tethering, and by internal mesenteries as well as

by tethering and fixing of a valve-like collapsible tube. Tentacles could emerge between the mesenteries on the oral disc. The external epithelial layers of the pedal disc are able to produce external carbonate structures between the mesenteries. During the ontogenetic growth of polyps, the installation of a new internal tethering structure is necessary to preserve form and coherence of the whole construction. Thereby new spaces between the mesenteries arise in which new carbonate structures were produced. Therefore, the skeleton of a coral polyp represents a kind of negative copy of the internal construction of the soft body. Thus the fossil skeletons give some valuable hints for the reconstruction of their soft bodies. The rugose corals are reconstructed as polyp-like barrel-shaped constructions. Their shape is determined by hydraulic filling and by the internal tethering by single mesenteries. The given reconstruction of the ontogenetic insertion of single mesenteries explains the pattern of the septal insertion within only four sectors in the rugose skeletons. This reconstruction is only valid for the general representation of the rugosa. It is a testable approach to the reconstruction of the rugose soft body, and it explains the pattern of septal insertion of the rugose corals. The reconstruction presented here is not extended to the very early ontogenetic stages of rugose polyps. Obviously, the model should be modified to explain those groups of the rugosa which do not show the general pattern of septal insertion in four sectors.¹¹;

6017 s[6014] = "LIN Y., HUANG Z. (1996).- On genus *Stylostroton* Chi and its systematic position.- *Acta Palaeontologica Sinica* 35, 1: 84-87.- FC&P 27-1, p. 70, ID=3813^Topic(s): systematics; Rugosa, *Stylostroton*; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^After the establishment of the genus *Stylostroton* by Dr. Chi in 1935, many palaeontologists in China and abroad have different opinions. As Chi described in diagnosis of this genus: "It has a distinct palicolumella";, some palaeontologists, such as S. Smith, D. Hill, Yu and Wang, regard it as a synonym of the genus *Siphondendron*. However, J. Fedorowski established a new subclass *Dividocorallia* (Palaeozoic Anthozoa) in 1991, holding a different opinion from Chi about this genus. He indicated the inconstant number of major septa in quadrants, which are similar to that of heterocoral, and so he established the new family *Stylostrotonidae*, which belongs to the order *Calyxcorallia* under the subclass *Dividocorallia*. Through examining the description and figures of this genus in Chi's paper, the authors found that there are two individual transverse sections in the type specimen (Pl. I, fig. 1a), with a palicolumella-like structure at the center of the right one. In fact, this is a structure caused by the connection of inner septa, rather than a palicolumella; the left one also presents this characteristic, with its septa in bunchwise arrangement, and each bunch has a long septum prolonged to the center and connected to others. Hence, it may be concluded that this genus has no palicolumella and bears no relationship with *Siphonodendron*. It is unavailable to correlate the genus with *Nemistium*, *Aulina*, *Diphyphyllum*, and therefore it is necessary for us to emend the diagnosis of the genus in this paper. According to Fedorowski (1991), this genus is a kind of heterocoral, and is regarded as a new Palaeozoic anthozoan. However, the authors have a different opinion, since the heterocoral has a specific structure, which is characterized by the never separated inner ends of septa, the absence of minor septa and dissepiments, with some boss, spines and ridges on the wall. While this genus has minor septa and a dissepimentarium, with the inner ends of septa occasionally separated, indicating that it is a typical Rugosa, instead of heterocoral. In case this genus is placed in the heterocoral, it would present a confusion between the Rugosa and the *Heterocorallia*. Therefore the authors suggest that the family *Stylostrotonidae* Fedorowski (1991) be placed under the suborder *Stauriina* of the Rugosa, including *Pseudopetraia* Soshkina, *Palaeophyllum* Billings, *Stylostroton*

Chi, Polygonaria Fan, Sudetiphyllia Fedorowski and Xinglangophyllum gen. nov.¹¹;

- 6018 s[6015] = "FEDOROWSKI J. (1997).- Remarks on the paleobiology of Rugosa.- Geologos 2: 5-58.- FC&P 27-2, p. 13, ID=3890^Topic(s): biology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^It is the interpretation of anatomy, behaviour and general physiology of the Rugosa.Variability in the suspected behaviour and general physiology of the Rugosa is inferred from frequently appearing morphotypes in solitary forms. This discussion is preceded by a review of important skeletal and suspect soft features, supported mainly by external characteristics of fossils. Existing skeletal data has led to the proposal of an initial development of two pairs of mesenteries. They are considered to be directive mesenteries by comparison to other Anthozoa. Only the sclerosepta corresponding to these two pairs of mesenteries are considered as protosepta. The cardinal fossula is reconstructed as an important irrigation apparatus, leading to a siphonoglyph above it, but not forming sufficient space to host mesenteries bearing gonads. Clear differences between the skeletal morphology in juvenile and mature parts are discussed in detail using several examples, beginning with reconstruction of earliest skeletogenesis. Secretion of the attachment and first wall of the aseptal cup is postulated as the initiation of the skeletogenesis of the polyp.¹¹;
- 6019 s[6016] = "OLIVER W.A.jr (1998).- Nomenclatural problems of Breviphrentis Stumm 1949 and Contophrentis new genus (Devonian rugose corals).- Journal of Paleontology 72, 5: 932-934.- FC&P 28-1, p. 34, ID=3965^Topic(s): nomenclature; Rugosa, Breviphrentis; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Amplexus invaginatus Stumm, 1937, the type species of Breviphrentis, is from Nevada; my redescription (Oliver, 1993, p. 19-20) was based on the specimens collected by C.W. Merriam that were used by Stumm (1937), and Merriam (1940 and 1974) in their descriptions. I concluded that most of the Merriam and Stumm material represented two species, one a siphonophrentid and one from another family (not named); I selected a lectotype from Stumm's (1937) illustrated "holotypes" and identified it as belonging to the siphonophrentid species (Oliver, 1993, p. 19-20). This had the apparent effect of preserving Breviphrentis as a siphonophrentid and justifying the assignment of the Eastern Americas species to that genus. * Later. Dr. A.E.H. Pedder, Geological Survey of Canada, Calgary, collected a large number of specimens from the type locality and horizon of Amplexus invaginatus in Nevada. During a visit to Pedder's laboratory (April, 1992), I was able to examine the prepared specimens and agreed with his conclusion that the A. invaginatus lectotype belonged to the population represented by his new collection and that it was the non-siphonophrentid. Thus, Breviphrentis sensu stricto is not a siphonophrentid and the Eastern Americas "Breviphrentis" needs a new name. The purposes of this note are to clarify the status of the Nevada Breviphrentis s.s. (see also Pedder, 1997) and to establish Contophrentis new genus, for the EAR species. [taken from introductory part of a short note]¹¹;
- 6020 s[6017] = "OSPAANOVA N.K. (1991).- To the nature of juvenile corallites of rugoses.- Izvestiya AN Taj. SSR,. otd. fiz.-mat., chim. i geol. nauk, 1991, 3: 47-53.- FC&P 23-1.1, p. 41, ID=4122^Topic(s): juvenile corallites; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^11";
- 6021 s[6018] = "FLUGEL H.W., HUBMANN B. (1994).- Anthozoa palaeozoica: Rugosa.- Catalogus Fossilium Austriae. Ein systematisches Verzeichnis aller auf osterreichischem Gebiet festgestellten Fossilien, IVC/la [H.W. Fluegel & H. Zapfe H. (eds)]; 134pp; wien.- FC&P 23-1.1, p. 60, ID=4127^Topic(s): catalogue of fossils; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ;

- 6022 **s[6019]** = "BOLTON J.C., DRIESE S.G. (1990).- The determination of substrate conditions from the orientations of solitary rugose corals.- *Palaios* 05: 479-483.- **FC&P 23-2.1**, p. 31, ID=4222^Topic(s):growth orientation; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^The substrate conditions of mudstone strata formed in ancient epicontinental settings may be determined from taphonomic assemblages of solitary rugose corals. Equal-area plots on the orientations of preserved corals can be used to infer whether subsequent hydrodynamic conditions affected any postmortem reworking of the corals. Mechanically stable positions for curved corals can be determined. Curved corals preserved in mechanically stable positions are interpreted to have been deposited on firm or hard substrates. Curved corals preserved in mechanically unstable positions were probably embedded in soft or soupy substrates.^1";
- 6023 **s[6020]** = "HECKER M.R.[GEKKER] (1993).- Kolonialnye Koninckofillumy.- Fauna i ekosistemy geologicheskogo proshlogo [B.S. Sokolov & A.B. Ivanovskiy (eds)]: 62-70; Rossiyskya Akademiya Nauk, Otdelenie Geologii, Geofiziki, Geokhimii i Gornyykh Nauk, Paleontologicheskii Institut. [in Russian].- **FC&P 23-2.1**, p. 45, ID=4263^Topic(s):colonial; Rugosa, Koninckophyllum; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^^1";
- 6024 **s[6021]** = "HUBMANN B. (1995).- Zur Kenntnis der Parricidalsprossung bei *Argutastrea Crickmay* (Anthozoa, Rugosa).- *Sitz.-Ber. oesterr. Akad. Wiss., math.-nat. Kl 1*, 201: 83-100. [in German, with English abstract].- **FC&P 24-1**, p. 62, ID=4475^Topic(s):blastogeny; Rugosa, *Argutastrea*; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^Among representatives of *Argutastrea* the species *quadrigenina* (Goldfuss 1826) is characterized by its quadripartite increase, which is a prominent taxonomic feature (Coen-Aubert & Luette 1990). within (i.e. &at the cost of) autocorallites four hystero-corallites develop. At the moment accurate investigations of such a peculiar increase were only carried out in *Stauria favosa* (Koch 1883, Smith & Ryder 1927, Ting 1940). On the basis of numerous series of thin sections and acetate peels of *Argutastrea quadrigenina* as well as on experimental tests the importance of this budding, but also mutualities and differences to *Stauria favosa* are discussed.^1";
- 6025 **s[6022]** = "SHEN JIANWEI (1995).- A study of *Sinospongophyllum* (Yoh 1937) by cladistic analysis - with discussion on intrapopulational variability of *S. crassiseptatum* sp.nov.- *Acta Palaeontologica Sinica* 34, 3: . [pp?].- **FC&P 24-2**, p. 41, ID=4545^Topic(s):cladistic analysis; Rugosa, *Sinospongophyllum*; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^^1";
- 6026 **s[6023]** = "PLUSQUELLEC Y. (1970).- Révision du genre *Microcyclus* Meek et Worthen, 1868 (Tétracoralliaires).- *Annales de la Société géologique du Nord* 91: 129-139.- **FC&P 1-2**, p. 17, ID=4661^Topic(s):revision; Rugosa, *Microcyclus*; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^^1";
- 6027 **s[6024]** = "TSIEN H.-H. (1970).- *Skoliophyllum lamellosum* and *wedekindophyllum marginatum*, interpreted as ecological forms of many species of *Cystiphyllodes*.- *Annales de la Société géologique de Belgique* 93: 183-202.- **FC&P 1-2**, p. 19, ID=4666^Topic(s):variability; Rugosa *cystimorpha*; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^Seven species of *Cystiphyllodes* are described in all of which &lamellosum&; and &marginatum&; forms are found. Problems concerning &septal cones&; and the validity of the so-called &wedekindophyllum&; and &skoliophyllum&; are discussed. The possession of &septal cones&; is not a specific characteristic, but an internal structure

adjusted to the external forms of the corals which are directly influenced by ecological conditions. The so-called *Wedekindophyllum*; and *Skoliophyllum*; are shown to be two special forms of *Cystiphyllodes* developed in unusual conditions.¹¹;

- 6028 s[6025] = "KULLMANN J. (1972).- Ontogenetic allometries of rugose corals.- Journal of Paleontology 46: 75-81.- FC#038;P 2-1, p. 16, ID=4717^Topic(s): ontogeny, allometry; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6029 s[6026] = "SPASSKIY N.Ya., KRAVTSOV A.G. (1971).- Modalities of appearance of morphologically similar structures in the evolution of Tetracorals .- Zapiski Leningradskogo ordenov Lenina i trudovogo Krasnogo Znameni Gornogo Instituta im. G.V. Plekhanova 59, 2, Paleontology (1971): 5-22.- FC#038;P 2-1, p. 23, ID=4736^Topic(s): parallel evolution; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6030 s[6027] = "IVANOVSKIY A.B., KRAVTSOV A.G., SPASSKIY N.Ya. (1971).- Estimation of the taxonomic value of the different morphological characters of the skeleton of Rugose Corals.- Geologiya i Geofizika 1971, 8: 121-124.- FC#038;P 2-2, p. 16, ID=4800^Topic(s): classification criteria; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6031 s[6028] = "IVANOVSKIY A.B. (1971).- Repetitive (iterative) phenomena in Rugose Corals.- Geologiya i Geofizika 1971, 8: 98-103.- FC#038;P 2-2, p. 16, ID=4801^Topic(s): iterative evolution; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6032 s[6029] = "PLUSQUELLEC Y., SEMENOFF-TIAN-CHANSKY P. (1972).- Révision de Combophyllum osismorum M.E. & H. 1850 (Tétracoralliaire dévonien).- Bulletin du Museum national d'histoire naturelle, 3e sér. 100, Sciences de la Terre 20: 411-461.- FC#038;P 2-2, p. 18, ID=4811^Topic(s): revision; Rugosa, Combophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^A revision of Combophyllum osismorum M.E. & H., type-species of Combophyllum, is given. This study was carried out on the original material and on a large collection from the type-locality. It was possible to state precisely the morphological, structural and microstructural features of the species. The radiary elements of this discoid coral are costo-septa of which the growth direction is chiefly peripheric, distal and proximal. They are composed of trabeculae arranged in a fan-shaped pattern. The stratigraphical position of the species is accurately determined (lower part of the Middle Devonian). A critical revision of the other known species of Combophyllum is proposed.¹¹;
- 6033 s[6030] = "COTTON G. (1973).- The rugose coral genera.- Elsevier Scientific Publishing Co.; 358 pp., no illustr.- FC#038;P 3-1, p. 24, ID=4879^Topic(s): index of genera; Rugosa genera; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[review by William A. Oliver jr] This book is in three parts: an alphabetical listing of generic names with generic and type species diagnoses (218pp), an identification key to the genera (99pp), and a list of type species alphabetized by trivial name (11pp). Remaining pages are occupied by a too brief preface, a reference list and a short addendum. This is a reference book for the specialist - neither more nor less. Generic listings are remarkably complete through the 1971 literature. W.J. Sando and I have found only seven missing genera, two missing spelling variants, and only one misspelled generic name. Diagnoses range from three to 20 or more lines, and seem to be good. Apparently they are based on original descriptions and published revisions; sources are given. Subjective synonyms are separately diagnosed and not necessarily noted as possible synonyms. This represents good policy and makes the book more objective and useful. A

questionable procedure is that of proposing 11 new names for junior homonyms that have been generally accepted as synonyms and not previously renamed. This is consistent with the treatment of other subjective synonyms but will cause trouble if later revisers decide that the genera are not synonyms. Most of the names will find use only in synonymies and other nomenclatural works. In any case, the new names are easily found in the book as all were constructed by adding the prefix 'Pro-' to the homonym. 'New names' (pp 32-33) for specimens originally described as 'Gen. I, Sp. I' and 'Gen. II, Sp. I' by Kostic-Podgorska (1957) are unnecessary and bad policy. These are new genera and species (with Cotton as author) based on material that the original describer considered inadequate. [part of extensive summary]^1";

- 6034 s[6031] = "IVANOVSKIY A.B. (1972).- Transformations interspécifiques, morphologie et ontogenèse du squelette du Calophyllum profundum (Rugosa) [en russe].- Trudy Inst. Geofiz. Moskva SSSR, 112: 4-9.- FC#038;P 3-1, p. 26, ID=4882^Topic(s): phylogeny, morphology, ontogeny; Rugosa, Calophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6035 s[6032] = "WEYER D. (1972).- Rugosa (Anthozoa) mit biformen Tabularium.- Jb. Geol. 1972, 4: 439-463.- FC#038;P 3-1, p. 30, ID=4899^Topic(s): structures, biform tabularium; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^A new morphological term "biform tabularium" is proposed for tabulae arranged in two systems corresponding to two different groups of interseptal loculi (position I and II of Sutherland, 1965). This feature, the variability of which is discussed, occurs in several independent lines of Rugose corals and is known from Upper Ordovician to Upper Permian times. The new genera Kaljolasma, Kabakovitchiella, Sutherlandinia, and Pedderelasma are erected for some species with a biform Tabularium. The revised family Cyathaxoniidae contains Middle Ordovician to Upper Permian genera of five subfamilies (Petraïinae, Ditoecholasmatinae, Cyathaxoniinae and two new ones, Sutherlandiniinae, and Lophotichiinae). Sutherlandiniinae and Ditoecholasmatiinae are characterized by curious split septa (cardinal, counter, and two counter minor septa). The known definitions of the genera Barrandeophyllum, Haptophyllum, Boolelasma, Petraïella, and Lophotichium have been changed.^1";
- 6036 s[6033] = "COTTON G. (1974).- The rugose coral genera. Supplement 1.- published by the author; 35pp; Kidderminster (UK).- FC#038;P 3-2, p. 37, ID=4942^Topic(s): index of genera; Rugosa genera; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^This supplement brings the Book substantially up to date by providing 33 new and 15 amended generic diagnoses with appropriate additions to the Identification Key and to the list of References. Mention is made of 32 genera recently suppressed, and of 17 new names. Numerous small corrections or additions are made.^1";
- 6037 s[6034] = "IVANOVSKIY A.B. (1973).- Rugosa. [en russe] .- Trudy Inst. Geol. Geofiz. AN SSSR 131: 38-73.- FC#038;P 3-2, p. 38, ID=4948^Topic(s): ; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6038 s[6035] = "IVANOVSKIY A.B. (1973).- Sistema Rugoz (Système des Rugosa).- Trudy Inst. Geol. Geofiz. AN SSSR (Sib. Otd.) 47 (Nouveaux résultats paléontologiques en Sibérie et en Asie moyenne): 76-81; Novosibirsk.- FC#038;P 3-2, p. 38, ID=4950^Topic(s): systematics; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^L#039;auteur propose une nouvelle classification des Rugosa basée sur l#039;analyse des travaux suivants: * Ivanovskiy 1965-70; * osnovy paleontologii 1962; * Spasskij 1965; * Hill 1956; * Lecompte 1952. * Les schémas montrent la position systématique des Rugosa parmi les Anthozoaires et contiennent un essai de phylogénie des superfamilles de Rugosa.^1";
- 6039 s[6036] = "FEDOROWSKI J. (1974).- Mirka, a new generic name for Mira

- Fedorowski, 1971.- Acta Palaeontologica Polonica 19, 4: p?.-
 FC&P 4-1, p. 31, ID=5099^Topic(s): nomenclature;
 Rugosa, Mirka; Systematics: Cnidaria; Rugosa; Stratigraphy:
 ; Geography: ^^1";
- 6040 s[6037] = "IVANOVSKIY A.B. (1973).- Faviphyllum sur la plate-forme
 sibérienne? .- Paleontologicheskii Zhurnal 1973, 1; 1 p.- FC&P
 4-1, p. 32, ID=5104^Topic(s): distribution; Rugosa,
 Faviphyllum; Systematics: Cnidaria; Rugosa; Stratigraphy:
 ; Geography: ^^1";
- 6041 s[6038] = "IVANOVSKIY A.B. (1974).- Soshkinella Gorianov et
 Lavrusewitsch 1972, nomen vanum.- Paleontologicheskii Zhurnal 1974, 1:
 1 p.- FC&P 4-1, p. 32, ID=5106^Topic(s): nomen
 vanum; Rugosa, Soshkinella; Systematics: Cnidaria; Rugosa;
 Stratigraphy: ; Geography: ^^1";
- 6042 s[6039] = "IVANOVSKIY A.B. (1975).- Rugosa.- Nauka, Moskva: 123 pp., 85
 figs.- FC&P 4-1, p. 32, ID=5108^Topic(s): research
 history; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:
 ; Geography: ^Dans cet important ouvrage l'auteur
 retrace l'histoire de l'étude de Rugosa, donne ensuite un
 aperçu de la morphologie du squelette et des méthodes de son étude,
 ainsi qu'un glossaire des principaux termes. La position
 systématique des Rugosa au sein des Coelentérés est analysée. Un
 chapitre est consacré aux tendances évolutives de ce groupe et aux
 principes de sa classification. L'auteur donne ensuite une revue
 des principaux genres par familles et groupes taxonomiques supérieurs.
 Enfin l'auteur traite de l'évolution des Rugosa à travers le
 Paléozoïque, de leurs conditions de vie, de leur utilisation en
 stratigraphie et de leur distribution paléogéographique. En dehors de
 son utilisation très générale, l'intérêt de ce travail réside dans
 le fait que l'auteur donne son propre point de vue sur tous les
 principaux problèmes concernant les Rugosa.^1";
- 6043 s[6040] = "SPASSKIY N.Ya. (1974).- Unité dialectique des lois
 spatio-temporelles de l'évolution (d'après l'exemple des
 Tétracoralliaires).- Zap. Leningr. ord. Len., ord. Oct. Revol. i ord.
 Trud. Krasnogo Znam. gorn. inst, im. G. V. Plekhanova 67, 2: 127-135.-
 FC&P 4-1, p. 38, ID=5137^Topic(s): phylogenetic
 laws; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:
 ; Geography: ^^1";
- 6044 s[6041] = "TSYGANKO V.S. (1972).- Zonastrea, nouveau genre de
 Tétracoralliaires coloniaux.- Ezhegodnik Inst. geol., Komi filiala AN
 SSSR 1972: 21-24; Syktykvar.- FC&P 4-2, p. 56,
 ID=5262^Topic(s): new taxa; Rugosa, Zonastrea; Systematics:
 Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6045 s[6042] = "EASTON W.H. (1975).- On Zaphrentoides.- Journal of
 Paleontology 49, 4: 674-691.- FC&P 4-2, p. 57,
 ID=5264^Topic(s): ; Rugosa, Zaphrentoides; Systematics:
 Cnidaria; Rugosa; Stratigraphy: ; Geography:
 ^Zaphrentoides Stuckenbergl 1895, is re-diagnosed on the basis of
 the type species Zaphrentis griffithi Milne Edwards et Haime 1851. A
 new, closely related species, Z. neogriffithi is described.
 Zaphrentoides is broadly interpreted herein as containing two
 subgenera, of which Zaphrentoides (Zaphrentoides) has the cardinal
 fossula on the convex side of curvature and Zaphrentoides
 (Amplexizaphrentis) has the cardinal fossula on the concave side of
 curvature.^1";
- 6046 s[6043] = "IVANOVSKIY A.B. (1974).- Concerning the biform Tabularium,
 Siphonofossula, Cyathaxonids, etc.- Paleontologicheskii Zhurnal 1974,
 8, 4: 552-555.- FC&P 4-2, p. 57, ID=5271^Topic(s):
 structures biform tabularium; Rugosa; Systematics: Cnidaria;
 Rugosa; Stratigraphy: ; Geography: ^^1";
- 6047 s[6044] = "MINATO M., KATO M. (1975).- Koninckocariniidae Dobrolyubova
 1962 (Rugose Corals).- Journ. Fac. Sci. Hokkaido Univ., ser. IV, 17, 1:
 23-25.- FC&P 4-2, p. 60, ID=5284^Topic(s): ; Rugosa,

- Koninckocariniidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[diagnosis of the genus Koninckocarinia]^1";
- 6048 s[6045] = "BIRENHEIDE R. (1974).- Growth form and biofacies of Microcyclus clypeatus (Goldfuss).- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 180-184.- FC&P 5-2, p. 5, ID=5393^Topic(s): growth form, ecology; Rugosa, Microcyclus; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[study of ontogeny and control of growth form in a small hadrophyllid coral]^1";
- 6049 s[6046] = "IVANOVSKIY A.B. (1974).- Criteria of genus, species and intraspecific categories of rugose corals.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 161-165.- FC&P 5-2, p. 5, ID=5398^Topic(s): classification criteria; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[discussion of criteria considered to be important at different levels of taxonomic discrimination]^1";
- 6050 s[6047] = "SEMENOFF-TIAN-CHANSKY P. (1974).- Donnees nouvelles sur la microstructure de certains tetracoraliaires.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 132-144.- FC&P 5-2, p. 7, ID=5413^Topic(s): microstructures; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^A comprehensive survey of primary and secondary skeletal fabrics in rugose corals studied by optical microscopy.^1";
- 6051 s[6048] = "SPASSKIY N.Ya., KRAVTSOV A.G. (1974).- Budding types of tetracorals.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 165-170.- FC&P 5-2, p. 8, ID=5416^Topic(s): blastogeny; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^A review of modes of increase in rugose corals. Solitary and colonial Rugosa are regarded as constituting two separate evolutionary lineages.^1";
- 6052 s[6049] = "VOYNOVSKIY-KRIGER K.G. (1974).- Longitudinal ribbing of the external surfaces of the rugose corals as a source of information about the internal structure of a polypary.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 144-150.- FC&P 5-2, p. 8, ID=5422^Topic(s): structures, longitudinal ribbing; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Comments on the relationships between epithecal grooves and septal insertion in Rugosa.^1";
- 6053 s[6050] = "IVANOVSKIY A.B. (1981).- On the origin of rugose corals.- FC&P 10, 1: 6-9.- FC&P 10-1, p. 6, ID=5464^Topic(s): phylogeny, origins; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^This problem is very important for understanding and reconstructing the history of Palaeozoic corals, as well as being very interesting. Really, how could solitary and colonial Rugosa, Tabulata and then Heliolitoidea appear so abruptly at the Early Ordovician / Middle Ordovician boundary? Soft bodied Coelenterata are known from the Late Precambrian and in the Cambrian there were suitable conditions for organisms to form a skeleton and benthic Metazoans took advantage of it, immediately. [first fragment of a paleontological note]^1";
- 6054 s[6051] = "COTTON G. (1977).- The rugose coral genera. Supplement 2.- published by the author; 44pp; Kidderminster (UK).- FC&P 6-1, p. 19, ID=5493^Topic(s): index of genera; Rugosa genera; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[2nd supplement updating the generic diagnoses and an identification key]^1";
- 6055 s[6052] = "IVANOVSKIY A.B. (1976).- Ukazatel' rodov rugoz. [index of rugose coral genera; in Russian].- Trudy Inst. geol. geofiz. AN SSSR 217; 255 pp; Moskva.- FC&P 6-1, p. 19, ID=5494^Topic(s): index of genera; Rugosa genera; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[data on type species, brief diagnoses and comments on rugose coral genera]^1";
- 6056 s[6053] = "SYTOVA V.A. (1977).- On the origin of rugose corals.-

- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 65-68.- FC&P 6-1, p. 21, ID=5505^Topic(s):early phylogeny; Rugosa origins; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^[supports pre-Ordovician divergence of soft-bodied ancestors of rugose and tabulate corals]^1";
- 6057 s[6054] = "IVANOVSKIY A.B. (1977).- Etapnost i stadiynost v evolucyi rugoz. [stages in evolution of Rugosa; in Russian].- Paleontologicheskii Zhurnal 1977, 1: 3-7.- FC&P 7-1, p. 26, ID=5576^Topic(s):phylogeny; Rugosa, phylogeny; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^^1";
- 6058 s[6055] = "LATYPOV Yu.Ya. (1976).- Pervaya nakhodka Spongonaria (Rugosa) v SSSR. [first discovery of a rugosan Spongonaria in the USSR; in Russian].- Paleontologicheskii Zhurnal 1976, 1: 118-119.- FC&P 7-1, p. 26, ID=5580^Topic(s):new records; Rugosa, Spongonaria; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:USSR^^1";
- 6059 s[6056] = "SYTOVA V.A., KAPLAN A.A. (1975).- Tetrakorally. [tetracorals; in Russian].- In: Kharakteristika pogranychikh sloev silura i devona centralnogo Kazakhstana: 61-76, pls 11-17; Nedra.- FC&P 7-1, p. 26, ID=5581^Topic(s):; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^Species of Hedstroemophyllum, Kodonophyllum, Scyphophyllum, Pseudochonophyllum, Characterophyllum, Mansuyphyllum, Lykocyetiphyllum, Implicophyllum, Pilophyllum, Australophyllum and Nodophyllum n.g., Aksarlinia n.g., Circumtextiphyllum n.g. and Kysylagathophyllum n.g. are described.^1";
- 6060 s[6057] = "GORANOV V.B., KAPLAN A.A., YERINA M.V., TSYGANKO V.S., GATAULINA G.M., KROPACHEVA G.S., LAVRUSEVICH A.I. (1977).- Otryad Rugosa. [order Rugosa; in Russian].- In: Nove vidy drevnikh rasteniy i bespozvonochnykh SSSR 4: 27-37, pls 9-12, 3 figs; Nauka.- FC&P 7-1, p. 27, ID=5583^Topic(s):; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^[described are species of Streptelasma, Zelophyllum, Altaiphyllum, Hexagonaria, Columnaria, Spongophyllum, Tabulophyllum, Lyrielasma, Taimyrophyllum, Carcinophyllum and Cruciphyllum Lavr. n.g.]^1";
- 6061 s[6058] = "SHURYGINA M.V. (1977).- Rugozy. [Rugosa; in Russian].- Biostratigrafiya i fauna rannego devona vostochnogo sklona Urala: 43-51, pls 11-19.- FC&P 8-2, p. 41, ID=5586^Topic(s):; Rugosa; Systematics:Cnidaria; Rugosa; Stratigraphy:; Geography:^The following Rugosa are described: Barrandeophyllum perplexum Pocta, Pseudamplexus fascicularis Soshk., P. quadripartitus Soshk., P. subbrevis Shur., Pseudamplexophyllum insolitus Shur., Favistella minor minor (Soshk.), F. minor minima Shur. subsp nov., Dendrostella columnaris (Zhel't.), D. (?) simbiotica (Frech.), Astrictophyllum massivum (Soshk.), Fasciphyllum conglomeratum Schlut, F. schluteri Soshk., Loyolophyllum cerioides Soshk., Spongophyllum halysitoides Ether., S. giganteum Shur., Neomphyma originata Soshk., N. kurpinskiensis Shur., N. simplex Vag., N. planevesiculosa Shur., N. paulotabulata Shur., Xystriphyllum medianum (Soshk.), Taimyrophyllum sp., Spongophylloides perfecta (wdkd), S. (?) thomasae Hill et Jones, S. improcerus Shur., Salairophyllum angustum (Zhel't.), Acanthophyllum heterophyllum M.-E. & H., A. irgislense (Soshk.), Lyrielasma petshorensis (Soshk.), L. columnum (Pocta), L. spissatoseptata Goryanov, Tryplasma aequabilis Lonsd., Microplasma composita (Soshk.), Rhizophyllum enorme Ether., Pseudomicroplasma nesterowskii (Peetz), P. salairica (Peetz), Thamnophyllum proprium Shur., sp.nov.^1";
- 6062 s[6059] = "NEVEROVA S.T. (1978).- O kodirovani vidovykh priznakov u roda Lithostrotion (rugozy). [on numerical coding of species features of the rugosan genus Lithostrotion; in Russian].- Vestnik Leningrad.

- Univ. 12, 2: 41-47.- FC&P 8-1, p. 53, ID=5687^Topic(s): numerical methods; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6063 s[6060] = "MINATO M., ROWETT C.L. (1968).- Modes of reproduction in rugose corals.- Lethaia 01, 2: 175-183.- FC&P 9-1, p. 19, ID=5781^Topic(s): reproduction; Rugosa, reproduction; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6064 s[6061] = "COTTON G. (1980).- The rugose coral genera. Supplement 3.- published by the author; Kidderminster.- FC&P 9-1, p. 23, ID=5786^Topic(s): index of genera; Rugosa genera; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[update of earlier versions; with 58 new and 22 amended generic diagnoses, with updated identification key, with complete list of type species, amounting to 1119 names]^1";
- 6065 s[6062] = "VOYNOVSKIY-KRIGER K.G. (1980).- O napravlenii zavivaniya u rugoz. [on direction of twisting of rugosans; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 98-100.- FC&P 10-2, p. 72, ID=5832^Topic(s): curvature; Rugosa curvature; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6066 s[6063] = "FLUGEL H.W. (1980).- Einige Notizen zur Phylogenie der Rugosa.- Annalen des naturhistorischen Museums in Wien 83: 73-82.- FC&P 10-2, p. 61, ID=6075^Topic(s): phylogeny; Rugosa, phylogeny; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6067 s[6064] = "IVANOVSKIY A.B. (1981).- O proiskhozhdenii rugoz. [origins of the Rugosa; in Russian, with English summary].- Izv. AN Est. SSR, 1981, 2: 56-60.- FC&P 10-2, p. 62, ID=6076^Topic(s): early phylogeny; Rugosa origins; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The oldest, soft-bodied Coelenterata appeared in the Vendian for the first time. At the beginning of the Cambrian the first skeletal forms of Anthozoa without septa, like Gastroconus and Tabuloconus, existed. In the Middle Ordovician all the main phylogenetical lines of Rugosa, Tabulata and Heliolithoidea appeared but the divergence of skeleton-building Anthozoa in the Ordovician was geochronologically "abrupt"; as it happened in the Vendian and then in the Middle Triassic. [original summary; essentially the same article as that published in FC&P 10, 1: 6-9; ID# 5464]^1";
- 6068 s[6065] = "anonymous (1983).- Book review: G. Cotton's "The Rugose coral species";.- FC&P 12, 1: 11.- FC&P 12-1, p. 11, ID=6172^Topic(s): book review, rugosan species; Rugosa, species; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^G. Cotton has now published "The Rugose Coral Species"; listing some 10 000 species in about 1200 genera, with 2400 references. The primary purpose of this book is to serve as a guide to where the original description of a Rugose Coral species is to be found. * The first section lists alphabetically the species that were originally referred or have subsequently been transferred to each genus, the genera also being listed alphabetically. For each species, the author, date of publication, page number, and horizons are given, and when a species is transferred, the author who first transferred it to the new genus. * In the second section all species are listed alphabetically with the genus to which they were originally referred, and the author and date. This makes it possible to trace the genus to which a species was originally referred even when, as is very frequently the case, only the genus to which it has subsequently been transferred is mentioned. * The third section lists the References, abbreviated in the manner of the World List of Scientific Periodicals, 4th Edition. [full text of a review]^1";
- 6069 s[6066] = "AUSICH W.I., SMITH D.P. (1982).- New evidence for the early life history of solitary rugose corals.- Journal of Paleontology 56, 5:

- 1223-1229.- FC&P 12-2, p. 33, ID=6212^Topic(s): ontogeny; Rugosa, ontogeny; Systematics: Cnidaria; Rugosa; Stratigraphy:; Geography:^Coiled protocoralla of solitary rugose corals from the Lower Mississippian (Lower Carboniferous) of the United States continental interior suggest two opposing life styles for their early life history. Specimens of *Cyathaxonia tantilia* have a hollow, coiled protocorallum and represent a coral with a pseudoplanktic brephic stage, as suggested by Sando (1977). *Amlexizaphrentis?* sp. has planispiral or low spiral protocoralla which are attached to fenestrate bryozoans and consequently had a benthic post-larval habit. These alternative life habits are important for the understanding of rugose coral ontogeny and have significant biostratigraphic implications. [original abstract]^1";
- 6070 s[6067] = "FEDOROWSKI J. (2009).- Morphogenesis and taxonomic value of the circumaxial skeleton in Rugosa (Anthozoa).- *Lethaia* 42, 2: 232-247.- FC&P 36, p. 56, ID=6441^Topic(s): structures axial; Rugosa, axial structures; Systematics: Cnidaria; Rugosa; Stratigraphy:; Geography:^An elevated skeletal structure surrounding an empty axial area occurs in many unrelated taxa within the Rugosa. This structure, commonly termed the aulos, was first differentiated and described by Grabau in 1922. Most terms introduced by that author for individual morphotypes have not been accepted because the taxa he chose to illustrate the typical development do not correspond to his diagnoses. The morphogenetic study on some circumaxial structures in this paper points out differences in their origin, their predicted role in the physiology of the coral polyps. The study shows both the advantages and disadvantages of the use of these circumaxial structures in taxonomy. In addition to the term aulos, which was introduced by Smith in 1928, new terms i.e. *circulotheca* and *columnotheca* are here introduced for the circumaxial structures that also are newly proposed names, to allow distinguishing them from true axial structures. [original abstract]^1";
- 6071 s[6068] = "FEDOROWSKI J. (2010).- Does similarity in rugosan characters and their functions indicate taxonomic relationship?.- *Palaeoworld* 19, 3-4: 374-381.- FC&P 36, p. 58, ID=6444^Topic(s): homologies, analogies; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:; Geography:^Functional analysis of changes in shape and arrangement of septa in the genera *Zaphrentites*, *Caninia*, and *Ufimia* allows one to move slightly beyond the usual boundaries of description and to ask why the arrangement in *Zaphrentites* is permanent, but becomes radial in *Caninia* and bilateral in *Ufimia*? This may be explained in terms of changing function and biological role of major septa in the ontogeny.* The creation of open space to accommodate strongly developed mesenteries is proposed as an explanation for the shortening and radial arrangement of axially free septa in mature *Caninia*, whereas the development of a slit on an oral disc, increasing water flow through the gastro-vascular cavity, is postulated for *Ufimia*. Both solutions point towards increased effectiveness of feeding and oxygenation, necessary for the growing organism. Such a conclusion negates the simple application of a given arrangement of septa as an indicator of taxonomic relationship. [original abstract]^1";
- 6072 s[6069] = "FEDOROWSKI J. (2010).- Remarks on rugose coral taxonomy.- *Palaeoworld* 19, 3-4: 242-248.- FC&P 36, p. 58, ID=6445^Topic(s): taxonomic principles; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy:; Geography:^Precise taxonomy is possible only when specimens are thoroughly investigated and checked against well known types. This simple procedure is not always followed and as a result, credible data are often lacking. * Accuracy. To match his interpretation of calice morphology, Schindewolf (1942, pl. 33, fig. 2a-d, text-fig. 89a-d) inaccurately oriented transverse sections of *Pentamplexus simulator* Schindewolf, 1940. His errors were in part corrected by Weyer and Ilna (1979), but they also

misidentified the counter protoseptum. Re-orientation of the original and two new thin sections allows that genus to be transferred to the family Polycoeliidae de Fromentel, 1860. * Manipulation: Schindewolf's (1942) manipulation of the data on Pentaphyllum De Koninck, 1872 and Cryptophyllum Carruthers, 1919 resulted in an incorrect diagnosis, which was followed by many students who introduced 49 species (Ilina, 1984). Despite its name and Schindewolf's (1942) description, the poorly preserved type of Pentaphyllum possesses six, instead of five, dominant septa in its calice. * Lack of attention to detail: Biform morphology in the tabularium is not always recognized and is commonly incorrectly described, despite its importance as a factor in water distribution within the gastro-vascular cavity and its diagnostic value for taxonomy. Failure to recognize that feature can lead to incorrect classification up to the family level.^1";

6073 s[6070] = "WEYER D. (2008).- Revision des Ludwig/Kunth-Gesetzes zur Septeninsertion der Supraordo Rugosa (Anthozoa, Ordoviz-Perm). [Revision of the Ludwig/Kunth law of septal insertion in the superorder Rugosa (Anthozoa, Ordovician-Permian; in German with English summary].- Abhandlungen und Berichte für Naturkunde 30: 85-145.- FC&P 36, p. 70, ID=6469Topic(s): septal insertion patterns; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The outstanding feature of the Rugosa, their ontogenetic mode of septal insertion, is redefined, based on a new morphogenetic nomenclature of septa. External furrows of the archaeotheca show septal increase either by bifurcation (schizosepta), or by intercalation (intrasepta). The primary phylogenetic radiation in the Late Ordovician comprises the two hitherto accepted orders characterized by schizosepta (metasepta, catasepta), the Stauriida (probably ancestral, with minor septa near antiseptum), and the Cystiphyllida (without antiseptal minor septa); but there exists an additional, completely neglected order Pholidophyllida as a sister group whose major and minor septa are intrasepta (here named addisepta and kalasepta). [original English summary]^1";

6074 s[6071] = "GUDO M. (1997).- Reconstruction of rugose corals - a constructional approach.- FC&P 26, 1: 9-16.- FC&P 26-1, p. 9, ID=6874Topic(s): constructional morphology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[the presented] model is qualified for a reconstruction of ontogeny of rugose corals from the early condition state with only six protosepta. However model is not sufficient to explain earlier phases of ontogeny. I must emphasize that the presented reconstruction is only valid for the generalized representations of the septal insertion mechanisms as described in paleontological textbooks and not for any special group of the tetracorallia. This model might possibly be modified to be valid for some special groups of rugose corals with only small modifications to adjust special situations. Furthermore it may also be applicable to describe and explain the limited capability of rugose corals to build coherent colonies and whole reef constructions as compared to those of madreporarian corals. [fragment of conclusions]^1";

6075 s[6072] = "GUDO M. (2000).- A structural-functional approach to the soft bodies of rugose corals.- Organisms, genes and evolution [D.S.Peters & M. Weingarten (eds): Proceedings 7th Intern. Senckenberg-Conference]: 219-240.- FC&P 29-1, p. 51, ID=7044Topic(s): constructional morphology, operculate corals; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The study of generation and control of shape is an integral part of a constructional approach to organisms. If living beings are understood as organismic constructions, the determination of shape can be explained as being driven by hydraulic, mechanical and energy conducting entities. The recent Anthozoans such as the Actiniaria, Octocorallia, or Scleractinia, can be analyzed in such a manner that it leads to an understanding of their organisation and the

physical laws underlying it. * The most important principles that have to be observed for a constructional approach of such organisms are hydrostatic and hydrodynamic physical laws, the principles of coherence, energy transformation and the mechanisms of muscular action, including the antagonistic interaction necessary for the proper functioning of all contractile elements (Gutmann 1991). A proper understanding of these principles leads to the conclusion that no structural transformation in individual development or evolution is arbitrary or accidental (Gutmann & Bonik 1981; Gutmann 1995; Grashoff 1976; Peters & Gutmann 1971; Schmidt-Kittler & Vogel 1991). * The results of a constructional morphology of recent organisms can be applied to analysis of the structural, organizational and functional aspects of fossil organisms. Any anatomical reconstruction of fossil and extinct organisms can only be performed in analogy to that of recent relatives and has to refer to biological and morphological knowledge. In this approach constructional morphology is used as a principle of uniformitarianism (Gudo 1997; Gutmann 1997) in order to reconstruct the lost soft bodies of the fossil rugose corals. [original introduction]^1";

- 6076 s[6073] = "GUDO M. (2001).- Soft body construction, evolution and reef forming potential of rugose corals.- FC&P 30, 1: 39-46.- FC&P 30-1, p. 39, ID=7081Topic(s): constructional morphology; Rugosa; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^All bauplans of the Anthozoa evolved independently from each other. The ancestor is a so called gallertoid-coral, an organism which bears a number of polyps, that have developed as closing apparatuses for the openings of the internal canals. When inside these polyps the gastric cavity enlarges, certain numbers of tissue pouches was preserved to hold the polyp in shape. These pouches later formed the mesenteries. The number of the initial developing pouches therefore determined the number of mesenteries and accordingly the bauplan. [concluding part of a paleontological note, summarizing a monograph by Gudo (2001), published in Courier Forschungs-Institut Senckenberg 228]^1";
- 6077 s[6074] = "WANG XIANGDONG (1994).- Revision of Antiphyllinae Ilna 1970 with a method of cladistic analysis.- Acta Palaeontologica Sinica 33, 1: 118-129.- FC&P 23-2.1, p. 34, ID=4228Topic(s): revision, cladistic analysis; Rugosa, Antiphyllinae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Great controversy has been evoked with the erection of the Antiphyllidae by Ilna in 1970. The subdivision of Antiphyllidae (Antiphyllinae) has been changing with different authors. The methodology employed here for the cladistic analysis with computer is a tentative of classification under a certain criterion. [first part of extensive summary]^1";
- 6078 s[6075] = "KOSSOVAYA O.L. (1986).- Importance of ontogeny and microstructure for systematics of bothrophyllids (Rugosa).- Phanerozoic reefs and corals of the USSR [Sokolov B. S. (ed.), Trudy V Vsesoyuznogo Simpoziuma po Korallam i Rifam, Dushanbe 1983]: 77-80 [in Russian].- FC&P 18-1, p. 37, ID=2253Topic(s): ontogeny, microstructures; Rugosa, Bothrophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6079 s[6076] = "WEYER D. (1996).- Calceolidae versus Goniophyllidae (Anthozoa, Rugosa; Silur-Devon).- Abhandlungen und Berichte für Naturkunde 19: 69-71.- FC&P 25-2, p. 49, ID=3139Topic(s): nomenclature; Rugosa, Calceolidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Author of the family taxon Calceolidae is not Lindstroem 1883 or Roemer 1883, but King 1846. Goniophyllidae Dybowski 1873 become a junior synonym.^1";
- 6080 s[6077] = "IVANOVSKIY A.B. (1973).- Sur la structure et la croissance du squelette de Calceola sandalina shuimokouensis Chi (Rugosa).- Paleontologicheskii Zhurnal 1973, 3: 127-129.- FC&P 3-2, p.

- 38, ID=4949^Topic(s): structures, ontogeny; Rugosa, Calceola; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6081 s[6078] = "BERKOWSKI B. (1997).- Calyxcorallia, their relation to Heterocorallia and Rugosa. A blastogenetic study of Stylostrotion sudeticum Fedorowski 1991.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 153-162.- FC&P 26-2, p. 13, ID=3681^Topic(s): blastogeny; Rugosa, Heterocorallia; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Detailed blastogenetic investigations using serial acetate peels from Stylostrotion sudeticum Fedorowski 1991, a representative of the controversial group Calyxcorallia, revealed that offset formation in the youngest stages is close to some lateral increase in rugose corals. The appearance of heterocoral symmetry in later stages of blastogeny is a feature which would differentiate the blastogeny of the Calyxcorallia from that of the Rugosa. Analysis of the similarities and differences between the blastogeny of S. sudeticum, the Rugosa and the Heterocorallia suggests that it is more appropriate to regard the Calyxcorallia as a group within the Rugosa, rather than grouping them with the Heterocorallia in a separate subclass. However, the possibility cannot be excluded that the Calyxcorallia was a transitional group from the Rugosa to the Heterocorallia, as postulated by Fedorowski (1991).^1";
- 6082 s[6079] = "JOHNSON G.A.L., NUDDS J.R. (1977).- Is the Columnariina (Rugosa) wholly polyphyletic?.- FC&P 6, 1: 11-12.- FC&P 6-1, p. 11, ID=5485^Topic(s): monophyly?; Rugosa, Columnariina; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Most workers on the Rugosa must have experienced difficulty in assigning definite and exclusive morphological characters to Suborder Columnariina. In Treatise F (p. F296) a precise diagnosis gives no characters or combination of characters that are not also present in other rugosan suborders. [] The lack of unspecialised ancestors, rarity of solitary corals, dominance of highly evolved compound coralla and the Devonian - Carboniferous stratigraphical hiatus leads us to believe that the Columnariina are entirely a polyphyletic group. * The suborder appears to create confusion in the genetic taxonomy of the Rugosa as end stages of many lineages have been placed in this group. * We suggest that it would be an advancement to suppress this taxon, but this cannot be done until the specialists in various groups of the Columnariina can reallocate them within the remaining framework of rugosan classification. * We intend to review the British Carboniferous Columnariina and would welcome, through this newsletter, results of research on other groups of Columnariina and suggestions as to their true affinities. [initial and concluding fragments of the paper]^1";
- 6083 s[6080] = "KULLMANN J. (1975).- Coral associations from cephalopod-bearing rocks of Spain and Turkey.- Drevniye Cnidaria [B.S. Sokolov (ed.): Proceedings of the 1st International Symposium on Fossil Cnidaria] 2: 161-167.- FC&P 5-1, p. 29, ID=5355^Topic(s): pelagic facies; Rugosa, Cyathaxonia fauna; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6084 s[6081] = "IVANOVSKIY A.B. (1974).- Sur le tabularium biforme et la siphonofossule des Cyathaxonides.- Paleontologicheskii Zhurnal 1974, 4: 126-127.- FC&P 4-1, p. 32, ID=5105^Topic(s): structures biform tabularium; Rugosa, Cyathaxoniidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6085 s[6082] = "BIRENHEIDE R. (1990).- Zur palöökologischen Bedeutung des Stereoplasmas in cystimorphen Deckelkorallen.- Natur und Museum 120, 5: 129-138. [in German].- FC&P 19-1.1, p. 46, ID=2651^Topic(s): operculate cystimorphs, ecology; Rugosa, Cystiphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy:

- ; Geography: ^Am Beispiel der cystimorphen rugosen Deckelkorallen-Arten Rhizophyllum gotlandicum (C. F. Roemer 1856) und Calceola sandalina (Linnaeus 1771) wird die in ihren Polyparen sehr unterschiedliche Menge von kompaktem Calcit-Stereoplasma als funktionelle Anpassung an ihre Siedlungsraume gedeutet: Rhizophyllum gotlandicum war auf Riffdetritus-Hartgrunden verankert, wogegen Calceola sandalina auf weichem Sediment lag und deshalb eine Gewichtszunahme des Polypars zu seiner Lagefixierung beitrug.^1";
- 6086 s[6083] = "TSYGANKO V.S. (1972).-'Cônes septaux" des Tétracoralliaires et leur signification fonctionnelle.- Paleontologicheskii Zhurnal 1972, 4: 31-43. [en russe].- FC&P 4-1, p. 40, ID=5145^Topic(s): structures septal cones; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6087 s[6084] = "SPASSKIY N.Ya., KRAVTSOV A.G., TSYGANKO V.S. (1974).- Colonial cystimorphs.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 170-172.- FC&P 5-2, p. 8, ID=5417^Topic(s): ; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^An outline classification for colonial Rugosa with spinose septa. A number of new genera, families, suborders and the order Zonastreaeida are proposed.^1";
- 6088 s[6085] = "HE YUANXIANG (1986).- On Classification and Stratigraphical Significance of the Fine Structure in the Septa of Cystiphyllida.- Acta Palaeontologica Sinica 25, 1: 75-86.- FC&P 15-2, p. 28, ID=0649^Topic(s): septal microstructures; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The present paper discusses chiefly the morphological characters, classification and stratigraphical significance of the fine structure in the septa of Cystiphyllida. In addition to the discussion and emendation made of the definitions of the known superfamily, families and subfamilies, here one new superfamily, one new family and three new subfamilies have been established. The author considers that the basic unit of the fine structure in the septa of Cystiphyllida includes three forms: spinal-tubular skeleton-clasts, lamellar tissue and lamellar skeleton-clasts. Based on the septal fine structure, Cystiphyllida can be divided into two superfamilies: Cystiphyllidae and Zonechylidae. The septa of Cystiphyllidae are made up of spinal-tubular skeleton-clasts and lamellar tissue; this superfamily chiefly appeared in Silurian. The septa of Zonechylidae are only composed of lamellar skeleton-clasts; most of members of the superfamily occurred in Devonian.^1";
- 6089 s[6086] = "HE YUANXIANG (1985).- Some new genera and species of Cystiphyllida.- Acta Palaeontologica Sinica 24, 4: 361-368.- FC&P 15-1.2, p. 27, ID=0839^Topic(s): new taxa; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The paper deals with descriptions of: Tryplasma naoxianense sp.nov., Trypacystiphyllum shiqianense gen. et sp.nov., Zelocystiphyllum gen. nov., with the species Z. guanyuanense sp.nov. (type species), Z. chaotianense sp.nov., Z. tianbaense sp.nov., Z. ganluoense sp.nov., Z. ningqianense sp.nov., Z. dazubaense sp.nov., Z. shaanxiense sp.nov., Zelophyllum dalushaiense sp.nov., Chonophyllum dazubaense sp.nov., Oliveria huanggeensis sp.nov., O. shaanxiensis sp.nov., Pseudamplexus raretabulata sp.nov.^1";
- 6090 s[6087] = "WANG HONGZHEN, HE YUANXIANG, CHENG JIANQIANG (1987).- Skeletal structures and classification of the Order Cystiphyllida (Rugosa).- Geoscience 1, 1: 3-14 [in Chinese, with English summary].- FC&P 17-2, p. 29, ID=2187^Topic(s): microstructures, SEM study, classification; Rugosa cystimorpha; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^SEM study on the microskeletal structures of more than 10 cystiphyllid genera has revealed that lamellar skeleton with fundamental unit calcite flakes 15-35 µm in diameter and 1.5-2.5 µm in thickness is in

all cases dominant, while fibrous skeleton is mostly represented by primitive types, by irregular granules some 2-3 μm in diameter and brachycolumns 2-3 μm in diameter and 5-10 μm in length. These two kinds of elements combine in various ways to form 4 types of septal spines or trabeculae. They are (1) holacanth, tube-like and entirely lined with lamellar flakes; (2) single rhabdacanth with axial granules enveloped by peripheral flakes; (3) composite rhabdacanth comprising axial row of clusters of rhabdacanths embedded in interstitial and enveloping lamellar flakes, and (4) monacanth composed of parallel to subradial brachycolumns or short needles. They are exemplified respectively by *Protocystiphyllum*, *Holmophyllum*, *Gyalophylloides* and *Tryplasma*. Based on these microstructures and megastructures we have recognized 50 genera of cystiphyllid corals grouped into 8 families. They are: Primitophyllidae, Palaeocyclidae, Tryplasmataceae, Cystiphyllidae, Mucophyllidae, Holmophyllidae, Goniophyllidae and Ketophyllidae. Diagnoses of the families are given and briefly discussed, and genera included in the families are named. Microstructures of some important genera are indicated in the caption of plates. Stratigraphical and geographical distribution in China and in the world are given in Table 1. Possible evolutionary and taxonomic relations are shown in the figures. It is deemed that the two earliest appeared families, Primitophyllidae and Mucophyllidae, came from different descent. Palaeocyclidae and Tryplasmataceae were probably derived separately from Primitophyllidae. A third branch is Cystiphyllidae, which underwent radiating evolution to form the 4 families in the beginning of the Silurian and became the major constituents of the group until the end of Early Devonian, when most of the cystiphyllids died out. Ketophyllidae may however represent another separate lineage directly from Primitophyllidae.¹¹;

6091 s[6088] = "MCLEAN R.A. (1976).- Genera and stratigraphic distribution of the Silurian and Devonian rugose coral family Cystiphyllidae Edwards and Haime.- Papers of geological Survey Canada 76-1B: 295-301.- FC&P 5-2, p. 6, ID=5404Topic(s): classification, distribution; Rugosa, Cystiphyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^An outline classification of the Cystiphyllidae with a range chart of the genera recognised by the author.¹¹;

6092 s[6089] = "FEDOROWSKI J. (1993).- Some remarks on morphogenesis and evolution of Dividocorallia Fedorowski 1991.- Courier Forschungsinstitut Senckenberg 164: 81-087. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 1].- FC&P 22-2, p. 12, ID=3441Topic(s): phylogeny; Rugosa, Dividocorallia; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Dividocorallia Fedorowski 1991, the recently distinguished subclass of extinct Devonian and Carboniferous Anthozoa, comprises two orders: Heterocorallia Schindewolf 1941 and Calyxcorallia Fedorowski 1991. The arrangement and development of septa are fundamental characters common for the subclass. It has been postulated that only a single septum appeared at the very beginning of septogenesis in both orders. This common character of orders points on the Rugosa as the ancestral group of the Dividocorallia. Presence (Calyxcorallia) or absence (Heterocorallia) of calices is the basic distinguishing character of the order-level. It can be traced back to the Lower Devonian, when the oldest representatives of both orders occur. Pseudopetraia Soshkina 1951 represents Calyxcorallia whereas Tetrephyllia Yoh et al. 1984 is the oldest known heterocoral. Symmetrical (Tetrephyllina Fedorowski 1991) versus asymmetrical (Heterocorallia) arrangement of septa allows to distinguish suborders within the order Heterocorallia, whereas morphogenesis and microstructure of the external wall are the basic diagnostic characters of families of that order. The order Calyxcorallia comprises families that are distinguishable by the form of growth: solitary versus colonial. Majority of genera included in

- 6093 Calyxcorallia were formerly described as rugose corals.^1";
s[6090] = "KOSSOVAYA O.L. (1993).- Some aspects of the study of massive Durhaminidae.- Courier Forschungsinstitut Senckenberg 164: 89-101. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 12, ID=3442^Topic(s): ; Rugosa, Durhaminidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^The main evolutionary trends of massive colonial tetracorals of the family Durhaminidae are described and classified under two orders. Analysis of morphological variation is used as the basis for phylozones in the Asselian-Artinskian time interval.^1";
- 6094 s[6091] = "ONOPRIENKO Yu.I. (1979).- Concerning the relationship between Endophyllum and Tabulophyllum (Rugosa).- Iskopaemye bespozvonochnye Dalnego Vostoka: 29-32; Vladyvostok.- FC&P 11-2, p. 26, ID=1832^Topic(s): classification; Rugosa, Endophyllum; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Supports the separation of Endophyllum and Tabulophyllum, but also maintains Apolythophyllum as a genus distinct from Tabulophyllum. The new genus Pseudoendophyllum (type species Endophyllum nalivkini Gorsky 1935) is erected for crinoid [??] forms from the Upper Devonian and Lower Carboniferous, and is assigned to the Petalaxidae.^1";
- 6095 s[6092] = "MINATO M., KATO M. (1975).- Geyerophyllidae Minato 1955.- Journ. Fac. Sci. Hokkaido Univ., ser. IV 17, 1: 1-21.- FC&P 4-2, p. 60, ID=5283^Topic(s): ; Rugosa, Geyerophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[study on this rugosan family and its probable 7 genera]^1";
- 6096 s[6093] = "MINATO M., KATO M. (1975).- Geyerophyllidae.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 184-188.- FC&P 5-1, p. 29, ID=5357^Topic(s): ; Rugosa, Geyerophyllidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[synopsis of morphology, stratigraphic and geographic distribution, and generic composition of the family]^1";
- 6097 s[6094] = "NUDDS J.R. (1979).- Coloniality in the Lithostrotionidae (Rugosa).- Systematics Association Special Volume 11 [Larwood G. & Rosen B. R. (eds): Biology and systematics of colonial organisms]: 173-192.- FC&P 9-2, p. 41, ID=0326^Topic(s): coloniality; Rugosa, Lithostrotionidae; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6098 s[6095] = "CHEREPNINA S.K. (1974).- Taxonomy of the suborder Phillipsastraeina.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 1: 198-204.- FC&P 5-2, p. 8, ID=5418^Topic(s): systematics; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^A revision of the suprageneric classification of phillipsastreid and disphyllid corals including the erection of a new genus.^1";
- 6099 s[6096] = "ILYINA T.G. (1977).- Development of the septa in rugose corals of the superfamily Polycoeliaceae.- Bureau Recherches Geologiques et Minieres Memoir 89: 78-086 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 25, ID=0053^Topic(s): structures septa; Rugosa, Polycoeliina; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^Describes and illustrates one new species. Discusses importance of septal development in classification.^1";
- 6100 s[6097] = "ILYINA T.G. (1984).- Istoricheskoe razvitie korallov, podotryad Polycoeliina [historical development of corals, suborder Polycoeliina].- Akademiya Nauk SSSR, Paleontologicheskii Institut; Trudy . ???????.- FC&P 13-2, p. 40, ID=0550^Topic(s): phylogeny; Rugosa, Polycoeliina; Systematics: Cnidaria; Rugosa; Stratigraphy: ; Geography: ^^1";
- 6101 s[6098] = "ILYINA T.G. (1975).- Morphology and important evolutionary

- stages of the suborder Polycoeliina.- Drevniye Cnidaria [B.S. Sokolov (ed.): Proceedings of the 1st International Symposium on Fossil Cnidaria] 1: 211-219.- FC&P 5-2, p. 5, ID=5353^Topic(s):morphology, phylogeny; Rugosa, Polycoeliina; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^[includes comments on the Devonian members of the suborder]^1";
- 6102 s[6099] = "ILYINA T.G. (1980).- Morfogenez septalnogo apparata polyceliin. [morphogeny of polycoeliine septal system; in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 148-156.- FC&P 10-2, p. 70, ID=5807^Topic(s):structures septa, septal system; Rugosa, Polycoeliina; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^1";
- 6103 s[6100] = "ILYINA T.G. (1981).- Offsetting of Polycoeliina.- Acta Palaeontologica Polonica 25, 3-4: 451-457.- FC&P 10-2, p. 70, ID=6088^Topic(s):blastogeny; Rugosa, Polycoeliina; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^1";
- 6104 s[6101] = "HE XINYI, LI ZHIMING (1983).- On the taxonomy and evolution of the family Stauriidae (Rugose corals).- Acta Palaeontologica Sinica 22, 4: 389-397.- FC&P 13-1, p. 32, ID=0440^Topic(s):systematics; Rugosa, Stauriidae; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^This paper deals with the taxonomy and evolution of the family Stauriidae. The diagnostic features of the Stauriidae are emended. Besides the shape of corallum, the differentiation of tabulae and the two rows of dissepiments, the axial increase shows a quadripartite gemmation in the calyx with four major septa (Teilungssepten) becoming longer and stronger, and crossed at the center. However, the gemmation may also be tripartite, pentapartite or rarely hexapartite. This family includes five genera and two subgenera: Ceriaster, Ceriaster (Eostauria) subgen.nov., Ceriaster (Ceriaster), Paraceriaster (He Yuanxiang 1980), Stauria, Parastauria and Cyatostauria gen.nov.^1";
- 6105 s[6102] = "HE YUANXIANG (1980).- On the classification and the stratigraphic significance of the Stauriidae.- Bulletin Chinese Academy geological sciences 9, 1: 32-47.- FC&P 11-2, p. 25, ID=1817^Topic(s):systematics, biostratigraphy; Rugosa, Stauriidae; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^1";
- 6106 s[6103] = "SYTOVA V.A. (1980).- Ob obyome semeystva Streptelasmataidae (rugozy). [on extent of the Streptelasmataidae (Rugosa); in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 42, ID=5829^Topic(s):classification; Rugosa, Streptelasmataidae; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^1";
- 6107 s[6104] = "ONOPRIENKO Yu.I. (1980).- Nekotorye osobennosti morfologii i evolucyi uraliniid (rugozy). [some morphological and evolutionary peculiarities of Uraliniidae (Rugosa); in Russian].- Korally i rify fanerozoya SSSR [B.S. Sokolov (ed.)]: 127-130.- FC&P 10-2, p. 71, ID=5820^Topic(s):systematics; Rugosa, Uraliniidae; Systematics:Cnidaria; Rugosa; Stratigraphy: ; Geography: ^1";
- 6108 s[6105] = "DROSER M.L., HAMPT G., CLEMENTS S.J. (1993).- Environmental patterns in the origin and diversification of rugose and deep-water scleractinian corals.- Courier Forschungsinstitut Senckenberg 164: 047-054. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 10, ID=3436^Topic(s):distribution patterns; Rugosa, Scleractinia; Systematics:Cnidaria; Rugosa Scleractinia; Stratigraphy: ; Geography: ^Scleractinian and rugose corals demonstrate a broad environmental distribution; both clades have a relatively high diversity of representatives which live(d) at great depths. In order to determine the nature of diversification of these deep-water forms the paleoenvironments of the

earliest Rugosa and representatives of extant deep-water scleractinian families were determined. Environmental patterns of the subsequent diversification of the Rugosa and scleractinian suborder Caryophyllina were also documented. The earliest reported Rugosa is *Lambeophyllum* from the Chazyan Crown Point Limestone (Vermont, U.S.A.) which is interpreted to have been deposited in a nearshore setting. Within five million years of their initial appearance the rugosans expanded, at relatively low diversities, offshore to the slope and deep-basin. Nearly all representatives of families of extant scleractinians now living in deep-water (>200m) also first occur in an onshore environment. The caryophylliids, the most speciose deep-water coral clade, first appeared in the Toarcian and soon after expanded across the shelf. Thus, both rugose and scleractinian corals expand offshore at relatively low diversities early in their histories. Throughout most of the Mesozoic high diversities of caryophylliids occur in shelfal settings. In the Tertiary high diversity patterns in the outer shelf and slope are established.¹¹;

- 6109 s[6106] = "FEDOROWSKI J. (1997).- Rugosa and Scleractinia - a commentary on some methods of phylogenetic reconstructions.- *Acta Palaeontologica Polonica* 42, 3: 446-456.- FC&P 27-2, p. 14, ID=3892Topic(s): phylogeny; Rugosa, Scleractinia; Systematics: Cnidaria; Rugosa Scleractinia; Stratigraphy: ; Geography: ^A critical review of two papers: (1) Dzik J.: Early metazoan evolution and meaning of its fossil record. *Evolutionary Biology*, 27, 1993 and (2) Stolarski J.: *Gardineria* - a scleractinian living fossil. *Acta Palaeont. Polonica*, 41, 1997. An approach of Dzik to the reconstruction of phylogeny and roots of Rugosa was questioned. The inadequately known morphology and ontogeny of *Cothonion*, as well as differences in the microstructure of the external wall and increase in septa between that Middle Cambrian genus and the Rugosa, established by Jell & Jell (1976) eliminate it from potential ancestors of the Rugosa. Its similarity to the Devonian genus *Calceola* is superficial and those two cannot be compared as relatives. The operculate taxa postulated by Dzik (1993) to be ancestors for all the Rugosa appeared to be when all basic morphotypes of non-operculate Rugosa were already flourishing. Thus, all phylogenetic conclusions by Dzik (1993) were rejected. Stolarski (1996) in his study on the Recent *Gardineria* attempted to prove a thesis of the rugosan origin of Scleractinia. The long known similarity in morphology and microstructure of those two subclasses (or Orders) of the Anthozoa, as well as equally well known differences between them, were briefly discussed in the critique to show parallelism in the development rather than true relationships of those taxa. An absence of the Rugosa from all latest Permian strata, despite proper ecological conditions some of the offer, speaks more strongly against a direct relationship of those two large taxa than an absence of Scleractinia from equally proper conditions existing in Early Triassic.¹¹;
- 6110 s[6107] = "GILL G.A., SEMENOFF-TIAN-CHANSKY P. (1971).- Analogie entre la structure du squelette chez les Coraux *Combophyllum* (Dévonien) et *Chomatoseris* (Jurassique), en relation avec leur mode de vie.- *C. R. Acad. Sc. Paris ser. D*, 273: 49-50.- FC&P 1-2, p. 14, ID=4642Topic(s): ecologic analogies; Rugosa, Scleractinia; Systematics: Cnidaria; Rugosa Scleractinia; Stratigraphy: ; Geography: ^Le développement du squelette vers le bas en ménageant un espace à l'intérieur du Madréporaire, a été signalé chez *Chomatoseris*. Le même type de structure vient d'être trouvé chez *Combophyllum*. Cette formule structurale est liée à un mode de vie bien déterminé: état libre du Madréporaire sur un fond instable et faculté de s'y déplacer. Une telle similitude entre Madréporaires très éloignés dans le temps et dans la systématique, témoigne d'un assujettissement aux lois du milieu.¹¹;
- 6111 s[6108] = "JELL J.S., HILL D. (1974).- The microstructure of corals.- *Drevniye Cnidaria* [B.S. Sokolov (ed.)], 1: 8-14.- FC&P 5-2,"

- p. 5, ID=5399^Topic(s): microstructures; Rugosa, Scleractinia; Systematics: Cnidaria; Rugosa Scleractinia; Stratigraphy: ; Geography: ^[comparison of scanning electron microscope studies on the fine structure of scleractinian and rugose corals]^1";
- 6112 s[6109] = "OLIVER W.A.jr (1981).- On the relationship between Rugosa and Scleractinia (Summary).- Acta Palaeontologica Polonica 25, 3-4: 395-402.- FC&P 10-1, p. 45, ID=5975^Topic(s): phylogeny; Rugosa, Scleractinia; Systematics: Cnidaria; Rugosa Scleractinia; Stratigraphy: ; Geography: ^[a review of the evidence bearing on this problem, suggesting that the Scleractinia are not directly descended from the Rugosa]^1";
- 6113 s[6110] = "FLUGEL H.W. (1985).- Abstammung und systematische Stellung der Rugosa und Auloporida.- Paläontologische Zeitschrift 59, 3/4: 201-210.- FC&P 15-1.2, p. 26, ID=0858^Topic(s): phylogeny; Rugosa, Tabulata, Auloporida; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: ; Geography: ^The study of the morphology of the rugose corals and the acception of a solitary sexual polyp, as the stem form of the Anthozoa (B. WERNER) lead to the conclusion that the stem form of the rugose corals was a solitary sessil polyp without a base disc and with four or more pairs of mesenteries from which two were directive pairs. Therefore it seems correct to supply the name Rugosa by Tetracorallia Haeckel 1866. The evolution of the Auloporida from such a stem form follows another trend, which is characterised by the development of colonies. It seems possible, that this trend was attended with the reduction and the lost of the four mesenteries of the hypothetic stem form. Therefore it is not sure, that the Auloporida belong to the Anthozoa.^1";
- 6114 s[6111] = "HILL D. (1981).- Rugosa and Tabulata.- Teichert C. (ed.): Treatise on Invertebrate Paleontology F. suppl. 1, xi + 762 pp., Lawrence, Kansas.- FC&P 11-2, p. 26, ID=1830^Topic(s): Rugosa, Tabulata; Systematics: Cnidaria; Rugosa Tabulata; Stratigraphy: ; Geography: ^Professor Hill has completely revised the rugose and tabulate coral sections of the Treatise with extensive new documentation, including extremely valuable details on the location of type material.^1";
- 6115 s[6112] = "GEISTER J. (1984).- Die palaobathymetrische Verwertbarkeit der scleractinen Korallen.- Palaont. Kursbucher 2: 46-95.- FC&P 13-1, p. 13, ID=0385^Topic(s): bathymetry; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Discussion of several approaches to paleobathymetric analysis of fossil scleractinian assemblages and coral skeletons.^1";
- 6116 s[6113] = "ILYINA T.G. (1983).- O prioskhozhenii skleraktiniy.- Paleontologicheskii Zhurnal 1983, 1: 13-27.- FC&P 13-1, p. 46, ID=0500^Topic(s): origins; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Previous conceptions on the origin of the Scleractinia are quoted in a literature review and new details regarding the morphology of Triassic and Jurassic corals are investigated. The gradual transition from Late Permian rugose corals, via corals of a transitional group (Hexanthinaria), to Early Mesozoic Scleractinia is pursued, (translated)^1";
- 6117 s[6114] = "GRASSHOFF M. (1981).- Polypen und Kolonien der Blumentiere (Anthozoa) III. Die Hexacorallia.- Natur und Museum 111, 5: 134-150.- FC&P 13-2, p. 9, ID=0624^Topic(s): Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6118 s[6115] = "CHESHMEDJIEVA V.L. (1987?).- Relations phylogenetiques entre les genres Placocaenia d'Orbigny, 1849 et Columnocaenia Alloiteau, 1951.- 001 Annales Universite de Sofia, Faculte de Geologie et de Geographie .: .- FC&P 15-1.2, p. 9, ID=0892^Topic(s): affinity; Scleractinia, phylogeny; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Dans les sediments du Maestrichtien en Bulgarie du Sud-Ouest on a ramasse deux

polypiers, dont la structure montre quelques differences dans la morphologie des polypierites. Chaque colonie possede des polypierites qui caracterisent deux genres - Columnocaenia ALLOITEAU et Placocaenia d'ORBIGNY. La partie predominante des calices possede la structure du genre Columnocaenia. On observe aussi des calices avec la structure simultanement des genres Columnocaenia et Placocaenia. La presence des calices indiquantes les particularites simultanement des deux genres demontre la relation phylogenetique entre les genres Placocaenia et Columnocaenia.¹";

6119 s[6116] = "SANDERS D., BARON-SZABO R.C. (2005).- Scleractinian assemblages under sediment input: their characteristics and relation to the nutrient input concept.- Palaeogeography, Palaeoclimatology, Palaeoecology 216: 139-181.- FC&P 33-2, p. 35, ID=1172Topic(s): sediment input; Scleractinia, ecology; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[original abstract too long to be included here! see FC&P33-2, p. 39]^1";

6120 s[6117] = "STOLARSKI J., MAZUR M. (2005).- Nanostructure of biogenic versus abiogenic calcium carbonate crystals.- Acta Palaeontologica Polonica 50, 4: 847-865.http://www.a pp.pan.pl/article/item/app50-847.html.- FC&P 34, p. 105, ID=1304Topic(s): microstructures, biogenic vs abiogenic; Scleractinia, skeletal microstructures; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The mineral phase of the aragonite skeletal fibers of extant scleractinians (Favia, Goniastrea) examined with Atomic Force Microscope (AFM) consists entirely of grains ca. 50-100 nm in diameter separated from each other by spaces of a few nanometers. A similar pattern of nanograin arrangement was observed in basal calcite skeleton of extant calcareous sponges (Petrobiona) and aragonitic extant stylasterid coralla (Adelopora). Aragonite fibers of the fossil scleractinians: Neogene Paracyathus (Korytnica, Poland), Cretaceous Rennensismilia (Gosau, Austria), Trochocyathus (Black Hills, South Dakota, USA), Jurassic Isastraea (Ostromice, Poland), and unidentified Triassic tropiastreaeid (Alpe di Specie, Italy) are also nanogranular, though boundaries between individual grains occasionally are not well resolved. On the other hand, in diagenetically altered coralla (fibrous skeleton beside aragonite bears distinct calcite signals) of the Triassic corals from Alakir Cay, Turkey (Pachysolenia), a typical nanogranular pattern is not recognizable. Also aragonite crystals produced synthetically in sterile environment did not exhibit a nanogranular pattern. Unexpectedly, nanograins were recognized in some crystals of sparry calcite regarded as abiotically precipitated. Our findings support the idea that nanogranular organization of calcium carbonate fibers is not, per se, evidence of their biogenic versus abiogenic origin or their aragonitic versus calcitic composition but rather, a feature of CaCO₃ formed in an aqueous solution in the presence of organic molecules that control nanograin formation. Consistent orientation of crystallographic axes of polycrystalline skeletal fibers in extant or fossil coralla, suggests that nanograins are monocrystalline and crystallographically ordered (at least after deposition). A distinctly granular versus an unresolvable pattern of nano-organization of CaCO₃ fibers seems to correspond, respectively, to an original versus a diagenetically depleted amount of organic matter bounding a mineral phase; this is consistent with qualitative and quantitative analyses of organic matter content in extant and fossil skeletons¹";

6121 s[6118] = "STANLEY G.D.jr (2003).- The evolution of modern corals and their early history.- Earth-Science Reviews 60, 3-4: 195-225.- FC&P 32-1, p. 19, ID=1414Topic(s): early phylogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Scleractinians are a group of calcified anthozoan corals, many of which populate shallow-water tropical to subtropical reefs. Most of these corals calcify rapidly and

their success on reefs is related to a symbiotic association with zooxanthellae. These one-celled algal symbionts live in the endodermal tissues of their coral host and are thought responsible for promoting rapid calcification. The evolutionary significance of this symbiosis and the implications it holds for explaining the success of corals is of paramount importance. Scleractinia stands out as one of the few orders of calcified metazoans that arose in Triassic time, long after a greater proliferation of calcified metazoan orders in the Paleozoic. The origin of this coral group, so important in reefs of today, has remained an unsolved problem in paleontology. The idea that Scleractinia evolved from older Paleozoic rugose corals that somehow survived the Permian mass extinction persists among some schools of thought. Paleozoic scleractiniamorphs also have been presented as possible ancestors. The paleontological record shows the first appearance of fossils currently classified within the order Scleractinia to be in the Middle Triassic. These early Scleractinia provide a picture of unexpectedly robust taxonomic diversity and high colony integration. Results from molecular biology support a polyphyletic evolution for living Scleractinia and the molecular clock, calibrated against the fossil record, suggests that two major groups of ancestors could extend back to late Paleozoic time. [first part of extensive abstract]^1";

- 6122 s[6119] = "STOLARSKI J., ZIBROWIUS H., LOESER H. (2001).- Antiquity of the scleractinian-sipunculan symbiosis.- Acta Palaeontologica Polonica 46, 3: 309-330.- FC&P 30-2, p. 30, ID=1586^Topic(s): coral-sipunculan symbiosis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Extant corals symbiotic with sipunculans, i.e., the caryophylliid Heterocyathus and the dendrophylliid Heteropsammia, develop corallum modifications (in comparison with 'ordinary' representatives of these families) that seem to meet the needs of the coral's worm partner. We distinguish two types of corallum modifications, designated the monoporous and the polyporous types. In the adult monoporous type, the shell inhabited by the sipunculan is usually overgrown only in part by the coral base. There are two orifices: the main one and a smaller pore in the upper part of the corallum. In the polyporous type the shell inhabited by the sipunculan is entirely overgrown and the coral produces a spiralled sipunculan housing. In addition to the main orifice there are several pores in the lower part of the corallum. Heterocyathus priscus sp. n. from the Early Cretaceous (Albian) of France is the oldest example of symbiosis, in which the monoporous-type corallum was modified in the same way as in extant monoporous Heterocyathus. We speculate that the monoporous type was ancestral, as only this type is known to occur among Cretaceous corals. Morphological similarities between Heteropsammia and certain species of Heterocyathus, such as the Poutalés plan of septal arrangement and skeleton porosity, may point to a close phylogenetic relationship.^1";
- 6123 s[6120] = "CASTELLARO C., RIBAUD-LAURENTIA A., MUENCH P., MONTAGGIONI I., RIOT S. (2000).- Image processing as a tool for reconstructing the skeletal early evolution for branching scleractinian corals (Acropora danai and Pocillopora verrucosa): preliminary results.- Géologie Méditerranéenne 27, 3-4: 107-117.- FC&P 31-2, p. 47, ID=1699^Topic(s): image processing, ontogeny; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^For the first time, the early evolution of branching corals skeleton (Acropora danai and Pocillopora verrucosa) has been depicted using image processing technique. Several parameters have been measured on digitized pictures of coral sections in order to characterize the geometry, and its evolution with increasing age of corallum, of intraskeletal cavities (fenestral pores). It has been possible to describe precisely the mesostructure of corals and together with the study of the microstructure, it has also been possible to link evolution of the different measured geometrical parameters to biotic or

to abiotic (diagenetic) precipitation of aragonite. A biotic or abiotic process both lead to a strengthening of basal parts of branches, it is very difficult to identify the two types of aragonite. For this purpose, it appears from this study that the hydraulic radius (surface/perimeter ratio) may be one of the most useful parameters to measure. The recognition of early marine diagenetic aragonite is only a first step towards its quantification which will only be completed by the use and the development of image processing technique.^1";

6124 s[6121] = "STOLARSKI J., RONIEWICZ E. (2001).- Towards a new synthesis of evolutionary relationships and classification of Scleractinia.- Journal of Paleontology 75, 6: 1090-1108.- FC&P 30-2, p. 29, ID=1704^Topic(s): phylogeny, classification; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The focus of this paper is to provide an overview of historical and modern accounts of scleractinian evolutionary relationships and classification. Scleractinian evolutionary relationships proposed in the 19th and beginning of the 20th centuries were based mainly on skeletal data. More in-depth observations of the coral skeleton showed that the gross-morphology could be highly confusing. Profound differences in microstructural and microarchitectural characters of e.g., Mesozoic microsolenine, pachythecline, stylophylline, and rhipidogyrine corals compared with nominotypic representatives of higher-rank units in which they were classified suggest their separate (?subordinal) taxonomic status. Recent application of molecular techniques resulted in hypotheses of evolutionary relationships that differed from traditional ones. The emergence of new and promising research methods such as high-resolution morphometrics, analysis of biochemical skeletal data, and refined microstructural observations may still increase resolution of the "skeletal" approach. Achieving a more reliable and comprehensive scheme of evolutionary relationships and classification framework for the scleractinia will require close co-operation between coral biologists, ecologists, geologists, geochemists, and paleontologists.^1";

6125 s[6122] = "BEAUVAIS L. (1981).- Calcite and aragonite secretion in the Madreporaria: its concepts and implications.- Internat. Symposium on Concepts and Methods in Palaeontology: 163-172; Barcelona.- FC&P 10-2, p. 79, ID=1743^Topic(s): calcite aragonite; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The main characters between Palaeozoic and post-Palaeozoic Madreporaria are outlined. Skeletal mineralogy seems to be the more important differentiation. It began in the Permo-Triassic boundary. During this period, numerous faunas were also changing. Factors leading calcite and aragonite secretion in marine organisms are considered. The necessity to study experimentally the carbonate secretion in Hexacorallia is ascertained. The results may help to give an interpretation to the Permo-Triassic changes. [original summary]^1";

6126 s[6123] = "KUZMICHEVA E.I. (1986).- Razvitie kolonialnosti u skleraktiniy [evolution of coloniality in Scleractinians; in Russian].- Paleontologicheskii Zhurnal 1986, 4: 3-14.- FC&P 16-1, p. 67, ID=1979^Topic(s): coloniality; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";

6127 s[6124] = "LOSER H. (2007).- Case 3386: Pseudocoenia d'Orbigny, 1850 (Coelenterata, Scleractinia): proposed conservation of usage by the designation of a lectotype for the type species.- Bulletin of Zoological Nomenclature 64, 2: 79-82.- FC&P 35, p. 77, ID=2390^Topic(s): nomenclature; Scleractinia, Pseudocoenia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The purpose of this application, under Article 74.1 of the Code, is to conserve the name Pseudocoenia d'Orbigny, 1850 in its accustomed usage by designating a new lectotype for its type

species *Pseudocoenia bernardina* d'Orbigny, 1850. The present lectotype of the type species contradicts the original description of the type species as well as the concept of the genus as indicated by its author and as currently used.¹";

6128 s[6125] = "PRZENIOSLO R., STOLARSKI J., MAZUR M., BRUNELLI M. (2008).- Hierarchically structured scleractinian coral biocrystals.- *Journal of Structural Biology* 161, 1: 74-82.PMID 17998166.- FC&P 35, p. 112, ID=2448Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Microscopic (AFM and FESEM) observations show that scleractinian coral biomineral fibers in extant *Desmophyllum* and *Favia*, and fossil Jurassic *Isastrea* are composed of nanocrystalline grains of about 30-100 nm in size. In contrast to these findings, SR diffraction data on the same coral materials exhibit narrow Bragg peaks suggesting much larger crystallite size. These seemingly contradicting results of microscopic and diffraction studies are reconciled within a new, minute-scale model of scleractinian biomineral fibers. In this model, nanocrystalline aragonite units are interconnected by mineral bridges and form aggregates usually larger than 200 nm. Most likely, the size of the aggregates is resulting from physiological biomineralization cycles that control cellular secretion of ions and biopolymeric species. Intercalation of biopolymers into crystal lattice may influence consistently several structural parameters of the scleractinian coral bio-aragonite in all studied samples: (i) the lattice parameters and internal strains of the bio-aragonite are larger than in mineral aragonite, (ii) lattice parameter elongations and internal strains reveal directional anisotropy with respect to crystallographic axes.¹";

6129 s[6126] = "ZIBROWIUS H. (1988).- Mise au point sur les Scleractiniaux comme indicateurs de profondeur (Cnidaria: Anthozoa). [review of the Scleractinians as depth indicators; in French, with English summary] .- *Geol. Mediterranee* 15, 1: 27-47.- FC&P 19-1.1, p. 55, ID=2671Topic(s): bathymetry; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Before considering the use of fossil scleractinians as depth indicators, their living counterparts are presented in their morphological and ecological diversity. Jointly, the main environmental factors conditioning their geographical and depth distribution are pointed out. Intraspecific variation depending on environmental factors makes taxonomy of the group more complicate. Taxonomy is yet far from being satisfactory for many taxa, particularly to some areas. The terms hermatypic - ahermatypic as currently used by biologists and geologists, are not without ambiguities due to the original definition (Wells 1933); they are discussed together with complementary terms, which had been introduced in order to remedy to that ambiguity. In case of precise taxonomy and well recorded ecology, reference to living scleractinians permits extrapolation of paleoenvironments corresponding to fossil assemblages. It is important to distinguish between shallow water coral reefs of the tropical type and scleractinian constructions in deep water, characters useful for this distinction are indicated. But the present contribution more specifically aims at demonstrating the usefulness of non-reefal scleractinians as indicators of depth (and temperature). According to Wells (1967), the depth (and temperature) interval common to the taxa present in a fossil assemblage can be estimated by reference to identical or related living forms. This provides an approximation for the paleoenvironment under analysis. It is essential to detect an eventual mixture of faunas issued from significantly different depth levels in order to avoid the pitfall of averaging incomparable data. At least for assemblages of a rather young geological past, extrapolations can be remarkably precise (examples of Pleistocene faunas from the Mediterranean). However, the more remote in age the assemblages are, the less precise will be the results because more and more taxa in common with the Recent drop out. Analysis of

- morphofunctional adaptations, detached from any taxonomic basis, will provide, at best, only general information on the type of the environment (deep or shallow) and of the substrate (soft or hard, stable or unstable).^1";
- 6130 s[6127] = "CHESHMEDJIEVA V.L. (1986).- Paleoeologie des Madreporaires du Cretace superieur dans le Srednogorie de l'Ouest (Bulgarie occidentale).- Geol. Balcanica 16, 5: 55-81.- FC&P 20-2, p. 33, ID=2894^Topic(s): ecology; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The paper reviews the organogenic buildups and the paleoecology of 71 species and 5 subspecies of scleractinians found in 9 Turonian and Maastrichtian occurrences in the west Srednogorie (West Bulgaria).^1";
- 6131 s[6128] = "CHESHMEDJIEVA V.L. (1990).- Representants du genre Caryophyllia Lamarck 1801 du Cretace superieur de l'arrondissement de Pleven.- Godishnik na Sofiyskiya Universitet "Kliment Okhridski", geologo-geografski fakultet, (1: geologie), 79 (for 1985): 29-35.- FC&P 20-2, p. 33, ID=2896^Topic(s): ; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^In this paper for the first time are described scleractinians originating from North european type of Upper Cretaceous in Bulgaria. The four species described belong to the genus Caryophyllia Lamarck 1801.^1";
- 6132 s[6129] = "REIG J.M., VILELLA J. (1995).- Sobre una presunta Rhizangia (Scleractinia).- Scripta Musei Geologici Seminarii Barcinonensis 227: 7-9.- FC&P 25-1, p. 44, ID=3043^Topic(s): ; Scleractinia, Haplaraea; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Some specimens of Haplaraea aff. braunii are described. They were formerly included in Rhizangia.^1";
- 6133 s[6130] = "ROMANO S.L. (1996).- A molecular perspective on the evolution of scleractinian corals.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 39-57.- FC&P 25-2, p. 43, ID=3130^Topic(s): phylogeny, molecular approach; scleractinia, phylogeny; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The evolutionary history of scleractinian corals, based on morphological taxonomy and inferences from the fossil record, has been poorly understood. Molecular techniques developed over the past ten years are now being used to gain a new perspective on scleractinian phylogeny. DNA sequences, mitochondrial genome structure, and morphological characters support a basal position for the Anthozoa in the phylum Cnidaria. Mitochondrial and nuclear DNA sequences suggest a relatively derived position of the order Scleractinia within the class Anthozoa. Mitochondrial and nuclear DNA sequences have provided a new hypothesis for evolution within the Scleractinia that is different from hypotheses based on morphological characters of extant and fossil taxa. Groupings within the two major lineages defined by molecular data do not correspond to morphological suborder groupings although groupings of genera within families do correspond to traditional taxonomy. This new molecular hypothesis suggests that the Scleractinia are represented by two major lineages that diverged from each other before the appearance of the scleractinian skeleton in the fossil record. This divergence time supports the hypotheses that the Scleractinia are not related to the Rugosa of the Paleozoic and that the scleractinian skeleton has evolved more than once. These two major lineages may represent two architectural strategies within the Scleractinia that have led to their great morphological diversity.^1";
- 6134 s[6131] = "RONIEWICZ E. (1996).- The key role of skeletal microstructure in recognizing high-rank scleractinian taxa in the stratigraphical record.- Paleontological Society Papers 1 [Stanley G. D. jr (ed.): Paleobiology and Biology of Corals]: 187-206.- FC&P 25-2, p. 44, ID=3131^Topic(s): microstructures; Scleractinia classification; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Skeleton

microstructure of Recent scleractinians proves to be a valuable suprageneric taxonomical criterion, and the same has been stated with respect to Mesozoic corals where skeletal preservation is aragonite. In paleontological practice, septal microstructure is decisive in discrimination of taxa among homeomorphic genera of different families. Similarities of microstructural features of some Recent and fossil corals encompass the genera in common taxa of higher ranks and allow for reconstruction of their presumed phylogeny.¹¹;

- 6135 s[6132] = "LOSER H., BEAUVAIS L. (1996).- Morpho-Datenbanken in der Palaeontologie - Methodik des Strukturentwurfs und Einsatz anhand der Datenbank SCLERACT.- Mathematische Geologie 1: 61-65. [in German].- FC&P 25-2, p. 53, ID=3149Topic(s): software for data management; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The data base SCLERACT facilitates the acquisition of morphological data of the post-palaeozoic coral genera (Scleractinia). The theoretical outlines of such data bases are explained in detail with examples and the construction of data structures is described step by step. The systematization of the morphological characteristics calls for mathematical methods which help to avoid terminological weakness and contradictions in the morphological system of the investigated group of organisms.¹¹";
- 6136 s[6133] = "RONIEWICZ E. (1991).- Correction of homonymy of generic name Cyclophyllia Roniewicz 1989 (Scleractinia) into Cycliphyllia nom. n.- Acta Palaeontologica Polonica 36, 2: 239.- FC&P 21-1.1, p. 20, ID=3205Topic(s): homonymy; Scleractinia, Cyclophyllia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^A name Cyclophyllia Roniewicz 1989 (type-species Thecosmilia cyclica Schaefer et Senowbari-Daryan 1978, Triassic) is to be replaced by Cycliphyllia nom.n. and the orthography of the family-name Cyclophyllidae Roniewicz 1989 changed into Cycliphyllidae nom.n. The just replaced generic name is a junior homonym of Cyclophyllia Milne-Edwards & Haime 1848 (type-species Cyclolites cristata Lamarck 1801, Cretaceous). It was a List of Generic Names by Wells 1986 which for the second time helped me in correction of the regrettable errors.¹¹";
- 6137 s[6134] = "BUDD A.F., COATES A.G. (1992).- Nonprogressive evolution in a clade of Cretaceous Montastraea-like corals.- Paleobiology 18, 4: 425-446 .- FC&P 22-1, p. 42, ID=3315Topic(s): numerical taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Selected Cretaceous Montastraea-like coral colonies from localities across the central and western Tethyan region have been used for the construction of a phylogeny and for examinations on their differential speciation and selective extinction. The corals have been submitted to several statistical procedures. A total of 16 species are reported from the Cretaceous.¹¹";
- 6138 s[6135] = "LEHMANN J. (1993).- Ammonitengeh use als Korallenbesiedelte Hartgrunde.- Fossilien 1: 13-17.- FC&P 22-1, p. 29, ID=3368Topic(s): settlement; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Using ammonite shells as hardground the settlement of scleractinian coral Coelosmilia is described and conclusions on paleocology and fossilization are discussed.¹¹";
- 6139 s[6136] = "KUZMICHEVA E.I. (1992).- Vnutrividovaja izmenchivost skleraktinij [intraspecific variability in Scleractinia; in Russian].- In: Sokolov B.S. Ivanovskij A.B.: Vnutrividovaja izmenchivost korallov i spongiomorfid; RAN, otd. Geol., Geofiz. i Gor. N.; Paleontologicheskij Institut: 69-76.- FC&P 22-2, p. 88, ID=3380Topic(s): intraspecific variability; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Intraspecific variability and its relation to ontogenetical stages of solitary and colonial corals as well as

- environmental factors which influent intraspecific variability are discussed on the base of Mesozoic and Cenozoic corals from Russia.¹¹;
- 6140 s[6137] = "RONIEWICZ E., MORYCOWA E. (1993).- Evolution of the Scleractinia in the light of microstructural data.- Courier Forschungsinstitut Senckenberg 164: 233-240. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 18, ID=3458^Topic(s): microstructures, phylogeny; Scleractinia, microstructures; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Triassic Scleractinia were originally differentiated into four microstructurally defined groups (pachythechal, thick-trabecular, minitrabecular and fascicular), which were represented by at least 7 of more or less independent phyletic stems of familial or suprafamilial rank that varied in their evolutionary plasticity. The Recent coral fauna seems to be composed of descendants of only three of them. Diastrophic events resulted in changes of the environment, stimulated coral evolution and re-organization of coral faunas. In the Mesozoic, diastrophism controlled the development of an offshore platform variety of the shallow-water coral faunas, while in the Cenozoic it controlled the development of its littoral variety.¹¹;
- 6141 s[6138] = "MELNIKOVA G.K. (1992).- Predely vnutrividovoj izmenchivosti u astreomorf (skleraktinii) [range of intraspecific variability in Astreaeomorphids (Scleractinia); in Russian].- In: Sokolov B.S. Ivanovskij A.B.: Vnutrividovaja izmenchivost korallov i spongiomorfid; RAN, otd. Geol., Geofiz. i Gor. N.; Paleontologicheskij Institut: 76-86.- FC&P 22-2, p. 89, ID=3528^Topic(s): intraspecific variability; Scleractinia, Astreaeomorpha; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Five already known species of the genus Astreaeomorpha are redescribed and their intraspecific variability is discussed.¹¹;
- 6142 s[6139] = "RIEGL B., PILLER W.E. (1997).- Intra-colony variability of calice characteristics in Recent Porites lutea Milne-Edwards & Haime 1816: implications for fossil identification.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 305-316.- FC&P 26-2, p. 18, ID=3693^Topic(s): variability; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Patterns of morphological variation in calice characteristics were investigated within a single colony of Porites lutea Milne-Edwards & Haime 1816 from the Northern Red Sea. Hierarchical cluster analysis and canonical discriminance analysis revealed four groups of calice morphs to occur within this colony. The most clearly discriminating variables were calice size and thickness of thecae, besides the thickness and length of septa and the development of pali. The development and degree of fusion within the ventral triplet as well as columella diameter had the lowest correlation with the discriminant functions. The most stable characters were the pattern of fusion within the ventral triplet and the development of the columella. Corallites from the upper face of the colony (vertical growth direction) were different from corallites on the lateral face of the colony (horizontal growth direction). For the identification of fossil Porites it is necessary a) to obtain calices from several regions of the specimen in order to give a sample of corallite variability, b) It is necessary to fully sample the pattern of septal fusion in the ventral triplet, as this is a stable character at a colony level.¹¹;
- 6143 s[6140] = "CUIF J.-P., DAUPHIN Y., GAUTRET P. (1997).- Biomineralization features in scleractinian coral skeletons: source of new taxonomic criteria.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 129-141.- FC&P 26-2, p. 26, ID=3708^Topic(s): biomineralization, taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^In Scleractinian coral taxonomy, major phylogenetic lineages are based on hypothesized

relationships among septal microstructures, and various indications suggest that the widely used scheme proposed by Wells (1956) have to be reexamined. The last decade of studies of biomineralization process have demonstrated the leading role that specific macromolecules play during the growth of calcareous biocrystals. These results make possible a new microstructural approach, based on organo-mineral relationships examined at the micronic scale. In addition, biochemical informations obtained from extracted and purified macromolecules can be studied by multivariate analysis, resulting in diagrams showing the biochemical distances between species that can be compared to RNA / DNA based data. Thus, biochemically-based data provide us with evolutionary-related criteria by which phylogenetic distances can be assessed between the skeletal structures. ^1";

6144 s[6141] = "LOSER H. (1998).- Adelocoenia versus Pseudocoenia - some rectifications.- FC&P 27,1: 29-32.- FC&P 27-1, p. 29, ID=3930^Topic(s): nomenclature; Scleractinia, Adelocoenia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Colonial corals with small round calices, rudimentary septa and no columella of the suborder Stylinida (Scleractinia) are abundant in the Upper Jurassic and Cretaceous (Berriasian-Cenomanian). Several very similar genera are known. Based on Alloiteau (1948) and the type material available at that time, I tried to clarify this problem (Loser 1994). I proposed the use of Adelocoenia, instead of Pseudocoenia and Cyathophora. This proposal was repeatedly discussed in this newsletter (Baron-Szabo & Bertling 1995, 1996), as well as in Baron-Szabo & Steuber (1996) and Baron-Szabo (1997) but not accepted. * Generally, the IRZN [International Code of Zoological Nomenclature] force[s] us to consider genera and species in relation to their type species and type specimens. Our personal opinion on a certain taxon may be interesting but has no influence on its taxonomical status. This short note provides some information on type species and types which were ignored in my own work and in the previously mentioned discussions as well. ^1";

6145 s[6142] = "RONIEWICZ E., STOLARSKI J. (1999).- Evolutionary trends in the epithecate scleractinian corals.- Acta Palaeontologica Polonica 44, 2: 131-166.- FC&P 28-2, p. 30, ID=4023^Topic(s): epithecate corals, phylogeny; Scleractinia, epitheca; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Adult stages of wall ontogeny of fossil and Recent scleractinians show that epitheca was the prevailing type of wall in Triassic and Jurassic corals. Since the Late Cretaceous the frequency of epithecal walls during adult stages has decreased. In the ontology of Recent epithecate corals, epitheca either persists from the protocorallite to the adult stage, or is replaced in post-initial stages by trabecular walls that are often accompanied by extra-calicular skeletal elements. The former condition means that the polyp initially lacks the edge zone, the latter condition means that the edge zone develops later in coral ontogeny. Five principal patterns in wall ontogeny of fossil and Recent Scleractinia are distinguished and provide the framework for discrimination of the four main stages (grades) of evolutionary development of the edge-zone. The trend of increasing the edge-zone and reduction of the epitheca is particularly well represented in the history of caryophylline corals. We suggest that the development of the edge-zone is an evolutionary response to changing environment, mainly to increasing bioerosion in the Mesozoic shallow-water environments. A glossary is given of microstructural and skeletal terms used in this paper. ^1";

6146 s[6143] = "BEAUVAIS L. (1994).- Essai d'etablissement d'une banque de donnees permettant d'analyser les variations des caracteres morphologiques des Scleractiniaires en relation avec leur environnement.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 411-417.-

FC&P 23-1.1, p. 26, ID=4097^Topic(s): morphology, ecology, data banks; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Some 480 characteristics concerning the sedimentological environment of Scleractinia, about 30 ones concerning their ecology and almost 420 other ones dealing with their morphology have been inventorized and arranged on an hierarchical system, with view to introduce them in a data bank and to process them by a computer, and to compare the anatomical characteristics of the genera and species with those of their environmental changes. Entrance of these whole characteristics is done on a 20 Mo hard disk. Four chained data bases will be programmed to compare these numerous data: a data base for generalities (name of genus, species, geographical and stratigraphical localization, references, etc.), a data base for sedimentological characteristics, a data base for ecology and a data base for morphological features. As the data bases are chained, it will be possible to put in very varied questions such as: what is the geographical or ecological distribution of one genus, of one species? - what species are present in a given environment? - what anatomic features are specific for a given environment? or - what ecological conditions are required for a given anatomic feature? - etc.^1";

6147 s[6144] = "ALVAREZ PEREZ G. (1994).- Respuesta a la nota de J. M. Reig sobre la validez del genero Faviomorpha Reig 1990.- Batailleria 4: 50.- FC&P 24-1, p. 67, ID=4487^Topic(s): nomenclature; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The possible synonymy of Faviomorpha Reig 1990 with Ellipsocoenia d'Orbigny 1850 as proposed by Alvarez et.al. (1993) in view at the comments by Reig 1994 is discussed again.^1";

6148 s[6145] = "REIG ORIOL J.M. (1994).- Sobre la validez del genero Faviomorpha Reig 1990.- Batailleria 4: 49.- FC&P 24-1, p. 70, ID=4497^Topic(s): nomenclature; Scleractinia, Faviomorpha; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[the possible synonymy of Faviomorpha Reig 1990 with Ellipsocoenia d'Orbigny 1850 as proposed by Alvarez et.al. (1993) is commented]^1";

6149 s[6146] = "BARON-SZABO R.C., BERTLING M. (1995).- Adeloecoenia vs. Pseudocoecoenia - towards a taxonomic clarification.- FC&P 24, 2: 70.- FC&P 24-2, p. 70, ID=4546^Topic(s): nomenclature; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[authors suggest that Adeloecoenia although senior name to Pseudocoecoenia (Anthozoa, Scleractinia) should be rejected as nomen dubium]^1";

6150 s[6147] = "ISA Y. (1995).- Calcium binding substance in the hermatypic coral, Acropora hebes (Dana).- Origin, Evolution, and Modern Aspects of Biomineralization in Plants and Animals [R.E. Crick (ed.)]: 167-173; Plenum Press, New York.- FC&P 24-2, p. 89, ID=4588^Topic(s): Ca binding; Scleractinia, Acropora; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^A characteristic of skeleton formation in the hermatypic coral Acropora hebes has been investigated, with special reference to the calcium-binding substance assay. The skeletal soluble organic matrix such as protein and carbohydrate did not bind calcium ions in the Sephadex G-75 chromatography. On the other hand, the insoluble organic matrix of the skeleton showed the calcium-binding ability, which was reduced by treatment with organic solvent. Presumably, the calcium-binding substances in the skeletal insoluble matrix are firmly attached to the calcium carbonate crystals and will not be extracted by the aqueous or organic extracting solutions. The major component of the calcium-binding substances in the skeleton is phospholipid, but not the other lipids such as neutral lipid or glycolipid. A high-performance TLC revealed that the skeletal calcium-binding phospholipids consisted of acidic phosphatidylserine.^1";

- 6151 s[6148] = "BEAUVAIS L. (1971).- Quelques précisions sur le genre Chomatoseris Thomas.- C. R. Acad. Sci. Paris 273, sér.D: 2219-2222.- FC&P 1-2, p. 20, ID=4676^Topic(s): ; Scleractinia, Chomatoseris; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6152 s[6149] = "CHESHMEDJIEVA V.L. (1969).- Représentants du genre Plesiocunolites All. du Maëstrichtien de l'arrondissement de Breznik, Bulgarie du Sud-Ouest.- 001 Ann. Univ. Sofia, Géologie 61: pp?.- FC&P 1-2, p. 23, ID=4689^Topic(s): ; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6153 s[6150] = "CHESHMEDJIEVA V.L. (1973?).- Coraux madréporiques du Crétacé supérieur en Bulgarie du Sud-Ouest.- 001 Annuaire Univ. Sofia, Fac. Géol. Géogr. 1, Géol. 65: 34-39.- FC&P 2-2, p. 24, ID=4828^Topic(s): ; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6154 s[6151] = "MORI R. (1974).- Notes on Aragonite in Scleractinian Coral.- Bulletin Tokyo College of Domestic Science 14: 141-145.- FC&P 3-1, p. 12, ID=4840^Topic(s): aragonite; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The writer conducted some experiments on the alteration of aragonite in recent and fossil scleractinian coral under various temperatures. He used Pavona frondifera, Acropora sp., Montipora hispida, Pectinia lactuca, Echinophyllia aspera and Acropora leptocyathus as recent specimens and Favia speciosa, Premocyathus compressus, Porites sp. and Goniopora sp. as fossil specimens. The materials of the specimens were experimented with DTA under normal pressure, and crystal structures of some of them were investigated by means of X-rays. As a result of the experiments, the following can be said: (1) Recent and Quaternary scleractinian corals are aragonite in all of various species; (2) the aragonite in coral was inverted to calcite lower temperature (about 310°-320°C) than that of inorganic aragonite; (3) the DTA curves of the samples of recent and Alluvium fossil coral showed exothermic peak in the neighborhood of 430°C. It is supposed that some organic materials exist in the aragonitic materials.^1";
- 6155 s[6152] = "JELL J.S. (1974).- The microstructure of some scleractinian corals.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 301-320.- FC&P 4-1, p. 18, ID=5027^Topic(s): microstructures; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6156 s[6153] = "St JOHN B.E. (1974).- Heavy metals in the skeletal carbonate of scleractinian corals.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 461-469.- FC&P 4-1, p. 19, ID=5040^Topic(s): heavy metals; Scleractinia, skeletons; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6157 s[6154] = "CHESHMEDJIEVA V.L. (1975).- Plesiosiderastraea garloica gen. n., sp. n. (ordre Madreporaria) du Maestrichtien de la Bulgarie du Sud-Ouest.- Palaeont. Stratigr. Lithology 1: 55-56; Sofia.- FC&P 4-2, p. 54, ID=5247^Topic(s): new taxa; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[en provenance du Maestrichtien moyen au Nord du village Garlo (Bulgarie SW)]^1";
- 6158 s[6155] = "HAMADA T. (1973).- Caliceal increase in massive corals. A geometrical implication.- Earth Sci. Astr., Scient. Papers, Coll. Gen. Educ., Univ. Tokyo 23, 1: 53-71.- FC&P 4-2, p. 66, ID=5319^Topic(s): calicinal increase; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[studies on corallum growth in Goniastrea aspera;

- analysis of measurements and explanation]^1";
- 6159 s[6156] = "LEWIS J.B. (1976).- The importance of light and food upon the early growth of the reef coral *Favia fragum*.- Journal exp. Mar. Biol. Ecol. 15, 3: 299-304; Amsterdam.- FC&P 4-2, p. 66, ID=5320^Topic(s): ecology; Scleractinia; *Favia*; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[both light and food are necessary for a normal growth]^1";
- 6160 s[6157] = "MORI K., OMURA A., MINOURA K. (1977).- Ontogeny of euthecal and metaseptal structures in colonial scleractinian corals.- *Lethaia* . ???.- FC&P 7-1, p. 11, ID=5562^Topic(s): structures thecae septa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6161 s[6158] = "BEAUVAIS L., CHEVALIER J.P. (1980).- La croissance periodique chez les Scleractiniaux actuels et fossiles.- Bulletin Zool. France 105, 2: 301-308.- FC&P 10-1, p. 23, ID=5892^Topic(s): incremental growth, periodic growth; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6162 s[6159] = "BOTTJER D.J. (1980).- Branching morphology of the reef coral *Acropora cervicornis* in different hydraulic regimes.- Journal of Paleontology 54, 5: 1102-1107.- FC&P 10-1, p. 58, ID=6007^Topic(s): branching morphology; Scleractinia, *Acropora*; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6163 s[6160] = "MORI K., MINOURA K. (1980).- Ontogeny of<#039;epithecal<#039; and septal structures in scleractinian corals.- *Lethaia* 13, 4: 321-326.- FC&P 10-1, p. 58, ID=6013^Topic(s): structures thecae septa; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The ontogenetic development of a solitary scleractinian coral, *Flabellum distinctum* Edwards & Haime, has been studied in serial thin section, with special attention being paid to epithecal nature in relation to septal growth. The term 'epitheca<#039; has been confusingly used for two different skeletal structures: *epitheca* (sensu stricto) and *marginotheca*. The latter is here newly proposed, 'epitheca<#039; is defined as a calcareous investment developed on the outside of other skeletal structures of a corallite. It can be distinguished from the *marginotheca* in section by lacking a dark line (calcification centre) and by being unrelated to the formation of septa, 'marginotheca<#039; defines the outer margin of the main skeletal structures of a corallite. It has a dark line which functionally coincides with that of the *eutheca*. It is of primary origin, preceding formation of septa and provides the origin of the septa. The *marginotheca* is one of the more important and fundamental skeletal structures for coral classification.^1";
- 6164 s[6161] = "GEISTER J. (1982).- Book review: Skleraktinii Kuby s dannymi o soputstvujushchikh organizmakh. [die Scleractinia Kubas mit Angaben ueber die begleitenden Organismen; in Russisch]; by V.N. Zlatarski & N. Martinez Estrella; photographs by B. Zhablenski.- FC&P 11, 1: 14-17.- FC&P 11-1, p. 14, ID=6113^Topic(s): book review; book review; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Endlich ist die seit langem angekuendigte und von vielen Fachkollegen erwartete Neubearbeitung der rezenten kubanischen Korallenfauna durch Dr. Vassil N. Zlatarski erschienen. Als gemeinsamer Herausgeber des umfangreichen und stattlichen werkes zeichnen das Geologische Institut der bulgarischen Akademie der Wissenschaften und das Institut fuer Ozeanologie der Akademie der Wissenschaften Kubas. Erschienen ist die vorliegende Fassung beim Verlag der bulgarischen Akademie der Wissenschaften in russischer Sprache. Eine franzoesischsprachige und eine englischsprachige Ausgabe sind in Vorbereitung. […] handelt es sich um ein gutes und anregendes Buch, das Zeugnis ablegt von der

umfangreichen, sich ueber mehrere Jahre erstreckenden Arbeit des Autors an den kubanischen Korallen. Hierzu ist dem Autor aufrichtig zu gratulieren. Spaetestens wenn die einem breiteren Publikum leichter zugaengliche franzoesischsprachige und die englischsprachige Ausgabe erhaeltlich sein wird, duerfte es zu einem vielzitierten Nachschlagewerk fuer karibische Korallen werden. Dann wird wahrscheinlich auch die Diskussion um die vorgeschlagenen taxonomischen Aenderungen erst die richtige Belebung erfahren. [initial and final fragments of extensive review]^1";

- 6165 s[6162] = "KRASNOV Ye.V. (1972).- Some conformities of the reef scleractinian evolution.- FC&P 1, 2: 5-6.- FC&P 1-2, p. 5, ID=6261^Topic(s): reef corals, phylogeny; Scleractinia, phylogeny; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^reef-dwelling and reef-building scleractinians, although polyphyletic, show remarkable regularities in their phylogenies, claims Krasnov]^1";
- 6166 s[6163] = "ZLATARSKI V.N., CHEVALIER J.P., DUARTE BELLO P.P., GEYER O.F., GILL G., KRASNOV Ye.V., MORYCOWA E., RUSSO A., WELLS T.W. (1973).- Glossary of equivalent terms for scleractinian (madreporaria) studies in English, German, French, Italian, Spanish, Polish, Russian, Bulgarian.- FC&P 2, 2: 34-55.- FC&P 2-2, p. 34, ID=6275^Topic(s): multilingual glossary; Scleractinia, glossary; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The large amount of publications on Scleractinian fossils written in many different languages during last years clearly show how necessary is a lexicon in which every specialist could find the equivalence between the terms used. * In the present article, we have voluntarily not quoted the terms concerning living tissues, except when necessary for the understanding of fossil forms. * A succinct list of the main references in every language, on which this terminology was established, is given in supplement. * We are fully aware of the imperfections of this first attempt, it would be necessarily [to have it] completed and improved under the responsibility of an international commission. * Nevertheless, we would like to dedicate it to the late Dr Alloiteau who had so intensively contributed to the establishment of Scleractinian nomenclature. * This glossary, as we hope, is the witness of our wishes for close collaboration between all specialists of Cnidarian fossils. [introduction to the glossary]^1";
- 6167 s[6164] = "NEGUS P.E. (1975).- Homo sapiens and the Scleractinia.- FC&P 4, 1: 14-15.- FC&P 4-1, p. 14, ID=6284^Topic(s): corals & humans; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^It occurs to me that it is desirable to establish clearly our relationship with any group of animals, vertebrate or invertebrate, that we choose to study. Are we to be master, servant or partner? For example, our relationship with a member of the cat family is likely to be that of an inferior; with the dog, Man has traditionally been the master; with most reptiles, Man has maintained a precarious and uneasy relationship. When we come to the invertebrates, however, the position is not so simple and clear-cut. Some readers may think it merely frivolous to suggest that Man could have any kind of a relationship with the coral polyps. But I believe it is not only amusing but useful to look at the Scleractinia to find some analogies with human organisation and behaviour. [] The main lesson which Man could learn from the corals is the importance of maintaining a balance between the individual and the group (colony) and the environment. This is, after all, essential to the success of most species. [first and last fragments of a short essay]^1";
- 6168 s[6165] = "ZIBROWIUS H. (1975).- Esper collection.- FC&P 4, 2: 68.- FC&P 4-2, p. 68, ID=6292^Topic(s): collection Esper; Scleractinia ?; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^From this year [1975], Esper's collection is at Naturmuseum Senckenberg at Frankfurt.

- Many samples are lost. [brief note]^1";
- 6169 s[6166] = "CUIF J.-P. (2010).- The converging results of microstructural analysis and molecular phylogeny: Consequence for the overall evolutionary scheme of post-Paleozoic corals and the concept of Scleractinia.- *Palaeoworld* 19, 3-4: 357-367.- FC&P 36, p. 89, ID=6498^Topic(s): phylogeny, systematics; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^During the last three decades, a series of paleontological and biological results have brought considerable changes to the long-standing question of a possible relationship between the Paleozoic and modern corals. Microstructural descriptions of samples from the alpine outcrops (Salzkammergut and Dolomites) along with new specimens from Turkey have shown first that the classical wells' schemes have to be re-examined. Accordingly, several investigations based on molecular phylogeny have repeatedly led to the conclusion that, at the family level, the taxonomy inherited from Vaughan and wells cannot be maintained. From an overall evolutionary viewpoint, agreement also exists between microstructural analysis and molecular phylogeny. A recently discovered Triassic family, the Pachythealids, exhibits highly unexpected skeletal features and microstructures in both septa and walls. Additionally, structural relationships between walls and septa demonstrate a particular mode of growth, with ontogenic priority to the theca. Comparison of the corallite microstructures suggests that most of the Triassic fauna can be derived from this unique family by an evolutionary process during which the septal system became progressively prevalent upon the wall. This monophyly of the modern corals is also well supported by molecular phylogeny. The present concept of Scleractinia has to be re-examined because it cannot include neither Pachythealids, probably related to the Late Permian Polycoelids, nor some other post-Paleozoic corals, including extant Guyniidae, with long recognized specific structural patterns. [original abstract]^1";
- 6170 s[6167] = "KITAHARA M.V., CAIRNS S.D., STOLARSKI J., BLAIR D., MILLER D.J. (2010).- A Comprehensive Phylogenetic Analysis of the Scleractinia (Cnidaria, Anthozoa) Based on Mitochondrial CO1 Sequence Data.- *PLOS ONE* 5, 7: e11490.- FC&P 36, p. 91, ID=6505^Topic(s): phylogeny, molecular approach; Scleractinia, phylogeny; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Background: Classical morphological taxonomy places the approximately 1400 recognized species of Scleractinia (hard corals) into 27 families, but many aspects of coral evolution remain unclear despite the application of molecular phylogenetic methods. In part, this may be a consequence of such studies focusing on the reef-building (shallow water and zooxanthellate) Scleractinia, and largely ignoring the large number of deep-sea species. To better understand broad patterns of coral evolution, we generated molecular data for a broad and representative range of deep sea scleractinians collected off New Caledonia and Australia during the last decade, and conducted the most comprehensive molecular phylogenetic analysis to date of the order Scleractinia. Conclusions: There was a striking discrepancy between the taxonomic validity of coral families consisting predominantly of deep-sea or shallow-water species. Most families composed predominantly of deep-sea azooxanthellate species were monophyletic in both maximum likelihood and Bayesian analyses but, by contrast (and consistent with previous studies), most families composed predominantly of shallow-water zooxanthellate taxa were polyphyletic, although Acroporidae, Poritidae, Pocilloporidae, and Fungiidae were exceptions to this general pattern. One factor contributing to this inconsistency may be the greater environmental stability of deep-sea environments, effectively removing taxonomic "noise" contributed by phenotypic plasticity. Our phylogenetic analyses imply that the most basal extant scleractinians are azooxanthellate solitary corals from deep-water, their divergence predating that of the robust and complex

corals. Deep-sea corals are likely to be critical to understanding anthozoan evolution and the origins of the Scleractinia. [abbreviated abstract]^1";

- 6171 s[6168] = "ZLATARSKI V.N. (2008).- Need for a more integrative approach to scleractinian taxonomy.- Proceedings of the 11th International Coral Reef Symposium, Ft. Lauderdale, Florida, 7-11 July 2008; session 26. [conference abstract] - FC&P 36, p. 109, ID=6541Topic(s): integrative taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The history of scleractinian taxonomy is divided into six periods: the original, purely typological, was based on scarce coralla material; the second, starting at the end of nineteenth century, originated with visiting natural habitat and established variability; the third commenced in the 1930s with detailed skeletal study; the fourth began in the 1950s with scuba access to coral habitat; the fifth began in the 1980s following fundamental discoveries in life history and molecular genetics; and the sixth started in 1995, when data from molecular genetics opened a new avenue for scleractinian megataxonomy, contradicting conventional gross-morphology taxonomy but resulting congruent with skeletal histology and ornamentation. Currently, there are four sources of scleractinian taxonomic information: morphology, paleobiology, developmental biology and molecular genetics. Taxonomy is important for understanding scleractinian biodiversity and reef conservation. However, the taxonomy is fragmented and the nomenclature tangled. The e-dimension benefits have not yet been realized and the New Taxonomy not yet arrived for scleractinians. Vision and teamwork are needed for a more integrative taxonomy. The Atlantic Scleractinia Initiative seeks to address the following points: massive sampling, study of the mesophotic habitat, collection access, analysis of phenotypic diversity, life history, geological history, molecular genetics, cyberinfrastructure and education of specialists. [original abstract]^1";
- 6172 s[6169] = "ZLATARSKI V.N. (2010).- Palaeobiological perspectives on variability and taxonomy of scleractinian corals.- Palaeoworld 19, 3-4: 333-339.- FC&P 36, p. 109, ID=6542Topic(s): variability, taxonomy; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Scleractinians are well known for their exceptional variability and difficult taxonomy. Until the end of the nineteenth century, these corals were studied outside their natural habitat. In situ investigation brought to attention their variability and led to description of formae and attempts to depart from the typological taxonomy. Studies commenced in 1950s of extant scleractinians of Jamaica, the South Pacific, Madagascar, the Red Sea, Cuba, and Australia demonstrated instances of coralla unclassifiable in the described species because they possess intermediate characters, and sometimes one corallum exhibits the characteristics of more than one species. Since 1984, discoveries about scleractinian life history and molecular data further challenged the conventional taxonomy. The coral holobiont is now being studied as a totality of the coral animal, its endosymbiotic zooxanthellae, and its associated community of microorganisms. Molecular genetics and studies of life history combined with morphological variability and variability in geological time are needed for scleractinian taxonomy. The input of palaeontologists with temporal aspect as well as an enormous amount of morphological data is invaluable, as demonstrated by several examples based on detailed morphological observations later supported by molecular and life history information. Efforts to resolve the variability vs. taxonomy dilemma for fossil scleractinians would benefit from further actuopalaeontological work: studies at all levels of biological organization, including ancient DNA and evolutionary genetics, the rich fossil record, fractals and RLQ analysis, palaeopathological research, sclerochronology, the ecology and skeletogenesis of extant deep sea corals. [original abstract]^1";

- 6173 s[6170] = "ROSEN B. (1985).- Scleractinia.- Atlas of Invertebrate Macrofossils [J.W. Murray (ed.)]: 37-46; Longman & The Palaeontological Association. [atlas of fossils] - FC&P 14-1, p. 29, ID=6618^Topic(s): ; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6174 s[6171] = "WELLS J.W. (1986).- A list of scleractinian generic and subgeneric taxa, 1758-1985.- FC&P 15, 1.1: 1-69.- FC&P 15-1.1, p. 1, ID=6722^Topic(s): list of genera; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^This list is believed to be complete except perhaps for a few recently proposed taxa that I have not yet encountered, and any omissions or corrections will be received with thanks. * In compiling this list a few genera lacked designated type species, in which cases types have been selected. [original introduction; names are listed alphabetically, with type species and its stratigraphic position; about 1400 entries are listed]^1";
- 6175 s[6172] = "WELLS J.W. (1987).- Additions and corrections to "A list of scleractinian generic and subgeneric taxa, 1758-1986".- FC&P 16, 1: 49-53.- FC&P 16-1, p. 49, ID=6764^Topic(s): list of genera; Scleractinia genera; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[additions and corrections to wells 1986 (FC&P 15, 1.1)]^1";
- 6176 s[6173] = "BEAUVAIS L., CHAIX C., LATHUILLIERE B., LOSER H., ROSEN B. (1993).- Termes morphologiques utilises pour decrire les scleractiniaux: liste preliminaire / Morphological terms for describing Scleractinia: a preliminary list.- FC&P 22, 2: 50-72.- FC&P 22-2, p. 50, ID=6826^Topic(s): glossary; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[bilingual glossary of terms pertaining to Scleractinia: in French, with English translation and comments by Rosen; attached is an exemplary description of the genus Adelocoenia d'orbigny 1849a]^1";
- 6177 s[6174] = "CUIF J.-P. (1993).- An experimental approach to determine the value and phylogenetic position of scleractinian families by use of molecular biology, immunology and structural features of mineralized parts.- FC&P 22, 2: 73-74. [project outline] - FC&P 22-2, p. 73, ID=6827^Topic(s): molecular biology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Despite the research carried out on living and fossil corals over recent decades, the phylogenetic history of the Scleractinia obviously needs important improvements. More than thirty years on, the evolutionary scheme put forward by wells (1956) still remains the basic proposal. In the French treatise by Chevalier (in Grasse, vol. III, 1987), it is clearly said (p. 675) that our present state of knowledge does not allow us to present an equivalent picture. […] The project starts with a study of living species, on the basis of which a correlation between biochemical criteria and characters of the skeletons will be established, allowing a more efficient use of morphologic and microstructural features in fossil forms. [presentation of research project]^1";
- 6178 s[6175] = "MORSCH S.M. (1994).- Cerioid or plocoid, that is the question.- FC&P 23, 1.1: 47-50. [short note] - FC&P 23-1.1, p. 47, ID=6835^Topic(s): structures, terminology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[…] I would like to point out here a problem of terminology, found in the literature, about the discordance on the definitions of the terms "cerioid" and "plocoid". * The example showed in the "preliminary list of morphological…" (Beauvais et al. 1993, FC&P 22.2: 70-72) can, itself, be an example of the misunderstanding concerning the terms cerioid and plocoid: The illustration shows a plocoid corallum but in its character list it is defined as cerio-plocoid [excerpt from short

- note]^1";
- 6179 s[6176] = "MORSCH S.M. (1994).- A new Latin term for "trabecule en epi".- FC&P 23, 1.1: 50. [short note] - FC&P 23-1.1, p. 50, ID=6836^Topic(s): microstructures, terminology; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[…] I propose here the term "spicata" (from the Latin "spica" = "épi" in French, "spica in English; "spicat" = "en épi" in French, "spicate" in English) for the compound trabeculae in which the fibre sheaves are arranged alternately or without any particular order along the trabecular axis.^1";
- 6180 s[6177] = "LOSER H. (1999).- Scleractinian corals described as sponges, hydrozoans, rudists, or Palaeozoic corals.- FC&P 28, 1: 20-22.- FC&P 28-1, p. 20, ID=6924^Topic(s): misinterpretation cases; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[Decaphyllum Frech 1885 is not a rugosan but a Stylinid scleractinian; Somalites Pamoukchiev 1983 is not a rudist, but a Heterocoeniid scleractinian; Craticularia bulgarica Toula 1877 and Scaniostroma gracilis Brood 1072 (=Leptophyllia baltica Hennig 1900) are both Microsoleniid scleractinians]^1";
- 6181 s[6178] = "CUIF J.-P., SORAUJ J.E. (2001).- Biomineralization and diagenesis in the Scleractinia: part 1, biomineralization.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 144-151.- FC&P 30-1, p. 20, ID=7066^Topic(s): biomineralization; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Applying the organic matrix concept (Towe, 1972) to the study of coral skeletons leads to a series of results that considerably change our representation of the nature and fine scale organization of coral skeletal components. Since 1941, analogy between fibrous spherulites of inorganic origin and fibrous units that radiate from the "centers of calcification" has gained wide acceptance. Newer research greatly modifies this view, and organic control of fiber growth must be universally accepted. Specific preparations carried out on modern corals establish that the organic matrix concept explains all visible features in coral fibers, from overall morphology (with organic envelopes present), to control of longitudinal growth of fibers. Cyclic secretion of organic compounds leads to differential solubility between organic rich and organic depleted zones within these biocrystals at a micron scale, allowing very precise descriptions and comparison of development of various types of septa. * Since the 1940s, it has been commonly accepted that the role of "centers of calcification" is to provide a crystallographic substrate for further growth of aragonite skeletal fibers. Additionally, it is agreed that centers of calcification and septal microstructure have a very high taxonomic potential, but at the same time, they have also frequently been treated as formal descriptive concepts only. Physical chemical measurements (using non destructive methods) and evidence of microstructures obtained by an ultra light etching process complemented by specific biochemical staining allows demonstrating that centers of calcification are present in all species studied. They mostly contain very small, randomly oriented crystals that are always aragonitic, but no direct crystallographic link is seen between crystals from calcification centers and later coating layers of aragonite fibers. * All research areas involving coral skeletons are affected by these changing concepts of skeletogenesis. Thus, the biochemical study of macromolecular mineralizing matrices is important in the study both of coral phylogeny and environmental effects on coral calcification. Another major consequence of this "organic and mineral" concept of coral skeleton is to provide us with a new basis for studying the fossilization process. [original abstract]^1";
- 6182 s[6179] = "SORAUJ J.E., CUIF J.-P. (2001).- Biomineralization and

diagenesis in the Scleractinia: part 2, diagenesis.- Bulletin of the Tohoku University Museum 1 [Proceedings of the 8th International Symposium on Fossil Cnidaria and Porifera]: 152-163.- FC&P 30-1, p. 20, ID=7067Topic(s): diagenesis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Diagenesis in scleractinian corals depends on the relative solubility of aragonite and calcite, the presence and chemistry of pore fluids, and the amount, nature and configuration of organic matrix macromolecules within skeleton. Concepts of skeletal diagenesis have been largely based on mineralogic aspects ; thus we recognize that neomorphism of scleractinian skeletal aragonite into calcite results in obliteration of biogenic skeletal microstructure. However, structure can be preserved as aragonitic material, due to isolation, either by non permeable sediment or neomorphic calcite. In calcitized fossil scleractinians, crystal boundaries are seen cutting across biogenic features with resultant destruction of structure. Where dissolution of aragonite and replacement by calcite occurs on a very fine (µm) scale, aragonitic inclusions within calcite commonly outline organic structures. Isolation also allows preservation of whole specimens as aragonite, but fossils totally lacking neomorphic calcite are seldom found, and it is unusual to find aragonitic skeleton with preserved organic matrix within. * Concepts of diagenesis must take into account consequences of biochemical diversity. Organic matrix proteins play several roles in determining the end results of diagenesis, due to their abundance in centers of calcification, their presence in layers of abundant organic proteins within biocrystals and forming protein envelopes around biocrystal clusters. Earliest diagenesis of aragonite biocrystals begins in skeletal carbonate during the life of the corals, resulting in fusion of aragonite fibers, and loss of organic matter by microbial means or oxidation. There is a common association of reduced sulfur with formerly organic rich areas after breakdown of organic matter by microbes. Where organic material is most abundant, in growth layers or at centers of calcification, its early removal leads to modification of these structures or to calcitization. Growth lamellae, both within and between aragonitic fibers can be exaggerated by calcific neomorphism of aragonite enhanced by early removal of organic matter. [original abstract]^1";

6183 s[6180] = "STOLARSKI J. (2003).- Three-dimensional micro- and nanostructural characteristics of the scleractinian coral skeleton: A biocalcification proxy.- Acta Palaeontologica Polonica 48, 3: 497-530.- FC&P 33-1, p. 73, ID=7219Topic(s): skeletogenesis; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^The contemporary "two-step model" of growth of the scleractinian skeleton is based mostly on transversely sectioned samples. According to this model, many skeletal elements, e.g. septa are formed in two temporally distinct phases represented by (1) "centers of calcification" that are composed of homogenously distributed microcrystalline or/and organic components and serve as scaffolding for the further growth of (2) fibrous skeleton. Based on transverse and longitudinal sections and histochemical staining techniques, I demonstrate herein that in extant corals (i.e. Stephanocyathus, Flabellum, Desmophyllum, "Ceratotrochus", Galaxea, Platygyra), the entire septal skeleton is composed of superimposed layers of mineral and organic-enriched phases. These may be interrupted in some directions of growth but in other directions there is continuity between "centers of calcification" and "fibers", making any distinction between these two structures unclear. As an alternative to the "two-step model", a "layered model" of skeletal growth is proposed, that explains the differences between "centers of calcification" and "fibers" in terms of differential growth dynamics between these regions. Instead of the traditional but inadequate "trabecular" and "centers of calcification"

concepts, a distinction between deposits of the Rapid Accretion Front (Draf); which in particular cases can be organized into Centers of Rapid Accretion (CRA), and Thickening Deposits (TD) is proposed. In the dRAF region, mineral components, ca. 50nm in diameter, seem to match the size range of nodular structures recently interpreted as nascent CaCO₃ crystals. Remarkable regularity of the mineral/organic phase alternations (microbanding) in the TD skeleton of zooxanthellate corals and lack of such regular microbanding in azooxanthellate coralla is a promising criterion for distinguishing these two ecological coral groups on a skeletal basis, and one that could be applicable to fossils. [original abstract]^1";

6184 s[6181] = "BELASKY P. (1996).- Biogeography of Indo-Pacific larger foraminifera and scleractinian corals: A probabilistic approach to estimating taxonomic diversity, faunal similarity, and sampling bias.- Palaeogeography, Palaeoclimatology, Palaeoecology 122, 1-4: 119-141.- FC&P 25-1, p. 28, ID=2999^Topic(s): biogeography, biodiversity; Scleractinia, Foraminifera; Systematics: Cnidaria Foraminifera; Scleractinia; Stratigraphy: ; Geography: ^The eastward decline in the diversity of Indo-Pacific scleractinian corals and larger foraminifera is due primarily to the shallowing of the thermocline and significant cooling of the Equatorial Undercurrent in the eastern Pacific. The coral larvae carried eastward across the Pacific encounter temperatures below 18°C; which is lower than the optimum for the long-term survival of reef-building corals. This thermal barrier to dispersal of the Indo-Pacific fauna is particularly effective in an area within 2000 km west of the Galapagos Islands. Nevertheless, trend-surface analysis of faunal similarity based on the probabilistic index of Raup and Crick (1979) suggests that the modern scleractinian fauna of the eastern Pacific region exhibits a high degree of similarity to that of the Indo-Pacific region. The newly assembled data on the generic occurrence of larger foraminifera and the results of the probabilistic analysis based on the method of Henderson and Heron (1977) indicate that the observed diversity of a fauna constituted, on average, 65% of the true diversity; the remaining 35% can be viewed as a measure of the sampling bias. Last, the maximum north-south range of a genus belonging to modern scleractinian corals or larger foraminifera is 70 ±5° and its east-west range never exceeds the distance that is four times the north-south range. The reason for a correspondence between the maximum latitudinal and longitudinal ranges of genera belonging to these two unrelated groups is believed to lie in the similarity of their dispersal capabilities, which were largely controlled by temperature.^1";

6185 s[6182] = "GAUTRET P., MARIN F. (1993).- Evaluation of diagenesis in scleractinian corals and calcified demosponges by substitution index measurement and intraskeletal organic matrix analysis.- Courier Forschungsinstitut Senckenberg 164: 317-327. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 1].- FC&P 22-2, p. 21, ID=3467^Topic(s): diagenesis, evaluation; Scleractinia, Porifera; Systematics: Cnidaria Porifera; Scleractinia; Stratigraphy: ; Geography: ^The composition of aragonitic skeletons of some living corals and calcified demosponges is first examined in the way to provide references for following interpretations of preservation states occurring in still aragonitic Triassic and Tertiary fossil records. The analysis of both carbonate lattice and soluble organic compounds, included inside skeletal structures, emphasizes important differences between the two taxonomic groups, inducing different diagenetic trends. Nevertheless, this analytical approach allows us to detect noticeable transformations concerning the composition of biogenic aragonite before the aragonite / calcite inversion.^1";

6186 s[6183] = "BEAUVAIS L., BEAUVAIS M. (1975).- Une nouvelle famille dans le sous-ordre des Stylinida All.: les Agatheliidae nov. fam. (Madréporaires mésozoïques).- Bulletin de la Societe geologique de

- France, 7e sér., 17, 4: 576-581.- FC&P 4-2, p. 50, ID=5230^Topic(s): taxonomy; Scleractinia, Agathellidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Dans cette note, les caractères d'une nouvelle famille appartenant au sous-ordre des Stylinida Alloiteau (1952) sont décrits. Trois genres sont placés dans cette famille (Agathelia Reuss, Stylohelia de From, et Bracthelia nov. gen.). Leur diagnose est précisée. Les affinités de cette nouvelle famille avec le sous-ordre des Stylinida Alloit., celui des Heterocoeniida M. Beauvais et celui des Amphiastraeida Alloit. sont étudiées.^1";
- 6187 s[6184] = "BEAUVAIS L. (1970).- Données nouvelles sur le sous-ordre Amphiastraeida Alloiteau.- C. R. Acad. Sc. Paris 271: 34-37.- FC&P 1-2, p. 20, ID=4672^Topic(s): classification; Scleractinia, Amphiastraeida; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^L'étude des espèces-types de tous les genres placés par les auteurs dans les Amphiastraeida a permis de redéfinir ce sous-ordre d'une façon plus précise, de reclasser les genres, de comparer les Amphiastraeida à différents groupes de Madréporaires tant post-paléozoïques que paléozoïques et de discuter la valeur de leurs caractères phylogénétiques et morphogénétiques.^1";
- 6188 s[6185] = "KOLODZIEJ B. (1995).- Microstructure and taxonomy of Amphiastraeina (Scleractinia).- Annales Societatis Geologorum Poloniae 65: 1-17.- FC&P 25-1, p. 41, ID=2992^Topic(s): microstructures, classification; Scleractinia, Amphiastraeina; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^A new classification of the suborder Amphiastraeina is supposed on the basis of microstructures. The suborder Heterocoeniina is included in the Amphiastraeina, in which two superfamilies are distinguished now. In addition three new species of the genera Confusaforma, Preverastraea and Thecidiosmilia are described from the Upper Jurassic to Lower Cretaceous of Poland and Romania.^1";
- 6189 s[6186] = "MELNIKOVA G.K., RONIEWICZ E. (1976).- Contribution to the systematics and phylogeny of Amphiastraeina (Scleractinia).- Acta Palaeontologica Polonica 21, 1: 97-115.- FC&P 5-1, p. 22, ID=5339^Topic(s): phylogeny; Scleractinia, Amphiastraeina; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^Amphiastraeina are connected with their presumed ancestors, Permian Polycoeliidae, by a transitional link - Triassic corals of the family Pachythecalidae Cuif 1975. During the early Jurassic they differentiated into a few phylogenetic lines and developed certain structural patterns of corallites homeomorphic with those of Rugosa, which had not been, however, recognized in their ancestral group (lonsdaleoid septa and dissepiments, gemmation). Four families are recognized: Amphiastraeidae Ogilvie, Donacosmillidae Krasnov, emend. Roniewicz, Carolastraeidae Eliasova, and Intersmiliidae Melnikova & Roniewicz, fam. n. The earliest Amphiastraeina are described from the ?Hettangian-Sinemurian through the Bajocian and the Callovian of South-East Pamir. One new genus, Prodonacosmilia Melnikova is distinguished.^1";
- 6190 s[6187] = "STOLARSKI J. (1995).- Ontogenetic development of the thecal structures in caryophylline corals.- Acta Palaeontologica Polonica 40, 1: 19-44.- FC&P 24-1, p. 72, ID=2997^Topic(s): thecal structures; Scleractinia, Caryophylliidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^At the initial stage of ontogeny, in Caryophylliidae (Miocene Caryophyllia salinaria, C. depauperata, Recent C.berteriana) and Flabellidae (Miocene Flabellum roissyanum, Recent Javania cailleti), wall and septa are formed simultaneously, and their trabecular structure is coalesced (marginothecal wall). At subsequent juvenile stage in Caryophylliidae the presence of the extensive exosarc enables formation of costo-septa and, in consequence, formation of trabeculotheca. Trabeculotheca consists of fragments of primordial wall

Located between the costo-septa. The trabeculothecal segments vanish in the adult stage in the majority of corals when the septothecal wall is formed by thickening of the costo-septa. In others, however, marginotheca can be present throughout the whole ontogenetic sequence (C. salinaria). Most Flabellidae are characterized by limited expression of exosarc and the presence of marginothecal wall up to the adult stage. The origin of 'flabellid' organization in Caryophylliina may result from a simple modification of ontogeny - extension of initial morphology to later ontogenetic stages. Such corals could develop several times, and the Flabellidae may be polyphyletic.^1";

- 6191 s[6188] = "RONIEWICZ E. (1984).- Microstructural evidence of the distichophylliid affinity of the Caryophylliina (Scleractinia).- Palaeontographica Americana 54: 515-518 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-2, p. 23, ID=0942^Topic(s): microstructures, phylogeny; Scleractinia, Caryophylliina; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^A possible relationship between shallow-water Triassic distichophylliids and stratigraphically younger ahermatypic caryophylliids is inferred from the resemblance of microstructural peculiarities of their septa: a small-trabecular mid-septal plane, and septal sides formed by a stereomal deposit organized in fascicles of fibres or in short trabeculae normal to the mid-septal plane.^1";
- 6192 s[6189] = "CHESHMEDJIEVA V.L. (1970).- Madréporaires cyclolitoides du Maëstrichtien de l''arrondissement de Breznik, Bulgarie du Sud-Ouest.- 001 Ann. Univ. Sofia, Géologie 62: pp?.- FC&P 1-2, p. 23, ID=4690^Topic(s): ; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^A la faune corallienne du Maëstrichtien de l''arrondissement de Breznik, Bulgarie du Sud-Ouest est représentée par des Polypiers simples et coloniaux. Le gisement des Coraux coloniaux se trouve dans les sédiments Maëstrichtiens, au voisinage du village Garlo. Les marnes Maëstrichtiennes au Sud-Ouest du v. Krassava et au Nord-Est du v. Yaroslavtzi ne contiennent que des Polypiers simples. Prédominant les Polypiers de forme cyclolitoides. On donne la description de 6 espèces, qui appartiennent aux genres Cunoolites Barrère et Plesiocunoolites Alloiteau: Cunoolites sororius (Quenstedt), Plesiocunoolites undulatus (Goldfuss), Pl. undu-latiformis (Oppenheim), Pl. platystoma (Quenstedt), Pl. mitissimus (Oppenheim) et Pl. reissi (Fromental).^1";
- 6193 s[6190] = "CHESHMEDJIEVA V.L. (1971).- Coraux madréporiques cyclolitoides de la famille Cunoolitidae All. du Maëstrichtien de l''arrondissement de Breznik, Bulgarie du Sud-Ouest.- 001 Ann. Univ. Sofia, Géologie 63: pp?.- FC&P 1-2, p. 23, ID=4691^Topic(s): ; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6194 s[6191] = "STOLARSKI J. (2000).- Origin and phylogeny of Guyniidae (Scleractinia) in the light of microstructural data.- Lethaia 33: 13-38.- FC&P 29-1, p. ???, ID=1493^Topic(s): microstructures, phylogeny; Scleractinia, Guyniidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6195 s[6192] = "BEAUVAIS M. (1977).- Le nouveau sous-ordre des Heterocoeniida.- Bureau Recherches Géologiques et Minières Memoir 89: 271-282 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 28, ID=0080^Topic(s): taxonomy; Scleractinia, Heterocoeniida; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6196 s[6193] = "BEAUVAIS M. (1974).- Le nouveau sous-ordre des Heterocoeniida.- FC&P 3, 2: 22-23.- FC&P 3-2, p. 22, ID=6277^Topic(s): new suborder; Scleractinia, Heterocoeniida;

- Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[Les genres inclus dans ce sous-ordre (Heterocoeniida) sont caracterises par une microstructure particuliere des elements de leur squelette. Les elements radiaires, les elements transversaux, la muraille et les lamelles perithecales sont formes par l''accolement de 'trabecules elementaires'; perpendiculaires aux faces des elements structuraux. Les elements radiaires sont soit des septes composes constitues par l''accolement des trabecules elementaires disposees dans des plans verticaux (= plans trabeculaires), soit a la fois des septes composes et des septes rudimentaires formes d'un seul plan de trabecules; taken from 'caracteres generaux de sous-ordre']^1";
- 6197 s[6194] = "GILL G.A. (1970).- Anomalies dans la constitution du squelette des Coraux Microsolénides simples.- Bulletin de la Societe geologique de France 7, 12, 2: 378-382.- FC&P 1-2, p. 21, ID=4680Topic(s): growth anomalies; Scleractinia, Microsoleniida; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^On décrit deux sortes d''anomalies. L''une est la formation de bourgeons secondaires abortifs chez les Madréporaires Microsolénides typiquement solitaires. L''autre concerne des perturbations observées dans l''élaboration de la face inférieure et dans la disposition des septes de cette face chez Chomatoseris: elles sont dues à la persistance d'un important support de la planula; celui-ci par ses dimensions excessives, entrave alors la fermeture normale de la face inférieure du Polypier. Les anomalies présentées ici, malgré une certaine coïncidence avec l''ontogenèse des Madréporaires, sont causées essentiellement par des facteurs du milieu extérieur.^1";
- 6198 s[6195] = "GILL G.A. (1977).- Essai de regroupement des Stylines (Hexacoralliaires) d'après la morphologie des bords internes de leurs septes.- Bureau Recherches Geologiques et Minieres Memoir 89: 283-295 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-1, p. 29, ID=0096Topic(s): classification; Scleractinia; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6199 s[6196] = "BARON-SZABO R.C., BERTLING M. (1996).- Justification of neotypes within stylinid genera.- FC&P 25, 2: 31,32. [short note] - FC&P 25-2, p. 31, ID=3116Topic(s): nomenclature; Scleractinia, Stylinidae; Systematics: Cnidaria; Scleractinia; Stratigraphy: ; Geography: ^[Authors indicate, citing ICZN, that designation of neotypes may be justified only under special circumstances: in case of revision of numerous species, and avoiding inconsistencies with former usage of a particular name]^1";
- 6200 s[6197] = "OEKENTORP K. (2004).- Professor Dr. Alexander von Schoupe.- FC&P 33, 1: 10-12.- FC&P 33-1, p. 10, ID=7166Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[born] 26. Februar 1915 in Baden near Vienna, Austria [died] 06. July 2004 in Münster, Germany. * Prof. Dr. Alexander von Schoupe, Nestor of German coral research and long standing member of the International Association for the Study of Fossil Cnidaria and Porifera, was an international recommended and esteemed scientist as well as a passionate researcher and University teacher. He has been revered by his students and colleagues, and he was always a trustworthy friend. * Alexander von Schoupe studied Geology, Paleontology and Mineralogy at the Karl-Franzens University in Graz, supervised by the famous Prof. Dr. Franz Heritsch. On May, 26. 1939, after finishing his thesis "Die Coelenteratafauna des e-gamma der Karnischen Alpen"; he became Dr. phil. and assistant at the Geological Institute Graz. During the world war II he was assigned to the German Air Force where he served as meteorologist in a remote scout plane. He survived three downings. * After the war he returned to Graz. In 1948 and with an investigation on morphogenesis and systematics of the coral genus

Thamnophyllum [Die Thamnophyllen und ihre Beziehung zur Gruppe des Cyathophyllum caespitosum], the *venia legendi* in Palaeontology was bestowed on him and, following in 1952, the *venia legendi* in Geology with a paper on hydrogeological studies on the genesis of the Gleichenberg mineral springs [Hydrogeologische Studien zur Genesis der Heilquellen von Gleichenberg]. * In 1953 Alexander von Schoupe was appointed to the University at Münster to establish the branch of Palaeontology at the Geologisch-Paläontologisches Institut and Museum [Director Prof. Dr. Franz Lotze] where, in 1956, he became extraordinary professor and in 1965 **Wissenschaftlicher Rat**; and senior professor. Between 1973-1975 he was the Dean of the **Geosciences**. [excerpts from extensive obituary]¹;

- 6201 s[6198] = "OLIVER W.A.jr (1980).- The relationship of the scleractinian corals to the rugose corals.- Paleobiology 06, 2: 146-160.- **FC#038;P 9-2**, p. 44, ID=0347^Topic(s): phylogeny; Scleractinia, Rugosa; Systematics: Cnidaria; Scleractinia Rugosa; Stratigraphy: ; Geography: ^The Mesozoic-Cenozoic coral Order Scleractinia has been suggested to have originated or evolved (1) by direct descent from the Paleozoic Order Rugosa or (2) by the development of a skeleton in members of one of the anemone groups that probably have existed throughout Phanerozoic time. In spite of much work on the subject, advocates of the direct descent hypothesis have failed to find convincing evidence of this relationship. Critical points are:(1) Rugosan septal insertion is serial; Scleractinian insertion is cyclic; no intermediate stages have been demonstrated. Apparent intermediates are Scleractinia having bilateral cyclic insertion or teratological Rugosa.(2) There is convincing evidence that the skeletons of many Rugosa were calcitic and none are known to be or to have been aragonitic. In contrast, the skeletons of all living Scleractinia are aragonitic and there is evidence that fossil Scleractinia were aragonitic also. The mineralogic difference is almost certainly due to intrinsic biologic factors.(3) No early Triassic corals of either group are known. This fact is not compelling (by itself) but is important in connection with points 1 and 2, because, given direct descent, both changes took place during this only stage in history of the two groups in which there are no known corals. (Original summary)¹";
- 6202 s[6199] = "SWART P.K., MOORE M., CHARLES C., BOHM F. (1998).- Sclerosponges May Hold New Keys to Marine Paleoclimaze.- EOS, Transactions, American Geophysical Union 79: 633-636.- **FC#038;P 28-2**, p. 40, ID=3985^Topic(s): stable isotopes, C O; Porifera Sclerospongiae; Systematics: Porifera; Sclerospongiae; Stratigraphy: ; Geography: ^This paper reports on a meeting of March 1998 to discuss the use of sclerosponges to reveal climatic changes of the past few thousand years. The advantages of using these sponges are that the basal skeleton is secreted in carbon and oxygen isotopic equilibrium with the environment, they are very long lived (up to 4,000 years estimated), and they live in a range of different depths. Unlike those of scleractinians the isotopic signatures of their skeletons are apparently unaffected by vital effects. They grow at between 0.2 mm and 1 mm per year depending on depth. The growth increments are most successfully dated by mass spectrometric measurements or uranium series isotopes.¹";
- 6203 s[6200] = "REITNER J., ENGESER T. (1985).- Revision der Demospongier mit einem thalamidem, aragonitischen Basalskelett und trabekulaerer Internstruktur ("Sphinctozoa" pars).- Berliner geowissenschaftliche Abhandlungen A060: 151-193.- **FC#038;P 16-2**, p. 32, ID=1921^Topic(s): revision; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: ; Geography: ^The demosponges with a thalamid and aragonitic basal skeleton, and a trabecular internal structure ("Sphinctozoa" pars) are revised. The following new taxa are proposed: Stylothalamidae n. fam. (type genus Stylothalamla

Ott 1967); *Menathalamia caniegoensis* n.gen., n.sp.; *Vaceletiidae* n. fam. (type genus *Vaceletia* Pickett 1982); *Vascothalamia arayaensis* n.gen., n.sp. (attributed to the family *Verticillitidae* Steinmann 1882); *Murguithalamida* n. ordo; *Murguithalamiidae* n. fam.; *Murguithalamia jugoensis* n.gen., n.sp.; *Boikothalamiidae* n. fam. and *Boikothalamia* n.gen. (type species *Verticillites convexus* Bojko 1979). All new species come from the Albian of Northern Spain. *Murguithalamia jugoensis* n.gen., n.sp. was proved having pseudomorphs of originally siliceous triaene megascleres. *Vascothalamia arayaensis* n.gen., n.sp. was found having pseudomorphs of monaxone siliceous megascleres. Considering these findings as well as the living sphinctozoan; *Vaceletia crypta* (Vacelet 1977) - it is obvious that the demosponges with a thalamid and aragonitic basal skeleton, and a trabecular internal structure are polyphyletic. The taxa were attributed therefore partly to the subclass *Ceractinomorpha* Levi 1973 (order *Verticillitida* Termier et Termier 1977 with the families *Verticillitidae* Steinmann 1882, *Vaceletiidae* n. fam. and *Stylothalamiidae* n. fam.) and partly to the subclass *Tetractinomorpha* Levi 1973 (order *Murguithalamida* n. ordo with the families *Murguithalamiidae* n. fam. and *Boikothalamidae* n. fam.).¹;

6204 s[6201] = "BOIKO E.V., BELYAEVA G.V., ZHURAVLEVA I.T. (1991).- Phanerozoic Sphinctozoa of the Territory of the USSR.- Nauka, Moscow [ISBN N 5-02-00223-3], 224 pp., 64 pls.- FC&P 20-1.1, p. 82, ID=2888Topic(s): monograph; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Geography: USSRThe monograph embracing all the information on Sphinctozoa, a very important taxon in evolutionary and biostratigraphical aspects, was created for the first time in the USSR. The general part of the monograph includes the outlines devoted to the problems of morphology, systematics, paleontology and the stratigraphical significance of Sphinctozoa. The description of all the species of Sphinctozoa known in the USSR (from the Carboniferous to the Jurassic and from the Far Eastern USSR to the Crimea inclusively) is given in another part of the monograph, which contains the regional geological outlines. In some cases the revision of the higher taxa at the level of "genus" - "suborder" is given. The separate chapter represents the materials related to the discussion on the nature of Sphinctozoa among both the specialists from different countries and the authors of this monograph. The book is richly illustrated, includes textfigures and 65 plates, traces, the list of references is complete.^1;

6205 s[6202] = "DEBRENNE F., LAFUSTE J. (1972).- Microstructure du squelette de quelques Sphinctozoaires (exemples pris dans le Permien du Jbel Tebaga et le Crétacé d'Angleterre).- Bulletin de la Société géologique de France 7, 14: 325-330.- FC&P 3-1, p. 34, ID=4909Topic(s): microstructures; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: Geography: Des fossiles de position et affinités zoologiques incertaines, ayant en commun un ensemble de caractères morphologiques (porosité du squelette, loges, cavité axiale, etc.), tels que les Archaeocyatha, Sphinctozoa, Aphrosalpingoidea, Soanitida et Receptaculitidae, pourraient constituer le plus ancien groupe de Métazoaires (Archaeatha). Pour rechercher s'il n'existerait pas également des similitudes de constitution du squelette, des recherches sont menées en microscopie électronique et microscopie optique (sur lames ultra-polies). Sont donnés ici les premiers résultats de l'étude de quelques Pharétones, Barroisia anastomosans, Tremacystia orbigny, Amblysiphonella sp., Preverticillites sp. comparés avec Petrobiona, Eponge calcaire actuelle. Toutes ces formes ont un squelette fibreux, dont les éléments peuvent être classés en trois groupes: (1) fibres droites fines - pas de spicules (Sphinctozoaires du Permien); (2) fibres droites ténues - pas de spicules (Petrobiona); (3) fibres à bosselures avec fins

- spicules monaxones et spicules triaxones (Sphaeroceelidae - Barroisia, Tremacystia - du Crétacé). L'hypothèse de regroupement de ces formes n'est pas vérifiée au niveau de la microstructure.¹";
- 6206 s[6203] = "SENOWBARI-DARYAN B. (1991).- Sphinctozoa: an overview.- Fossil and Recent Sponges [J. Reitner & H. Keupp (eds)]: 224-241; Springer-Verlag, Berlin.- <FC>P 21-1.1, p. 60, ID=6817^Topic(s): systematics; Porifera, Sphinctozoa; Systematics: Porifera; Sphinctozoa; Stratigraphy: ; Geography: ^<in many structural elements this group of sponges duplicates those of the stromatoporoids]¹";
- 6207 s[6204] = "STEARN C.W. (1977).- Studies of Stromatoporoids by scanning electron microscopy.- Bureau Recherches Geologiques et Minieres Memoir 89: 033-041 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- <FC>P 6-1, p. 30, ID=0104^Topic(s): research methods, SEM; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6208 s[6205] = "KAZMIERCZAK J. (1976).- Cyanophycean nature of stromatoporoids.- Nature . 49-51.- <FC>P 6-1, p. 30, ID=0108^Topic(s): as Cyanophyta; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The author argues that the granular fabric of a well preserved specimen of Stromatopora undata Riablnin represents permineralised aggregates of coccoidal cells; and that the astrorhizae represent weak or absent permineralization of young colonies insufficient to protect the organic matter against decomposition;¹";
- 6209 s[6206] = "STEARN C.W. (1977).- The stromatoporoid coenosteum: condominium or castle.- Journal of Paleontology 51: 27 [North American Paleontological Convention II].- <FC>P 6-1, p. 30, ID=0109^Topic(s): skeletal structures, biology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6210 s[6207] = "RIDING R., KERSHAW S. (1977).- Nature of Stromatoporoids.- Nature.- <FC>P 7-1, p. 26, ID=0195^Topic(s): systematic position; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^In this note the proposal by Kazmierczak (1976) that Stromatoporoids are skeletal stromatolites is rejected.¹";
- 6211 s[6208] = "KERSHAW S., RIDING R. (1978).- Parameterization of Stromatoporoid shapes.- Lethaia 11: 233-242.- <FC>P 8-1, p. 49, ID=0207^Topic(s): growth forms; stroms, morphology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Stromatoporoid cross sectional shape is expressed on triangular diagrams as combinations of vertical, diagonal and basal dimensions.¹";
- 6212 s[6209] = "BOGOYAVLENSKAYA O.V. (1980).- On the characterization of the genus Stachyodes (Stromatoporida).- Korally i rify fanerozoia SSSR [B.S. Sokolov (ed.)]: 8-10; Nauka, Moskva.- <FC>P 9-2, p. 50, ID=0360^Topic(s): morphology, classificatiob; stroms, Stachyodes; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Stachyodes should not be considered as a separate taxonomic entity but is closely related to massive coenostea of other genera.¹";
- 6213 s[6210] = "KAZMIERCZAK J. (1980).- Stromatoporoid Stromatolites, new insight in the evolution of the cyanobacteria.- Acta Palaeontologica Polonica 25, 2: 243-251.- <FC>P 9-2, p. 51, ID=0370^Topic(s): as Cyanophyta; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Spherical structures in the tissue of a specimen of Stictostroma are interpreted as preserved aggregates of cyanobacterial cells.¹";
- 6214 s[6211] = "STOCK C.W. (1979).- Relationship of the Stromatoporoidea within the Porifera.- Journal Alabama Academy of Science 50, 3:

- 130-131.- FC&P 9-2, p. 51, ID=0377^Topic(s):systematic position, Porifera; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^^1";
- 6215 s[6212] = "STOCK C.W. (1983).- The Function of the Tube-Pillars in Cliefdenella (Stromatoporoidea) inferred by Analogy with Calcifibrospongia (Sclerospongia).- Palaeontographica Americana ????-FC&P 13-1, p. 47, ID=0511^Topic(s):Sclerospongiae as analog; stroms, Cliefdenella; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^^1";
- 6216 s[6213] = "STEARNS C.W. (1983).- Stromatoporoids: Growth and Form, Classification, Affinity with Modern Organisms.- Tennessee University, Studies in Geology: Sponges and Spongiomorphs; Notes for a Short Course: 141-148, 157-165.- FC&P 13-1, p. 49, ID=0527^Topic(s):growth forms, classification; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^^1";
- 6217 s[6214] = "KAZMIERCZAK J., KRUMBEIN W.E. (1983).- Identification of calcified coccoid cyanobacteria forming stromatoporoid stromatolites.- Lethaia 16, 3: 207-213.- FC&P 13-1, p. 50, ID=0534^Topic(s):as Cyanophyta; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^A simple technique is described enabling the identification in scanning electron micrographs (SEM) of combined fractures and etched stromatoporoid sections, the cyanobacteria-like coccoid aggregates building the entire stromatoporoid structure. The coccoid aggregates from stromatoporoids are closely related to extant calcified coccoid cyanobacteria (Pleurocapsales) forming stromatolitic mats in Laguna Mormona (Baja California) and Sabkha Gavish (Sinai).^1";
- 6218 s[6215] = "SMOSNA R. (1984).- Diagenesis of a Stromatoporoid patch reef.- Journal of Sedimentary Petrology 54, 3: 1000-1011.- FC&P 15-1.2, p. 43, ID=0775^Topic(s):reefs, patch reef, diagenesis; stroms, reefs; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^^1";
- 6219 s[6216] = "BOGOYAVLENSKAYA O.V. (1985).- K poznaniyu prirody roda Amphipora (Stromatoporata) [nature of the genus Amphipora].- Problematiki pozdnego dokembriya i Paleozoya / 632:62-70.- FC&P 15-1.2, p. 44, ID=0778^Topic(s): stroms, Amphipora; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^^1";
- 6220 s[6217] = "BOGOYAVLENSKAYA O.V., KHROMYKH V.G. (1985).- Ukazatel' Rodov i Vidov Stromatoporat [index of genera and species of Stromatoporata].- Akademiya Nauk SSSR, Sibirskoe Otd., Inst. Geol. Geofiz.- FC&P 15-1.2, p. 44, ID=0779^Topic(s):list of species & genera; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^This is a useful compilation arranged first by species name and secondly by genus. For each species the original generic assignment and occurrence is given. For each genus a list of references, a short diagnosis, a list of species and an illustration of the type species is supplied.^1";
- 6221 s[6218] = "STEARNS C.W. (1986).- Contemporary phases and the species problem in stromatoporoids.- Geological Society of America, Abstracts with Programs 18: 69.- FC&P 15-1.2, p. 45, ID=0789^Topic(s):species problem; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^^1";
- 6222 s[6219] = "WANG MINGZHOU (1985).- Discussion of the systematic position of the stromatoporoids in the light of Dongaiastroma Dong and Wang.- Journal of Xian College of Geology 03:- FC&P 15-1.2, p. 45, ID=0790^Topic(s):stroms as Protista; stroms Dongaiastroma; Systematics:Porifera; Stromatoporoidea; Stratigraphy: Geography:^… the author considers that the stromatoporoids should be placed in the class Rhizopoda of the

- phylum Sarcodina of the kingdom Protista…^1";
- 6223 s[6220] = "ENDERSON R.A. (1984).- Diagenetic growth of euhedral megaguartz in the skeleton of a stromatoporoid.- Journal of Sedimentary Petrology 54: 1138-1146.- FC&P 14-2, p. 44, ID=0937^Topic(s): diagenesis, euhedral quartz; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6224 s[6221] = "HARRINGTON R.J. (1983).- Opportunistic behaviour in stromatoporoids.- Geological Society of America, Abstracts with Programs 15: 409.- FC&P 14-1, p. 55, ID=1041^Topic(s): biofacies; stroms, ecology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6225 s[6222] = "COOK A.G. (2002).- Stromatoporoidea.- Systema Porifera: A Guide to the Classification of Sponges [Hooper J. N. A. & Van Soest R. W. M. (eds); Kluwer Academic/Plenum Publishers, New York]: 69-70.- FC&P 33-2, p. ???, ID=1417^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Stromatoporoidea Nicholson & Murie (?Demospongiae) are calcareous skeletal remains of organisms present during the Palaeozoic to Mesozoic, comprising sponge-like taxa with hypercalcified layered skeletons that were important to reef-building. Earlier (Palaeozoic) forms lack spicules but some of the later (Mesozoic) taxa have siliceous monaxonomic or tetraxonic spicules in addition to calcitic basal skeletons, inferring affinities to Demospongiae. 'Stromatoporoids' has been used at various levels (ordinal, class, and subphylum) within the phylum Porifera, but also within other "lower" marine invertebrate phyla at various times. The contemporary hypothesis is that these life forms may represent a grade (not a clade) of poriferan construction, although it is also recognized that there may be fundamental differences between the Palaeozoic and Mesozoic stromatoporoid faunas, such that this grade of skeletal construction may not be homologous, and the taxon may be a completely artificial construct. Some stromatoporoids have also been associated with the Calcarea and also the 'sphinctozoan' grade of construction. Only a brief overview is provided although the stromatoporoids include about 110 genera in seven orders.^1";
- 6226 s[6223] = "STOCK C.W. (2001).- Stromatoporoidea, 1926-2000.- Journal of Paleontology 75, 6: 1079-1089.- FC&P 31-1, p. 55, ID=1622^Topic(s): research history; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The history of research on the "true" stromatoporoids, a presumably monophyletic group of sponges that occurred from the Ordovician through the Devonian, is examined in detail. Stromatoporoid published research is summarized in five categories: quantity of publication; biological affinities; systematics; skeletal microstructure; and paleoecology. Quantity of publication is measured from each of the 75 years. Moderate levels of publication in the late 1920s and 1930s declined in the early 1940s, and were reduced to zero for four years due to the impact of world war II. Levels similar to that of the 1930s returned in the 1950s, after which there was an overall increase until the mid-1980s, when levels began a decrease that persists today. The proportion of research on paleoecology has increased as research on systematics decreased through time. Post-Devonian forms assigned to the stromatoporoids are a polyphyletic grouping of several apparently unrelated taxa, possibly representing both Porifera and Cnidaria. Publications on the post-Devonian "stromatoporoids" amount to less than one-third that on the true stromatoporoids during the same 75 years.^1";
- 6227 s[6224] = "MORI K. (1980).- A new interpretation on taxonomic position of stromatoporoids.- Journ. Geol. Soc. Japan 86, 12: 829-832 [in Japanese].- FC&P 11-2, p. 20, ID=1810^Topic(s): systematics; stroms; Systematics: Porifera;

- Stromatoporoidea; Stratigraphy: ; Geography: ^Skeleton of some scleractinian corals are so similar to that of stromatoporoids. No spicules have been found in the skeleton of stromatoporoids, which were essentially predator, phyletically close to Hydrozoa and Anthozoa. They will stand as an independent class of their own.^1";
- 6228 s[6225] = "KAZMIERCZAK J., KRUMBEIN W.E. (1982).- The preservability of coccoid cyanobacteria forming Stromatoporoid stromatolites.- Journal of Paleontology 56, 2: 14.- FC&P 11-2, p. 36, ID=1855^Topic(s): as Cyanophyta; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[authors consider stromatoporoids as cyanobacteria]^1";
- 6229 s[6226] = "STEARNS C.W. (1982).- The unity of the stromatoporoidea.- 3rd North American Paleontological Convention, Proc. Volume 2: 511-516.- FC&P 11-2, p. 37, ID=1860^Topic(s): monophyly ?; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The skeleton of the stromatoporoids show morphological continuity with many other fossil and recent groups. Non-morphologic criteria by which the stromatoporoids' unity as a group is suggested are discussed. These include history, paleoecology and reaction to crises.^1";
- 6230 s[6227] = "YAVORSKIY V.I. (1978).- O terminologii stromatoporoidey i genezise astrorhiz.- Paleontologicheskii Sbornik 15: 33-36.- FC&P 11-2, p. 37, ID=1867^Topic(s): terminology, astrorhizae; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6231 s[6228] = "BOYAJIAN G.E., LABARBERA M. (1987).- Biomechanical analysis of passive flow of stromatoporoid morphologies: paleoecologic and systematic implications.- Lethaia 20: 209-216.- FC&P 16-2, p. 33, ID=2082^Topic(s): biomechanics; stroms, biomechanics; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Flow tank experiments with models of surfaces of stromatoporoids suggest that the mamelons aided the outward flow of water from astrorhizal systems by creating a pressure differential. The morphology of astrorhizae may be a reflection of the rate of water flow over the top of the stromatoporoid. Similar patterns were found in the sclerosponge Ceratoporella.^1";
- 6232 s[6229] = "BOGOYAVLENSKAYA O.V. (1986).- O nekotorykh osobennostyakh v razvitiy stromatoporata (Hydrozoa). [about some peculiarities in development of Stromatoporoids].- Tezisy dokladov XXXII sjezda vsesouznogo Paleontologicheskogo obshchestva, Tallin.- FC&P 17-1, p. 39, ID=2153^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6233 s[6230] = "BOGOYAVLENSKAYA O.V., PANCHENKO E.V. (1986).- O densastrukturakh stromatoporat [about "densastructures" of Stromatoporoids].- Korally i rify fanerozoya SSSR [Corals and reefs of the Phanerozoic of the USSR]; Nauka.- FC&P 17-1, p. 39, ID=2156^Topic(s): structures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6234 s[6231] = "KERSHAW S. (1988).- Stromatoporoids: a beginner's guide.- Geology Today, Nov-Dec. 1988: 202-206.- FC&P 18-1, p. 52, ID=2304^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6235 s[6232] = "HLADIL J. (2007).- The earliest growth stages of Amphipora.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen 17: 51-65. ISBN 978-3-7001-3826-6.- FC&P 35, p. 42, ID=2319^Topic(s): growth stages; stroms, Amphipora; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The ontogenetic changes expressed in the earliest Amphipora-skeleton growth stages suggest that the observed successions can be very different from those of common stromatoporoids. The amphiporid organisms built first their bottom

discs or directly the complex first chambers (diameters ~0.2 mm), and these structures were directly continued by upright growth of first single tubes. The first occurrences of gradually developing amphiporid skeleton fiber meshworks were concentrated in the zone of metamorphosis, where the first tubes decayed. The attributes of adult amphiporid stages (axial canal and sparsely perforated outer casings or walls) developed with a little delay. The *Amphipora* stems increased mainly during the first millimeters of their length (to ~1.5-2 mm), but further increase of the stems (to ~3 or 5 mm) was a very slow process. It can be suggested that amphiporids can be linked to very old ancestors, somewhere around archaeocyaths or common metazoan sources at ~0.8 Ga.¹;

- 6236 s[6233] = "STOCK C.W. (1989).- Microreticulate microstructure in the Stromatoporoidea.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 149-155.- FC&P 19-1.1, p. 13, ID=2533^Topic(s): microreticulate microstructure; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6237 s[6234] = "St JEAN J. (1989).- Lectotype designation for Stromatoporella subvesiculosum (Lecompte 1951) (Stromatoporoidea).- Journal of Paleontology 63, 6: 957.- FC&P 19-1.1, p. 69, ID=2707^Topic(s): types designation; stroms, Stromatoporella; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Based on the lectotype specimen herein selected, Clathrodictyon amygdaloides subvesiculosum Lecompte (1951: 143, pl. 18, figs. 3, 3a, 3b) is raised to species status and assigned to Stromatoporella.¹";
- 6238 s[6235] = "BOGOYAVLENSKAYA O.V. (1987).- Podklass Stromatoporata.- Opornye razrezy verkhnego ordovika i nizhnego silura Pripolyarnogo Urala [Tsyganko V. S. & Chermnykh V. A. (eds)]: pp 20, 24, 30, 35, 37, 83, 99, 100, 106, 107, pls 14, 27, 30; Akademiya nauk SSSR, Komi filial, Institut Geologii, Syktyvkar, 108 pp.- FC&P 20-1.1, p. 76, ID=2869^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6239 s[6236] = "LaBARBERA M., BOYAJIAN G.E. (1991).- The function of astrorhizae in stromatoporoids: Quantitative tests.- Paleobiology 17: 121-132.- FC&P 20-2, p. 73, ID=2877^Topic(s): structures, astrorhizae; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[The diameters of the channels at branch points can be used to test 3 alternative models of astrorhizal function. These diameters do not support a model of diffusive function or a bulk flow system. They do support a model based on "Murray's Law" that "simultaneously minimizes resistance to flow and some volume-related cost function". "The most parsimonious hypothesis of function, that the fluid transport system was associated with suspension feeding, implies strong similarities between the structure of the stromatoporoid animal and living sponges".]^1";
- 6240 s[6237] = "DONG DEYUAN (1990).- The rise development and extinction of stromatoporoids.- Palaeontologia Cathayana 5: 267-268. [in Chinese].- FC&P 20-2, p. 74, ID=2979^Topic(s): phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6241 s[6238] = "KHROMYKH V.G. (1990).- Evolyutsiya stromatoporoidei v organogennykh postroikakh paleozoya. p. 53-59.- In Betekhtina O. A. and Zhuravleva I. T. (eds.): Sreda i zhizn' v geologicheskoy proshlom: Aspekty evolyutsii organizmov i sredy; Akademiya Nauk SSSR, Sibirskoe Otdelenie, Institute Geologii i Geofiziki, Trudy 764; 136 pp.- FC&P 20-2, p. 74, ID=2981^Topic(s): phylogeny; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";

- 6242 s[6239] = "BOGOYAVLENSKAYA O.V., LOBANOV E.Y. (1990).- K poznaniyu drevneishikh stromatoporat.- Trudy Akademii Nauk SSSR, Sibirskoe Otdelenie, Institut Geologii i Geofiziki 783 [Sokolov B.S. & Zhuravleva I.T. (eds): Iskopaemye Problematiki SSSR]: 76-87.- FC&P 21-1.1, p. 58, ID=3270^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The morphological relationships, phylogeny, and paleogeography of many genera of the Labechiida are reviewed. The new genus Parksodictyon with type species Pseudostylodictyon kavi Galloway & St. Jean 1957 is established within the family Stratodictyidae. The new family Cystostromatidae Bogoyavlenskaya is established to include the genera Cystostroma and Pachystyllostroma.^1";
- 6243 s[6240] = "KERSHAW S., SWAN A. (1991).- Stochastic simulation of Stromatoporoid growth.- Palaeontological Association, Palaeontology Newsletter 12: 13.- FC&P 21-1.1, p. 59, ID=3274^Topic(s): growth simulation; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6244 s[6241] = "STEARNS C.W. (1992).- Petridiostroma a new name for Petrostroma Stearns 1991, not Petrostroma Doderlein 1892.- Journal of Paleontology 66: 531.- FC&P 21-2, p. 48, ID=3342^Topic(s): nomenclature; stroms, Petridiostroma; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6245 s[6242] = "STEARNS C.W. (1993).- Revision of the order Stromatoporida.- Palaeontology 36: 201-229.- FC&P 22-2, p. 94, ID=3547^Topic(s): revision; stroms, Stromatoporida; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The genus Stromatopora is interpreted in terms of the type specimens of the type species as dominated by oblique elements in a cassiculate structure. Cellular structure is distinct from microreticulate structure and separates the order Stromatoporida from the order Syringostromatida which evolved from the densastromatids. Parallelostroma gave rise to Coenostroma, Habrostroma, Syringostroma, Columnostroma, Parallelopora in a Late Silurian-Early Devonian radiation. In Early and Middle Devonian the stromatoporids radiated into Lineastroma, Arctostroma, Pseudotruperostroma, Glyptostromoides, Taleastroma. Each of these genera and also Salairella, Ferestromatopora, and Syringostromella is rediagnosed and discussed.^1";
- 6246 s[6243] = "STEARNS C.W. (1997).- Stromatoporoid faunas.- International Union of Geological Sciences Publication 33 [Norford B.S. (ed.): Correlation chart and biostratigraphy of the Silurian rocks of Canada]: 26-27.- FC&P 27-1, p. 110, ID=3867^Topic(s): ; stroms, faunas; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Zonation of the Silurian rocks on the basis of stromatoporoid ranges is not possible in the present state of knowledge but faunas have been described from all the major stages. Early Llandovery faunas are known from Anticosti Island, Manitoba, Baffin Island and Lake Temiskaming. Late Llandovery faunas are cosmopolitan, spread by transgressing seas across the platforms, and marked by the adaptive radiation of the actinostromatids and stromatoporids. Wenlock faunas characterized by densastromatids and Parallelostroma are found in eastern Quebec, southern Ontario, and Lake Temiskaming. The arctic islands, southwestern Ontario and eastern Quebec have faunas of Ludlow age characterized by many clathrodictionids and Plexodictyon. Pridoli faunas are confined to southern and eastern Quebec in the Appalachian Mountain areas.^1";
- 6247 s[6244] = "KERSHAW S. (1998).- The applications of stromatoporoid palaeobiology in palaeoenvironmental analysis.- Palaeontology 31, 3: 509-544.- FC&P 27-2, p. 68, ID=3938^Topic(s): biology; stroms, biology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Stromatoporoids are epibenthic calcified sponges in many

Phanerozoic (especially Palaeozoic) reef, and reef-related environments, and may be used as tools for all scales of palaeoenvironmental analysis. Palaeozoic stromatoporoid classification uses the calcified skeleton, and although higher level taxa may be convergent, genera and species are normally readily identifiable and have palaeobiological utility. A hierarchical growth-form classification of stromatoporoids comprises: Level 1 (outline forms: laminar, tabular, domical, columnar, bulbous, defined with ratio limits; and dendroid, expanding conical, digitate and irregular); Level 2 (ornament, as papillae, mamelons and protuberants, give an increasing degree of disruption of the outline); and Level 3 (growth patterns of smooth and ragged margins, enveloping and non-enveloping laminations, coalescence and anastomosing). Inappropriate growth form terms in current use are rejected especially massive and encrusting. Stromatoporoid palaeobiology applied at local scale aids determination of relative degree of contemporaneous turbulence and sedimentation; community scale study of stromatoporoids promotes comparisons between palaeoenvironments in reef and reef-related facies. Palaeozoic stromatoporoids may aid regional and even global event recognition including changes in ocean states. Major gaps in knowledge are growth rates and whether stromatoporoids were photosensitive and /or photosymbiotic.^1";

- 6248 s[6245] = "BOLSHAKOVA L.N. (1993).- O sovremennykh analogakh stromatoporoidei.- Fauna i ekosistemy geologicheskogo proshlogo [B.S. Sokolov & A.B. Ivanovskiy (eds)]: 70-75, 112, 123-124; Rossiyskaya Akademiya Nauk, Otdelenie Geologii, Geofiziki, Geokhimii i Gornyykh Nauk, Paleontologicheskii Institut. [in Russian].- FC&P 23-2.1, p. 54, ID=4399^Topic(s): stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[On modern analogues of stromatoporoids; recent literature on the sponge nature of stromatoporoids is reviewed and a specimen of Astrosclera is described and illustrated]^1";
- 6249 s[6246] = "STEARNS C.W., PICKETT J. (1994).- The Stromatoporoid animal revisited: building the skeleton.- Lethaia 27: 1-10.- FC&P 23-2.1, p. 55, ID=4402^Topic(s): biology, skeletal growth; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Modern coralline sponges secrete a skeleton by means of a basal pinacoderm, intracellularly, or inside the soft tissue on an organic matrix. The examination of terminal growth surfaces of stromatoporoids indicates that soft tissue in laminate and amalgamate forms occupied the upper galleries and that the skeletal elements were secreted within soft tissue on an organic matrix. The stromatoporellids and clathrodictyids secreted the skeleton in modules that are homologous to the chambers of a sphinctozoan. In stromatoporellids the module was bounded by a floor that formed the upper layer of the tripartite lamina below and a roof that became the lower layer of the next lamina; it further included the intervening pillars. In clathrodictyids the module had only a roof and pillars and the laminae are single layers.^1";
- 6250 s[6247] = "SWAN A.R.H., KERSHAW S. (1994).- A computer model for skeletal growth of stromatoporoids.- Palaeontology 37, 2: 409-423.- FC&P 24-1, p. 81, ID=4449^Topic(s): growth forms; stroms, growth mode; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[A model of simple accretionary laminar growth can be developed based on probabilistic accretion of pixels on a raster array. Experiments with the model allow the effects of sedimentation and various alternative growth algorithms to be simulated. The model can be validated, with some reservations, on theoretical and empirical bases: the simulations show similarities to observed stromatoporoid morphologies. The results show that morphology is strongly influenced by the pattern of sedimentation and that the Stromatoporoids required a local pause in sedimentation in order to become established, and that they were integrated organisms with a low

- level of organization allowing a degree of autonomy of modular growth.]^1";
- 6251 s[6248] = "YAVORSKIY V.I. (1973).- Bemerkungen uber Astrorhizen (Remarks on astrorhizae). Eine Entgegnung auf Jordan, R. 1969: Deutung der Astrorhizen der Stromatoporoidea (Hydrozoa) als Bohrspuren.- N. Jb. Geol. Palaeont. Mh., 1973, 8: 438-461.- FC&P 2-2, p. 21, ID=4674^Topic(s): astrorhizae; stroms, astrorhizae; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^R. Jordan's (1969) interpretation of the astrorhizae of stromatoporoids as boring traces is opposed. The astrorhizae are, on the contrary, interpreted as parts of the stromatoporoid organisms.^1";
- 6252 s[6249] = "LAFUSTE J. (1972).- Fibres à bosselures chez le Stromatopore Stachyodes Bargatsky.- C. R. som. séances S.G.F. 2: 67-68.- FC&P 1-2, p. 25, ID=4703^Topic(s): microstructures; stroms, Stachyodes; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6253 s[6250] = "ABBOTT B.M. (1973).- Terminology of Stromatoporoid shapes.- Journal of Paleontology 47, 4: 805-806.- FC&P 2-2, p. 13, ID=4781^Topic(s): growth forms; stroms, morphology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6254 s[6251] = "BOGOYAVLENSKAYA O.V. (1973).- Stromatoporoidés. [en russe] .- Trudy Inst. Geol. Geofiz. AN SSSR 131: 7-31.- FC&P 3-2, p. 47, ID=4984^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6255 s[6252] = "MORI K. (1973).- Note on Kitakamilia and Labechiellata, invalid names of Stromatoporoidea.- Sci. Rep. Tohoku Univ. 2, Special Paper 6: 401-402.- FC&P 4-1, p. 46, ID=5180^Topic(s): nomenclature, invalid names; stroms, Kitakamilia; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6256 s[6253] = "RIDING R. (1974).- Stromatoporoid diagenesis: outline of alteration effects.- Geol. Mag. 111, 2: 143-148.- FC&P 4-1, p. 46, ID=5181^Topic(s): diagenesis; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6257 s[6254] = "STEARNS C.W. (1975).- The stromatoporoid animal.- Lethaia 8, 1: 89-100.- FC&P 4-1, p. 46, ID=5182^Topic(s): biology; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6258 s[6255] = "KHALFINA V.K., YAVORSKIY V.I. (1973).- Classification des Stromatoporoidea.- Paleontologicheskii Zhurnal 1973, 2: 19-34.- FC&P 4-2, p. 64, ID=5304^Topic(s): classification; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Les Stromatopores, ici pris comme sous-classe, comprennent 71 genres (2 nov.) dans 25 familles (8 nov.) regroupées dans 7 superfamilles: Actinostromatacea, Clathrodictyacea, Tienodictyacea, Syringostromatacea, Hermatostromatacea, Stromatoporoidea, Labechiacea. On donne un bref lexique des termes d'anatomie, surtout de ceux utilisés dans la littérature non soviétique.^1";
- 6259 s[6256] = "BOGOYAVLENSKAYA O.V. (1975).- Stromatoporoidea.- In T.A. Gorokhova (ed.): Fauna pograniichnykh otlozheniy Devona i Karbona tsentral'nogo Kazakhstana. [Tabulata: in fauna of the Devonian / Carboniferous boundary interval of central Kazakhstan] Materialy Geol. Tsentral. Kazakhstana 18: pp??.- FC&P 5-2, p. 12, ID=5453^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6260 s[6257] = "BENTON M.J. (1978).- Comment on a proposed designation of a neotype for the type species of Stromatoporella Nicholson 1886.- Z. N. (S) 2177 Bull. Zool. Nomencl. 35, 1: 14.- FC&P 8-2, p. 50, ID=5725^Topic(s): ; stroms, Stromatoporella; Systematics:

- Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[author agrees with St. Jean's proposal that Nicholson's specimens from Arkona be recognized as the neotypes of S. granulata because the type specimens from Port Colbourne have been lost]^1";
- 6261 s[6258] = "KERSHAW S. (1979).- Functional and environmental significance of skeletal morphology in stromatoporoids.- Wales University, unpublished Ph.D. thesis.- FC#038;P 9-1, p. 24, ID=5787^Topic(s): growth forms; stroms, morphology; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Stromatoporoids are important in Lower Palaeozoic reefs and related facies, and the palaeoecology of their external form is studied here using examples from the Ordovician and Silurian of the Oslo region, the silurian of Gotland and the Devonian of Belgium. * A new classification, of shape (bearing no relation to taxonomic schemes) distinguishes laminar, domical, bulbous and dendroid shapes defined by measurement of basal and vertical dimensions. Each has subdivisions, most importantly being the distinction between smooth (enveloping) and ragged (non-enveloping) latilaminae, interpreted to be a response to sedimentation. * A parameterization scheme relates laminar, domical and bulbous forms in a simple triangular display, in terms of basal, vertical and diagonal extension. * Flume experiments on model stromatoporoids, statistical analysis of field data and detailed hand specimen and thin section studies show that: (1) laminar forms were susceptible to sedimentation but were stable in high energy conditions. In deep water they were possibly limited by low light intensity; (2) domical forms were very stable and possessed a sediment shedding capability; with laminar forms their shape has a strong taxonomic component in some cases; (3) bulbous forms were unstable and generally reflect quiet water conditions; complex bulbous forms are found in high energy situations where they show overturning; (4) dendroid varieties were delicate and well suited to environments with higher sedimentation rates in areas of low turbulence. * Substrate composition and surface shape were important factors in the distribution of stromatoporoid morphotypes. Sandy substrates show susceptibility to scour around stromatoporoids leading to burial of domical and bulbous forms in environments of water flow, but low-profile laminar types were less affected. Dendroid forms were infrequently affected by substantial currents. Muddy substrates scoured less, and stromatoporoids were put into transport more easily, but if partly buried in mud, stromatoporoids were very stable. * The environments of stromatoporoids were generally open marine, although in certain restricted conditions examples show distinct morphological peculiarities (irregularity and extreme thinness) suggesting influence of other limiting factors, such as salinity, food supply, temperature and water aeration.^1";
- 6262 s[6259] = "COCKBAIN A.E. (1978).- Intracoenosteal variation in a specimen of Actinostroma.- West Australia Geol. Survey Ann. Rept 1978: 87-89.- FC#038;P 9-1, p. 52, ID=5835^Topic(s): ; stroms, variation; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[six variables were measured in 6 thin sections cut from a single coenosteum of Actinostroma papillosum; intracoenosteal variation is higher than previously believed]^1";
- 6263 s[6260] = "STEARNS C.W. (1979).- Stromatoporoids.- The Encyclopedia of Paleontology [R.W. Fairbridge & D. Jablonski (eds)]: 775-778; Dodson, Hutchinson & Ross, Inc.- FC#038;P 9-1, p. 53, ID=5836^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[a general review of the group]^1";
- 6264 s[6261] = "KAZMIERCZAK J. (1981).- Evidence for Cyanophyte origin of stromatoporoids.- Phanerozoic Stromatolites [C. Monty (ed.)]: 230-241; Springer Verlag, Berlin.- FC#038;P 10-1, p. 59, ID=6018^Topic(s): as Cyanophyta; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography:

- ^[spherical objects identified as cyanobacteria are illustrated from astrorhizal fillings, basal layers and dark bands within 3 fragments of Devonian stromatoporoids from deep boreholes]^1";
- 6265 s[6262] = "YAVORSKIY V.Y., YAVORSKIY V.I. (1973).- Bemerkungen uber Astrorhizen.- Neu. Jb. Geol. Palaontol. Monatsh. 1973, 8: 458-461.- FC&P 4-1, p. 46, ID=6286^Topic(s): astrorhizae; stroms, astrorhizae; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6266 s[6263] = "STEARNS C.W. (1984).- Note on "Nummulosphere" by R. Kirkpatrick.- FC&P 13, 2: 28.- FC&P 13-2, p. 28, ID=6369^Topic(s): ; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Although I thought that I was reasonably well acquainted with the paleontological literature on stromatoporoids, one book containing extensive discussions on these organisms had escaped my notice until this summer. I knew by rumour that it existed but had not taken the time to verify its existence until, by accident, I came across it in the library. I recommend it to all stromatoporoid specialists as an essential part of the history of their science. * It is Randolph Kirkpatrick's book "The Nummulosphere" published by the author in three parts or volumes - the first two in 1913 and the third in 1917. Kirkpatrick will be remembered by stromatoporoid paleontologists for the beautiful work that he did describing Merlia normani, the sclerosponge from Porto Santo Island near Madeira. Kirkpatrick could see the structure of Nummulites in all the rocks he examined including limestones, sandstones, slates, metamorphic rocks, lavas, plutonic igneous rocks and meteorites. "In the numerous igneous rocks that I have examined I have found them to be disguised (? colonial) foraminifera" (vol. I, p. 52). He concluded that the whole crust of the Earth is composed of Nummulitic limestone changed in various ways and was therefore deposited out of an ocean. The reader of vol. III will find that the macrostructural features of stromatoporoids are produced inorganically like concretions in limestone and that both the structural elements and the gallery filling are composed of Nummulites, like most of the rest of the world. Kirkpatrick's viewpoints on stromatoporoids has "matured" from the first to third volumes for in the first volume he equates them with both Eozoon and nummulites as follows: "I cannot find a single point of zoological difference between Eozoon canadense Dawson and Stromatopora concentrica Goldfuss. In both there are layers of Nummulite shells of the same structure and size" (p. 26). He then proceeds to write about the stromatoporoid type of nummulite and we find that "Jurassic Oolites and Chalk are probably mainly masses of Stromatoporoids, yet it is not possible to define the shapes of specimens, nor even of reefs" (p. 27). * The book throws some light on Kirkpatrick's note in Nature (1912) stating that he had discovered spicules in stromatoporoids and they must therefore be sponges. No one since has been able to verify this observation. It appears that Randolph Kirkpatrick was capable of seeing structures in rocks that other scientists have missed. * Here is a book that illustrates and describes such stromatoporoid species as Stromatopora concentrica, Stromatoporella eifeliensis, Clathrodictyon striatellum, Idiostroma oculatum and discusses the Caenopora problem yet I have never seen it referenced in a synonymy - I wonder why. [historical note, full text]^1";
- 6267 s[6264] = "STEARNS C.W. (2010).- Microstructure and mineralogy of Paleozoic Stromatoporoidea.- Treatise Online 06, Part E, Revised, Vol. 4, Chap. 9D, 25 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 42, ID=6412^Topic(s): microstructures; stroms; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[chapter subheadings include: (1) introduction; (2) observations of microstructures; and (3) diagenesis and interpretation of microstructures; the chapter is profusely illustrated]^1";

- 6268 s[6265] = "STEARN C.W. (2010).- Morphologic affinities of Paleozoic Stromatoporoidea to other fossil and Recent groups.- Treatise Online 7, Part E, Revised, Vol. 4, Chap. 9E, 9 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 42, ID=6413Topic(s):morphology, phylogeny; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^ [the chapter begins with an introduction, followed by summaries of other fossil groups compared to Paleozoic stromatoporoids: foraminifera; archaeocyatha and sphinctozoa; Chaetetida; Hydrozoa and disjectoporids; tabulate corals; scleractinia; Mesozoic stromatoporoid-like genera; and cyanobacteria; the author concludes (p. 7) that the relationship of stromatoporoids "with encrusting hypercalcified sponges is entirely convincing"]^1";
- 6269 s[6266] = "STEARN C.W. (2010).- Functional morphology of the Paleozoic stromatoporoid skeleton.- Treatise Online 8, Part E, Revised, Vol. 4, Chap. 9F, 26 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 42, ID=6414Topic(s):physiology; stroms physiology; Systematics:Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^ [chapter subheadings include: (1) introduction; (2) colonies or individuals; (3) spicules; (4) function of the skeleton as a whole; (5) skeletal fragments and propagation; (6) light dependence in stromatoporoids; (7) isotope fractionation; (8) growth rates and growth bands; (9) stromatoporoid skeletons, light dependence, and reef structure; (10) soft tissue within the skeleton; (11) basal skeleton secretion in living hypercalcified sponges; (12) growth modules of laminate stromatoporoids; (13) functions of specific structural elements; (14) mamelons; and (15) astrorhizae]^1";
- 6270 s[6267] = "STEARN C.W. (2010).- Techniques of study: collection, preparation, and analysis of the Paleozoic Stromatoporoidea.- Treatise Online 11, Part E, Revised, Vol. 4, Chap. 15A, 10 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 43, ID=6417Topic(s):techniques of study; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^ [This sort of useful information was missing from the first version of the Treatise on stromatoporoids (Lecompte 1956). Chapter subheadings include: (1) field observations and collecting; (2) thin sections; (3) statistical evaluation of taxonomic differences; (4) cathodoluminescence; (5) scanning electron microscopy; (6) geochemistry; (7) isotope studies; and (8) photography.]^1";
- 6271 s[6268] = "WOLNIEWICZ P. (2010).- Stromatoporoid biometrics using image analysis software: A first order approach.- Computers & Geosciences 36, 4: 550-558.- FC&P 36, p. 136, ID=6599Topic(s):morphometry; stroms, biometry; Systematics:Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^ Strommetric is a new image analysis computer program that performs morphometric measurements of stromatoporoid sponges. The program measures 15 features of skeletal elements (pillars and laminae) visible in both longitudinal and transverse thin sections. The software is implemented in C++, using the Open Computer Vision (OpenCV) library. The image analysis system distinguishes skeletal elements from sparry calcite using Otsu's method for image thresholding. More than 150 photos of thin sections were used as a test set, from which 36,159 measurements were obtained. The software provided about one hundred times more data than the current method applied until now. The data obtained are reproducible, even if the work is repeated by different workers. Thus the method makes the biometric studies of stromatoporoids objective.^1";
- 6272 s[6269] = "STEARN C.W. (1993).- Petrostroma Stearn 1991, Pteridiostroma Stearn 1992 and Faciledictyon Lessovaya 1991.- FC&P 22, 2: 95-96.- FC&P 22-2, p. 95, ID=6830Topic(s):nomenclature; stroms; Systematics:Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^ These three generic names

have been applied to the same taxon. They were proposed for clathrodictyids with simple laminae and simple pillars confined to an interlaminar space. Both authors realized that the discrepancy between the type species of Simplexodictyon Bogoyavlenskaya and its diagnosis required the establishment of a new genus to contain those species of this genus that did not have double laminae. The type species that Stearn used for Petrostroma (later corrected to Petridiostroma to resolve the homonymy with Petrostroma Doderlein), *P. simplex* (Nestor), is placed by Lessovaya (1991) in Faciledictyon. [8230;] Many journals are now not available until months after the publications dates that appear on their covers. This situation does not appear to be covered satisfactorily by Chapter V of the Code of Zoological Nomenclature. [first and last fragment of nomenclatorial note]^1";

6273 s[6270] = "MUNSON T. (1994).- E.A. Ripper stromatoporoid material in the Queensland Museum.- FC&P 23, 1.1: 97. [short note] - FC&P 23-1.1, p. 97, ID=6850Topic(s): collections of fossils; stroms collection; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^webby, Stearn & Zhen (1993: 122) mention a small collection of material held by the Queensland Museum. These were part of a large collection of fossil material acquired from the late Mr. F.S. (Stan) Colliver. Included in this collection were seven stromatoporoid specimens labelled "used by Betty Ripper in her publication". Review of E.A. Ripper material (Webby, Stearn & Zhen, 1933) indicates that one of the specimens part of a holotype and a second is a mentioned specimen. The remaining four are untraceable. All are partial skeletons, which have been cut, presumably for thin sections. [introductory part of a short note]^1";

6274 s[6271] = "BOGOYAVLENSKAYA O.V. (1984).- Systematicheskoe polozhenie stromatoporat i nekotorye problematiki [the systematic status of stromatoporata and some problematic fossils].- Akademiya Nauk SSSR, Sibirskoye Otdeleniye, Institut Geologii i Geofiziki 597 [Sokolov B. S. (ed.): Problematiki Paleozoya i Mesozoya]: 43-57.- FC&P 14-2, p. 43, ID=0928Topic(s): systematics; stroms, problematica; Systematics: Porifera problematica; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";

6275 s[6272] = "STOCK C.W. (1994).- Origin, evolution, and classification of the stromatoporoid order Actinostromatida.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, vol. 2]: 355-363.- FC&P 23-1.1, p. 24, ID=4092Topic(s): systematics; stroms, Actinostromatida; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^Actinostromatid stromatoporoids are constructed of vertical and horizontal rods, called pillars and colliculi. There are three families in the order: Pseudolabechiidae, Actinostromellidae, and Actinostromatidae. Two evolutionary schemes are presented, one traditional, and one containing some new ideas. Plumatalinia is moved from the Labechiida to the Actinostromatida. Plectostroma and Densastroma are poorly understood, and probably represent several genera. ^1";

6276 s[6273] = "NESTOR H. (1997).- Evolutionary history of the single layered, laminate clathrodictyid stromatoporoids.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 91, 1/4: 319-328.- FC&P 26-2, p. 18, ID=1510Topic(s): phylogeny; stroms, Clathrodictyidae; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The order Clathrodictyida is subdivided into five families: Actinodictyidae, Clathrodictyidae, Gerronostromatidae, Atelodictyidae and Tienodictyidae. The name Actinodictyidae has priority over Ecclimadictyidae. The first clathrodictyids (Clathrodictyon and Ecclimadictyon) with inflected laminae and weakly differentiated pillars appeared at the end of the middle Ordovician. They probably

- descended from labechiids but the separation could have taken place in the families Clathrodictyidae and Actinodictyidae. Later on they were gradually replaced by the clathrodictyids with well differentiated planar laminae and simple (Gerronostromatidae) or complicated pillars (Atelodictyidae, Tienodictyidae), prevailing in the Devonian.¹¹;
- 6277 s[6274] = "KHROMYKH V.G. (1986).- Obyem i izmenchivost vida Clathrodictyon boreale Riabinin [extent and variability aspects of Clathrodictyon boreale Riabinin; in Russian].- Trudy Inst. Geol. Geofiz. (Novosibirsk) 666 [Sokolov B. S. (ed.), Fauna i flora zapolyarya sibirskoy platformy]: 92-96.- FC&P 18-1, p. 52, ID=2306Topic(s): variability; stroms, Clathrodictyon; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^^1";
- 6278 s[6275] = "KHROMYKH V.G. (1996).- On the system of the family Clathrodictyidae Kuhn 1939.- Russian Geology and Geophysics 37, 2: 59-67. [translation of Geologiya i Geofizika].- FC&P 26-2, p. 79, ID=3768Topic(s): systematics; stroms, Clathrodictyidae; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^The family Clathrodictyidae Kuhn 1939, widespread in Paleozoic deposits in many regions of the planet, is revised, and a new system for it is proposed. A new phylogenetic scheme is suggested for this family, and genus diagnoses are improved. This paper presents a complete species composition of the genera assigned to the family and indicates the species synonyms. Geological and geographical distribution of species is refined. It is proved that some of the genera are not well established and that they are mere synonyms of previously recognized ones. * The classification scheme introduced is as follows: subfamily Clathrodictyinae (Clathrodictyon, Simplexodictyon, Petridiostroma, Stelodictyon, Coenellostroma, Oslodictyon, Clavidictyon); subfamily Tienodictyinae (Tienodictyon, Intodictyon); subfamily Ecclimadictyoniinae (Ecclimadictyon, Plexodictyon, Yabeodictyon, Neobeatricia); subfamily Actinodictyinae (Actinodictyon, Labechiina).¹¹;
- 6279 s[6276] = "BOGOYAVLENSKAYA O.V., VASILYUK N.P., GLEBOV A.R. (1990).- Kharakteristika nekotorykh paleozoiskikh Labechiida (Stromatoporata).- Trudy Akademii Nauk SSSR, Sibirskoe Otdelenie, Institut Geologii i Geofiziki 783 [Sokolov B.S. & Zhuravleva I.T. (eds): Iskopaemye Problematiki SSSR]: 69-76.- FC&P 21-1.1, p. 58, ID=3271Topic(s): taxonomy; stroms, Labechiidae; Systematics: Porifera; Stromatoporoidea; Stratigraphy: ; Geography: ^[Characteristics of the cylindrical labechiids are reviewed. The new genus Pararosenella Vassilyuk & Bogoyavlenskaya is established with type species Rosenella cylindrica Vassilyuk 1964 from Famennian strata. It is a linear series of large, widely-spaced cysts. The family Rosenellidae Bogoyavlenskaya is cited as a new family but in Yavorsky & Khal'fina 1973, this family name is attributed to Yavorsky]¹¹;
- 6280 s[6277] = "BOGOYAVLENSKAYA O.V., YANET F.Ye., VAKHRUSHEV V.A. (1983).- O geneticheskikh svyazyakh Stromatoporata i nekotorykh Anthozoa [on genetic relationship between Stromatoporata and certain Anthozoa].- Paleontologicheskii Zhurnal 1983, 4: 18-28.- FC&P 14-1, p. 54, ID=1035Topic(s): morphology; stroms, Anthozoa; Systematics: Porifera Cnidaria; Stromatoporoidea Anthozoa; Stratigraphy: ; Geography: ^The stromatoporoids, chaetetids, and tabulatormorphs are compared. Two new species of Ecclimadictyon are described and the new genus Sergaelites Yanet (incertae sedis) is established.¹¹;
- 6281 s[6278] = "MORI K. (1984).- Comparison of skeletal structures among stromatoporoids, sclerosponges and corals.- Palaeontographica Americana 54: 354-357 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 56, ID=1051Topic(s): cnidarian affinities of stroms; stroms, Porifera, Anthozoa; Systematics: Porifera Cnidaria;

- Stromatoporoidea Anthozoa; Stratigraphy: ; Geography: ^Six features of the skeleton of stromatoporoids are described that are better explained by the coelenterate affinity of this group.^1";
- 6282 s[6279] = "FAGERSTROM J.A. (1983).- Ecology and Paleocology of Sclerosponges, Sphinctozoans, Chaetetids and Stromatoporoids.- Palaeontographica Americana ????.- FC&P 13-1, p. 47, ID=0509^Topic(s): ecology; stroms, Chaetetida; Systematics: Porifera; Stromatoporoidea Chaetetida; Stratigraphy: ; Geography: ^^1";
- 6283 s[6280] = "BOLSHAKOVA L.N. (1987).- Stromatoporoidea and Chaetetida.- Sokolov, B. S., and Ivanovsky, A. B. (eds.): Rify i rifoobrazuyushtchie korally; Nauka, Moskva.- FC&P 16-2, p. 33, ID=2081^Topic(s): ; stroms, Chaetetida; Systematics: Porifera; Stromatoporoidea Chaetetida; Stratigraphy: ; Geography: ^^1";
- 6284 s[6281] = "NESTOR H. (1981).- The relationship between stromatoporoids and heliolitids.- Lethaia 14, 1: 21-25.- FC&P 10-2, p. 76, ID=6100^Topic(s): affinity ?; stroms, Heliolitida; Systematics: Porifera Cnidaria; Stromatoporoidea Heliolitida; Stratigraphy: ; Geography: ^The dense fibro-lamellar skeleton of lophiostromatids (Stromatoporoidea) is closely similar to the trabecular skeleton of protaraeids (Heliolitoidea) and, respectively, the cystose skeleton of labechiids is similar to that of proporids. They can be interpreted as different types of basal exoskeleton of colonial coelenterates. The main difference between these ancient stromatoporoids and heliolitids is in the arrangement of zooids in the colony, that in the heliolitids enabled them to participate in skeleton building, which was not possible in the stromatoporoids. The stratigraphical distribution supports the supposition of their common origin. [original abstract]^1";
- 6285 s[6282] = "LOBANOV Ye.Yu., GLEBOV A.R. (1995).- Stromatoporoids and tabulate corals from the Wenlockian-Ludlovian boundary of the Eastern slope of the Urals.- Paleontologicheskij Zhurnal 1995, 4: 34-42.- FC&P 25-2, p. 50, ID=3142^Topic(s): ; Systematics: Porifera Cnidaria; Stromatoporoidea Tabulata; Stratigraphy: ; Geography: ^Data about the distribution of Stromatoporoids and tabulate corals in Wenlockian and Ludlovian deposits are presented. The new species Aulacera amplexum Glebov (Stromatoporoids), Striatopora senta Yanet, S. vulgata Yanet, Aulocystella brevitatis Lobanov (tabulate corals) are described.^1";
- 6286 s[6283] = "KLAAMANN E. (1975).- K obyasnenuyu odnoy morfologicheskoy strukture Cystihalysites.- Izvestiya Akademii Nauk Estonskoy SSR, Chimiya Geologiya 24, 3: 256-257.- FC&P 6-2, p. 20, ID=0154^Topic(s): structures, apparent variability; Tabulata, Cystihalysites; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^On the interpretation of one morphological structure of the Cystihalysites).The apparently different formation of the vesicular tissue in the mesocorallites of Cystihalysites is discussed as a result of differently orientated longitudinal thin sections.^1";
- 6287 s[6284] = "PREOBRAZHENSKIY B.V. (1977).- The structural interpretation of tabulatomorphic corals.- Bureau Recherches Geologiques et Minieres Memoir 89: 97-101 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- FC&P 6-2, p. 21, ID=0158^Topic(s): characters classification; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^L'application des principes de l'analyse de la combinaison des caracteres des objets naturels peut-etre envisage dans l'etablissement de la systematique. Le principe fundamental sera alors la combinaison de caracteres independant de la phylogenie. L'exemple est donne de la division des Halysitidae en deux groupes, l'un rattache aux Lichenariidae, l'autre aux Heliolitidae.^1";

- 6288 s[6285] = "PREOBRAZHENSKIY B.V., KLAAMANN E. (1975).- Vzaimootnosheniya mezhdru rodami Sarcinula, Calapoecia i Lyopora (Tabulata).- Izvestiya Akademii Nauk Estonskoy SSR, Khimiya Geologiya 24, 5: 130-135.- FC&P 6-2, p. 21, ID=0159^Topic(s): taxonomy; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The authors conclude that in its present conception the genus Calapoecia is heterogeneous both morphologically and genetically. The species of the Calapoecia antieostiensis group are similar to Sarcinulids. Characteristically, both display horizontally stratified connecting tissue and well -developed septae with extrathecal connections. Namely this species group comprises the valid genotype of Calapoecia. Calapoecia and Sarcinula are included into the family Syringophyllidae Pocta 1902. The species of the other group [missing fragment ?]^1";
- 6289 s[6286] = "CONKIN J.E., BRATCHER T.M., CONKIN B.M. (1978).- Palaeacis obtusa (Meek and Worthen 1860) emended: its morphology, ontogeny, and stratigraphic significance.- Univ. of Louisville Studies in Paleontology and Stratigraphy 7: 26 pp.- FC&P 9-2, p. 40, ID=0309^Topic(s): nomenclature; Tabulata, Palaeacis; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6290 s[6287] = "LIN BAOYU, CHOW XINGU (1984).- Discovery of Genus Kolymopora and its stratigraphical significance.- Professional Papers of Stratigraphy and Palaeontology 11: 43-47.- FC&P 13-1, p. 29, ID=0428^Topic(s): ; Tabulata, Kolymopora; Systematics: Cnidaria; Tabulata; Stratigraphy: ???; Geography: ^^1";
- 6291 s[6288] = "TESAKOV Yu.I. (1984).- Principy ustanovleniya i izmenschivost taksonov Tabulyat. [principles of classification and variability of taxa in the Tabulata; in Russian].- Stratigrafiya i paleontologiya drevneyshego fanerozoya [A.B. Ivanovskiy & I.B. Ivanov (eds)]: 111-123; Nauka, Moskva.- FC&P 13-2, p. 44, ID=0563^Topic(s): taxonomy, variability; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^[principles of intraspecific classification of the Tabulata are discussed]^1";
- 6292 s[6289] = "ALKHOVIK T.S. (1986).- O revizii roda Yacutiopora (Favositida).- Paleontologicheskii Zhurnal 1986, 1: 38-45.- FC&P 15-2, p. 35, ID=0718^Topic(s): ; Tabulata, Yacutiopora; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The vegetative budding and the morphology of the type species Yacutiopora innae (Dubatolov) is studied and discussed. Additional diagnostic characteristics, precise description, systematical classification and phylogenetical relationships are the matter of the paper. The genus and the two species Y. innae (Dubatolov) and Y. fallacis (Yanet) are described in detail.^1";
- 6293 s[6290] = "ALKHOVIK T.S. (1985).- O sistemicheskom polozhenii i filogeneticheskikh svyazyakh roda Scoliopora (Favositida). [Zur systematischen Stellung und phylogenetischen Ableitung der Gattung Scoliopora (Favositida); in Russisch] .- Paleontologicheskii Zhurnal 1985, 3: 20-26.- FC&P 15-1.2, p. 33, ID=0818^Topic(s): systematics; Tabulata, Scoliopora; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Die systematische Stellung und die Herleitung der Gattung Scoliopora wird diskutiert und praezisiert sowie die neue Art Scoliopora inconstans beschrieben. Die Art S. clara (Yanet) wird revidiert.^1";
- 6294 s[6291] = "YOUNG G.A., ELIAS R.J. (1999).- Relationships between internal and external morphology in Paleofavosites (Tabulata): The unity of growth and growth form.- Journal of Paleontology 73, 4: 580-597.http://www.jstor.org/pss/1306758.- FC&P 29-1, p. 38, ID=1469^Topic(s): variation; Tabulata, Palaeofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^During growth of colonial corals, the basic organization of skeletal elements was determined by

inherent factors, but arrangement of corallites within a colony could be affected if environmental change induced a modified growth form. Comparisons of internal and external characters during colony development indicate how environmental and genetic factors determined growth form. The results of these comparisons have implications for understanding of colony integration, functional morphology, and systematics. This study is based on serially sectioned coralla of the cerioid tabulate *Paleofavosites subelongus*, from the uppermost Ordovician to lowermost Silurian of the east-central United States. Colony growth form resulted from changes in maximum growth angle of marginal corallites, and in the shape of the growth surface. These features were coordinated with corallite characters and were dependent on variation in corallite growth. At the same time that a colony became broader by expanding its maximum growth angle and developing a taller growth surface, its corallites became larger, more new corallites were initiated, and recently initiated corallites expanded more rapidly. When a colony's maximum growth angle was reduced and the growth surface became flatter, corallites also became smaller, fewer corallites were initiated, and those corallites that were recently initiated expanded slowly. Genetic constraint of growth is illustrated by consistent patterns of initial colony growth, and by relationships among characters of internal and external morphology. Frequent small-scale variations in growth angle and growth surface height:width during astogeny indicate fluctuating environmental factors. Sedimentation and subsidence of the colony were probably the major environmental controls on form. [original abstract]^1";

- 6295 s[6292] = "OSPANOVA N.K. (1998).- O poristosti Tabuljat. [On the origin of pores in Tabulate corals; in Russian].- Doklady Akademii Nauk Respubliki Tadjikistan 41, 8: 10-16; Dushanbe.- FC&P 31-1, p. 11, ID=1637^Topic(s): skeletal pores; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^1";
- 6296 s[6293] = "LELESHUS V.L. (1981).- Osnovnye napravleniya evolyucii Tabulyat. [main evolutionary trends of Tabulata].- Dokl. Akad. Nauk Tadjh. SSR 24, 6: 378-381.- FC&P 11-1, p. 50, ID=1772^Topic(s): phylogeny; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^1";
- 6297 s[6294] = "PLUSQUELLEC Y., SANDO W.J. (1987).- The microstructure of *Michelinia meekana* Girty 1910.- Journal of Paleontology 61, 1: 10-13.- FC&P 16-1, p. 65, ID=1977^Topic(s): microstructures; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The wall of *Michelinia meekana* Girty is composed predominantly of lamellae that are approximately parallel to the median dark line, confirming its placement in the genus *Michelinia* s.s. The presence of the *Praemichelinia*-type microstructure in some parts of the wall is a recurrence of primitive architecture that suggests derivation of *Michelinia* from *Praemichelinia*.^1";
- 6298 s[6295] = "MISTIAEN B. (1989).- Importance de la symetrie d'ordre douze chez les Tabulata.- C. R. Acad. Sci. Paris 308, II: 451-456 [in French, with English summary].- FC&P 18-1, p. 42, ID=2277^Topic(s): symmetry; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The study of *Auloporida* from the Devonian of the Ferques area, in the north of France, reveals the presence of a dodecal symmetry in the constitution of the walls of *Thecostegites bouchardi* and *Aulopora serpens*. This observation corroborates the discovery of 12 fossilized tentacles; in a *Favosites* by Copper, and adds information about the presence of 12 rows of septal spines in numerous Tabulata. So the dodecal symmetry seems to be a significant character of Tabulata.^1";
- 6299 s[6296] = "LEE D.-J., JUN Y.-H., BAE B.-Y., ELIAS R.J. (2007).- Axial increase in some early tabulate corals.- Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommissionen

- 17: 31-41.- **FC&P 35**, p. 62, ID=2363**Topic(s): **axial increase; Tabulata; **Systematics: **Cnidaria; Tabulata; **Stratigraphy: **; **Geography: **^^1";
- 6300 s[6297] = "ZAPALSKI M.K. (2007).- Parasitism versus commensalism: the case of tabulate endobionts.- Palaeontology 50, 6: 1375-1380.- **FC&P 35**, p. 117, ID=2455**Topic(s): **parasitism vs commensalism; Tabulata, endobionts; **Systematics: **Cnidaria; Tabulata; **Stratigraphy: **; **Geography: **^Tube-like traces of organisms belonging to the ichnogenus Chaetosalpinx sokolov have been considered in the literature as commensal endobiontic organisms of tabulate corals. Their position between the corallites (or sometimes within the septa), perforation of the host's skeleton and soft tissue, modification of its phenotype and a possible inhibition of its growth show that the relationship between these organisms and tabulate corals can best be interpreted as parasitism rather than commensalism, as previously suggested. Such an interpretation may be extended to the ichnogenera Helicosalpinx Oekentorp and Actinosalpinx Sokolov, which show identical placement within the host colony and similar features, such as the absence of their own wall.^1";
- 6301 s[6298] = "ZAPALSKI M.K., HUBERT B., MISTIAEN B. (2007).- Estimation of palaeoenvironmental changes: can analysis of distribution of tabulae in tabulates be a tool?.- Geological Society, London, Special Publications 275: 275-281.- **FC&P 35**, p. 117, ID=2456**Topic(s): **tabulae density; Tabulata, environment; **Systematics: **Cnidaria; Tabulata; **Stratigraphy: **; **Geography: **^Growth periodicity (cyclomorphic variation) in corals is expressed by various features, among them changes in the distribution of tabulae. A method potentially useful in analysis of periodical environmental changes is proposed herein. Measurement of spaces between tabulae in tabulate corals and preparation of a histogram converted into a trend curve may show relative periodical fluctuations of the environment. Such an analysis, exemplified here on Givetian Pachyfavosites sp. from the Avesnois (northern France), shows that this method may be used as a tool for estimation of environmental changes.^1";
- 6302 s[6299] = "SCRUTTON C.T. (1989).- Intracolony and intraspecific variation in tabulate corals.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 33-43.- **FC&P 19-1.1**, p. 12, ID=2520**Topic(s): **variation; Tabulata; **Systematics: **Cnidaria; Tabulata; **Stratigraphy: **; **Geography: **^^1";
- 6303 s[6300] = "PANDOLFI J.M. (1989).- Phylogenetic analysis of the early tabulate corals.- Palaeontology 32, 4: 745-764.- **FC&P 19-1.1**, p. 52, ID=2666**Topic(s): **early phylogeny; Tabulata; **Systematics: **Cnidaria; Tabulata; **Stratigraphy: **; **Geography: **^Phylogenetic analysis of the extinct anthozoan clade Tabulata yields new hypotheses concerning their pattern of diversification in the Ordovician. Two separate phylogenetic analyses, one based on primitive rugose corals as the outgroup (RUGSGRPS), and the other based on Lichenaria as the ancestral tabulate coral (LICHGRPS) yielded different phylogenies. The phylogenies generated are broadly different from previously proposed phylogenies based on possibly subjective morphological interpretations, and on biostratigraphical and / or biogeographical hypotheses alone. Character analysis based on consistency index (a measure of homoplasy of characters) yielded four suites of morphological characters: (1) suites with a high consistency index (CI) that differentiate major groups; (2) suites with a high CI that differentiate subgroups; (3) suites with a low CI that differentiate major groups and (4) suites with a low CI that differentiate subgroups. Therefore, CI does not necessarily correspond with the potential for differentiating major groups. The most useful characters in differentiating major groups of Ordovician tabulates are architecture, wall thickness, mural pores,

microstructure, corallite shape, and coenenchyme, whereas those not particularly useful in differentiating major groups are tabulae, septa, rows of septal spines, columella, and stereozone. The phylogenetic analyses corroborate the taxonomic integrity of the presently defined Auloporida, Favositida, Halysitida, Heliolitida and most Sarcinulida and falsify the taxonomic integrity of the Chaetetida and the Lichenariida. As presently defined the Halysitida should be separated from Heliolitida.^1";

- 6304 s[6301] = "TOURNEUR F. (1991).- The Bainbridgia-Dualipora association (Cnidaria, Tabulata): palaeogeographical and palaeoecological implications.- Hydrobiologia 216/217 [Williams R.B., Cornelius P.F.S., Hughes R.G. & Robson E.A. (eds): Coelenterate Biology: Recent Research on Cnidaria and Ctenophora]: 419-425.- FC;P 21-1.1, p. 11, ID=3195^Topic(s): ; Tabulata, associations; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The genera Bainbridgia and Dualipora (Cnidaria, Tabulata) have been found together in four localities of Early Devonian age (Missouri, USA; Tafilalet, Morocco; Barrandian, Czechoslovakia; Horre, Germany). Several isolated occurrences of each are also reported. The palaeogeographical and palaeoecological implications of this association are discussed.^1";
- 6305 s[6302] = "LAFUSTE J. (1988).- Sous classe des Tabules (Tabulata Milne-Edwards & Haime 1850).- In Grasse P. P. (dir.): Traite de Zoologie III: Cnidaires, Anthozoaires, fasc. 3: 815-821.- FC;P 21-1.1, p. 46, ID=3230^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6306 s[6303] = "HUBMANN B. (1992).- Variabilitaetsuntersuchungen an Catenipora Lamarck (Zoantharia, Tabulata).- N. Jb. Geol. Palaeont. Mh. 1992, 5: 279-291.- FC;P 21-2, p. 37, ID=3321^Topic(s): variability; Tabulata, Catenipora; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The variability of Cateniporids was investigated. This paper intends to improve the understanding of the taxonomic procedure. Intra- and interspecific as well as ecologically conditioned variabilities are discussed.^1";
- 6307 s[6304] = "COPPER P., PLUSQUELLEC Y. (1993).- Ultrastructure of the walls, tabulae and "polyps" in Early Silurian Favosites from Anticosti Island, Canada.- Courier Forschungsinstitut Senckenberg 164: 301-308. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC;P 22-2, p. 20, ID=3465^Topic(s): microstructures; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^SEM and ultra-thin section examination of the fossilized "polyps", corallite walls and tabulae in Late Llandovery (Silurian, Aeronian) Favosites from the Jupiter Formation on Anticosti Island reveal the following observations not previously discovered or described: (1), the "polyps" have a very finely radial and concentrically wrinkled surficial structure along the basal portions, but not on the "tentacles"; (2), the "polyps" are discrete and separate from the uppermost tabulae on which they rest, and are not produced as modifications of the tabulae nor the septal ridges; (3), the "polyps" occur only on top of the last tabula, with no remnants remaining on or between abandoned tabulae below; (4), the "polyps" consist of sparry calcite and are not microlamellar like the walls or tabulae; (5), the walls and tabulae consist of flattened microlamellae like those in Favosites gothlandicus; (6), within the preserved "polyps" are small yellow spherules (10-20µm), of possible cyanobacterial or algal origin. Our tentative explanation for these remarkable structures is that they reflect fortuitous burial and conservation which permitted early infilling or saturation by aragonite or calcite of the soft tissues, thereby preserving the 12-fold symmetry and morphology of the soft polyps, which once rested on the tabulae.^1";
- 6308 s[6305] = "HUBMANN B. (1997).- Astogenese von Catenipora micropora

(Whitfield 1882), Coelenterata, Tabulata.- Mitt. Ges. Geol.-Bergbaustud. Osterr. 39/40: 15-28.- FC&P 26-1, p. 65, ID=3635^Topic(s): astogeny; Tabulata, Catenipora; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The mode of growth of the adult corallum of Catenipora micropora from the Llandoveryan of NE-Iran (Shirgesht area) is demonstrated. The investigation of intraspecific variabilities of corallite geometries indicates, that intraserial variabilities (variability within a "plain") are not significant different from interserial variabilities (variability in "space"). Biometric data sets show the same variability of dimensions throughout the entire adult part. Compared with younger parts of the colony the older ones show a better defined data range. Size and geometry of the ring shaped chains of corallites (lacunae) are interpreted as genetically determined co-processes of all corallites (polyps) forming a lacuna. This process is subordinated the simple polyp. The investigation demonstrates that one section parallel and one vertical to the growth direction of the corallum is sufficient for taxonomic characterization.^1";

- 6309 s[6306] = "SCRUTTON C.T. (1997).- Growth strategies and colonial form in tabulate corals.- Boletín de la Real Sociedad Española de Historia Natural, Sección Geológica 91, 1/4: 179-191.- FC&P 26-2, p. 13, ID=3683^Topic(s): growth strategies, colony forms; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Adaptive strategies for colony development (growth strategies) in tabulate corals can be viewed in terms of two end-members, peripheral growth and medial growth. In peripheral growth, new corallites are preferentially offset at the colony margin, whereas in medial growth, new corallites are principally offset between earlier, diverging corallites. Many tabulate coral species were obligate followers of one or other strategy, whilst others could switch or vary growth between the two strategies. Growth strategy was a factor in recruitment success on different types of substrate. Colonial form was a function of growth strategy, offset density and corallite growth control, moderated during astogeny to a greater or lesser degree by environmental factors, principally sediment mobility and rate of substrate aggradation. A wide range of colonial growth-forms, with a considerable area of overlap, could result from both strategies. The interaction of growth strategy and environment is illustrated by two contrasting examples from the Silurian. A deep water (>50-60m) substrate, with no net sediment aggradation over a 15-20yr period, from the Llandovery of County Mayo, Ireland, was dominated by tabulate corals with a peripheral growth strategy and tabular to domal growth-forms. This environment was probably close to the base of the photic zone. Wenlock patch reefs in the Welsh Borderland of England developed in water <30m depth. Here, different strategies and growth-forms dominated the major phases of patch reef growth during periods of continuous sea-floor colonization. Peripheral growth and tabular form dominated in the initiation stage; a more even spread of strategies and a shift to domal and bulbous growth-forms, together with the highest percentage of halysitids occurred in the reef core; and medial growth dominated in the reef margin, with a wide range of growth-forms including a significant percentage of nodular colonies.^1";
- 6310 s[6307] = "BRUHL D., OEKENTORP KJ. (1997).- Tabulate Korallen - Bau, Verbreitung und Paläoökologie paläozoischer Riffbildner.- Kleine Senckenbergreihe 24 [Steininger F.F. & Maronde D. (eds) Städte unter Wasser - 2 Milliarden Jahre; Begleitheft zur gleichnamigen Ausstellung im Naturmuseum Senckenberg]: 67-76.- FC&P 27-1, p. 80, ID=3819^Topic(s): morphology, ecology; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6311 s[6308] = "LELESHUS V.L. (1991).- Darvasia catenata gen. et sp.nov. - one of the examples of parallelism in evolution of tabulates.- Doklady

- AN Taj. SSR., 34, 3: 188-190.- FC&P 23-1.1, p. 40, ID=4108^Topic(s): evolution parallel; Tabulata, Darvasia; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6312 s[6309] = "PLUSQUELLEC Y., TOURNEUR F., LAFUSTE J. (1995).- Microstructure de *Striatopora immota* Moore & Jeffords 1945, espece-type de *Parastriatoporella Tchudinova* 1959 (Tabulata, Pennsylvanien).- Neues Jahrbuch f. Geologie u. Palaeontologie, Monatshefte 1995, 4: 193-204.- FC&P 24-1, p. 7, ID=4444^Topic(s): microstructures; Tabulata, *Striatopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^A microstructural study of the holotype of *Striatopora immota* Moore & Jeffords 1945, type species of *Parastriatoporella Tchudinova* 1959, shows the entirely fibrous constitution of the skeleton of this genus. In the axial zone, the wall consists of a non-trabecular water-jet sclerenchyme, in the peripheral zone the water-jet arrangement persists but seems to become trabecular. The thickenings of the tabulae are fibrous. These microstructural features indicate a high degree of evolution for some branching Permo-Carboniferous Tabulata including *Thamnoporella* and *Gertholites*.^1";
- 6313 s[6310] = "KLAAMANN E. (1970).- Veraenderlichkeit und taxonomische Stellung der *Angopora hisingeri* (Jones).- Eesti NSV Teaduste Akad. Toimetised 19, Keemia Geologia 1: 62-68.- FC&P 1-2, p. 15, ID=4647^Topic(s): variability; Tabulata, *Angopora*; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6314 s[6311] = "LELESHUS V.L. (1972).- Erganzung zur Diagnose der Gattung *Daljanolites* Leleshus 1964 (Tabulata).- Muenster. Forsch. Geol. Palaeont. 24: 25-35.- FC&P 1-2, p. 15, ID=4650^Topic(s): taxonomy; Tabulata, *Daljanolites*; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The examination of a new material, collected at the type locality, makes it possible, to supply the diagnosis of the genus *Daljanolites*. This genus resembles very much the genus *Trachypora* E. & H. 1851, and the genus *Liscombea* Ross 1961. ^1";
- 6315 s[6312] = "OEKENTORP K. (1971).- Palaeofavosites Twenhofel 1919 (Anthozoa, Tabulata): proposed validation under the Plenary Powers.- Bulletin Zoological Nomenclature 28, 5/6: 158-160.- FC&P 1-2, p. 16, ID=4654^Topic(s): nomenclature; Tabulata, Palaeofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6316 s[6313] = "LELESHUS V.L. (1972).- Parallelism in the evolution of Tabulate Corals.- Doklady A.N. Tadjik. SSR 203, 1: 208-210.- FC&P 2-1, p. 16, ID=4720^Topic(s): parallel evolution; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6317 s[6314] = "LELESHUS V.L. (1970).- A revision of Lower Silurian representatives of the genus *Favosites* (Anthozoa, Tabulata). Computer application to biological classification.- Izv. A.N. Tadjik. SSR., Otd. biol. nauk. 3, 40: 67-71.- FC&P 2-1, p. 16, ID=4721^Topic(s): numerical taxonomy; Tabulata, *Favosites*; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6318 s[6315] = "OEKENTORP K. (1974).- Comment on Palaeofavosites Twenhofel, 1914 (Anthozoa, Tabulata): proposed validation under the plenary powers. Z.N. (S.) 1961.- Bulletin Zoological Nomenclature 31, 3: 112-113.- FC&P 4-1, p. 36, ID=5124^Topic(s): nomenclature; Tabulata, Palaeofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^[list of references in which the name Palaeofavosites Twenhofel, 1914 has been used in recent years]^1";
- 6319 s[6316] = "TESAKOV Yu.I. (1973).- Matériaux initiaux pour établir chez les Tabulata la taxonomie des espèces et des sous-espèces.- Trudy Inst.

- Geol. Geophys. AN SSSR 47: 67-76.- FC&P 4-1, p. 39, ID=5140^Topic(s): species recognition; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6320 s[6317] = "CARAMANICA P.P. (1975).- Stabilization of the spelling of the generic name Paleofavosites Twenhofel.- Journal of Paleontology 49: 1126.- FC&P 5-1, p. 32, ID=5383^Topic(s): nomenclature; Tabulata, Palaeofavosites; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^ [the author refers to the incorrect spelling of the generic name Paleofavosites used by Oekentorp (1971) as Palaeofavosites]^1";
- 6321 s[6318] = "CHUDINOVA I.I. (1975).- Tabulata.- Trudy Vses. Neft. Nauchno-issled. Geologoraz. Inst. 383: 69-72.- FC&P 5-2, p. 10, ID=5439^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ???. Geography: ^ Describes and illustrates 12 species, 2 of them new.^1";
- 6322 s[6319] = "TERMIER H., TERMIER G. (1975).- Nouvelles donnees sur le Tabule enigmatique Syringoalcyon Termier et Termier 1945.- Geologica et Palaeontologica 9: 85-93.- FC&P 5-2, p. 10, ID=5442^Topic(s): morphology, systematic position; Tabulata, Syringoalcyon; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^ Detailed discussion of morphology and possible affinities.^1";
- 6323 s[6320] = "PLUSQUELLEC Y., in, LE MENN J., PLUSQUELLEC Y., MORZADEC P., LARDEUX H. (1976).- Incursion hercynienne dans les faunes rhénanes du Dévonien inférieur de la Rade de Brest (Massif Armoricain).- Palaeontographica A153: 61 pp., 10 pls.- FC&P 5-2, p. 14, ID=5460^Topic(s): biogeography; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^ Etude d'une faune nouvelle de Tabulés (par Y. Plusquellec), Trilobites, Crinoïdes et Tentaculites. * Plusieurs genres et espèces de Pleurodictyformes sont décrits dans ce travail: Cleistodictyum porosum Plusquellec, Pleurodictyum microspinorum n.sp., Pl. latum n.sp., Pl. sp. A., Pl. sp. B., Petridictyum petrii (Maurer)?, ainsi qu'une forme proche de Procteria, présentant des caractères morphologiques très particuliers. * Le matériel à l'état de moulage naturel, très finement conservé, a permis une étude précise de l'ornementation des fonds calicinaux. Une abondante représentation en est donnée. L'auteur a tenté de représenter également, à l'aide de figures conventionnelles la morphologie de ces fonds calicinaux. * Chez Cleistodictyum porosum, l'étude du mode de croissance de la colonie a conduit à proposer quelques termes nouveaux pour repérer les différentes corallites. * Compte tenu du mode de conservation du matériel, aucune donnée sur la microstructure n'est disponible.^1";
- 6324 s[6321] = "TESAKOV Yu.A. (1978).- Tabulyaty. Popullyatsionnyi, biotsenoticheski i biostratigraficheski analiz. [Tabulata. Population, biocenosis and biostratigraphic analysis; in Russian].- Nauka, Moskva; 206 pp, 39 pls.- FC&P 8-2, p. 34, ID=5707^Topic(s): ; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6325 s[6322] = "HLADIL J. (1985).- Systematical approaches in tabulate corals - a three-way crossing?.- FC&P 14, 2: 26-27. [short note] - FC&P 14-2, p. 26, ID=6715^Topic(s): phylogeny; Tabulata, systematics; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^ At first sight the tabulate corals show a relatively simple morphology. But on the other hand the radiation and the genetically fixed changes can be recognized by detailed analysis of microarchitectural or microstructural features, as well as by the evaluation of variability pattern. The complete description is usually based on total quantified features (dimensions etc.) and on qualitative series coded into quantitative form (microstructure etc.). Ecological interactions, provide another useful criterions. For the description of each tabulate colony about 110 alternative characters or about 25 multistage characters are

- distinguished in our laboratory. [first part of a paleontological note]^1";
- 6326 s[6323] = "OEKENTORP K., STEL J. (1985).- Favosites - a true coral - remarks to P. Copper's discoveries of fossilized polyps.- FC&P 14, 2: 28-29. [short note] - FC&P 14-2, p. 28, ID=6716Topic(s): ; Tabulata Favosites; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The following summary and remarks are thought to throw attention on Paul Copper's sensational discovery of fossilized favositid polyps. This will be reason for a revival of the discussion of the Coelenterata's Sclerospongia nature of Favosites resp. most of the Tabulata. [initial part of paleontological note]^1";
- 6327 s[6324] = "FINKS R.M. (1986).- Spicules; in Thamnopora.- FC&P 15, 1.2: 22.- FC&P 15-1.2, p. 22, ID=6725Topic(s): systematic position; Tabulata Thamnopora; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^ [suggestion that spiculae are present within favositid skeletons] can be tested by attempting to dissolve away the calcium carbonate to see if there is a flexible residue, having the form of the spicules and taking Rose bengal stain. The test will not work if the organic material is lost or replaced by calcite, but it is worth trying. [concludes Finks]^1";
- 6328 s[6325] = "TERMIER G. (1977).- Comparaison de l'anatomie de certains tabules avec celle de certains spongiaires.- FC&P 6, 1: 15-16.- FC&P 6-1, p. 15, ID=5491Topic(s): ; Tabulata, Porifera; Systematics: Cnidaria Porifera; Tabulata; Stratigraphy: ; Geography: ^ Une révolution a été introduite dans l'étude des organismes constructeurs par la découverte dans les mers actuelles de Spongiaires à test hypercalcifié parfois facultatif (Merlia) et qui peuvent être dépourvus de spicules. Nous avons décidé de reprendre en détail la recherche de critères permettant d'en distinguer ou d'en rapprocher certains groupes constructeurs de position systématique mal établie, par exemple les Trépostomes (rangés parmi les Ectoproctes Sténolèmes, Termier et Termier 1976) et les Tabulés (rangés dans les Cnidaires). Nous pensons devoir classer auprès des Chaetetoïdes non seulement plusieurs Favositina à éléments de petites dimensions tels que Staphylopora Le Maître 1956, Riphaeolites Yanet in Sokolov 1955 (pourvu de cf. astrorhizes = rhodorhizes) mais aussi des formes plus classiques à calices plus grands telles que Favosites aenigmaticum Porfirjev 1937 qui semble posséder des orthotriaenes. Les Théciidés, avec Thecia Milne-Edwards et Haime 1849, paraissent devoir être apportés au même ensemble. La texture fibreuse du test est chaetetoïde. La présence de pores permettant le passage des fluides entre les tubes cloisonnés est comparable aux prosopyles reliant entre eux les tubes radiaires du sycon par exemple. * Les tubes de Syringoporacea ont une disposition semblable à celle des astrotubes de Stromatopores de type Trupetostroma par exemple. Cette assimilation pourrait expliquer la facilité de la symbiose dite Caunopora entre les deux groupes. La présence de planchers ou de plaquettes entre les tubes de certains Syringoporacés indique d'ailleurs l'existence de tissus vivants extracalicinaux, les calices pouvant alors avoir eu un rôle atrial. Les baguettes calcitiques (épines) traversant le test fibro-lamellaire des Syringoporidés, des Grabaulitidés (Auloporida p.p. de Stasinska), de certains Favositidés et des Pleurodictyidés (Procteria et certains Michelinia) suggèrent encore, chez ces Tabulés, une sorte de sécrétion apparentée à celle des spicules des Spongiaires. [original short note]^1";
- 6329 s[6326] = "MISTIAEN B., ZAPALSKI M.K., BRICE D. (2006).- Primary and secondary factors in substrate selection of auloporid tabulates.- Second International Palaeontological Congress, Beijing. Abstracts: 211. [abstract] - FC&P 34, p. 46, ID=1255Topic(s): ecology, substrates; Tabulata, Auloporida; Systematics:

- 6330 s[6327] = "STASINSKA A. (1975).- Observations sur la morphologie de quelques genres d'Auloporida.- FC&P 4, 2: 36-39.- FC&P 4-2, p. 36, ID=6290Topic(s): structures, classification; Tabulata, Auloporida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^[observations on skeletal structure and mode of offsetting allow Stasinska to distinguish 11 families within the order Auloporida, with two families new: Favosiporidae and Grabaulitidae]^1";
- 6331 s[6328] = "IVANOVSKIY A.B., POTASHOVA M.N. (1985).- Taksonomicheskaya ocenka struktury skeleta Favozitid (Tabulata).- Vestnik Leningradskogo Universiteta 1985, 21: 92-93.- FC&P 15-1.2, p. 35, ID=0823Topic(s): classification criteria; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^There are two subfamilies marked out in the Favositidae (Tabulata) - subfamily Favositinae with lamellar walls and Pachyfavositinae with fibrous ones. Their evolution was parallel during the Silurian and Middle Devonian ages.^1";
- 6332 s[6329] = "KAZMIERCZAK J. (1984).- Favositid Tabulates: Evidence for Poriferan Affinity.- Science 225: 835-837.- FC&P 14-1, p. 52, ID=1027Topic(s): as Porifera; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Calclitic pseudomorphs of desma-like siliceous spicules found in the calcareous skeleton of a Devonian thamnoporid support the proposal of poriferan origin of at least some favositid Tabulata. These favositids arose from a group of Ordovician lithistid demosponges that adapted to toxic calcium excess in shallow, tropical marine environments by developing calicoblasts within the pinacoderm, supplementing their primary siliceous spicular skeletons with basally secreted calcium carbonate. They are tentatively recognized as an order of the subclass Sclerospongiae (class Demospongiae).^1";
- 6333 s[6330] = "HUBERT B., ZAPALSKI M.K. (2005).- Distribution of tabulae in favositids as a potential tool for analysis of periodical environmental changes.- Climatic and evolutionary controls on Palaeozoic reefs and bioaccumulations [Alvaro J.-J. et al. (eds); Paris, 30pp]. [abstract] - FC&P 34, p. 45, ID=1251Topic(s): Tabulae, sclerochronology; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6334 s[6331] = "SCRUTTON C.T. (1987).- A review of favositid affinities.- Palaeontology 30, 3: 485-492.- FC&P 16-2, p. 25, ID=2056Topic(s): systematic position; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Although the favositids have been traditionally interpreted as a group of Palaeozoic tabulate corals, there has been persistent speculation, particularly over the last decade, that they could be the massive basal skeletons of sponges and should be transferred to the Porifera. Two recent papers, claiming respectively the preservation of spicules and the fossilization of soft polyps, strongly focus the dispute. Here, all the evidence relating to the affinities of the favositids, including these recent claims, is reviewed. It is concluded that this evidence strongly favors retention of the favositids within the Tabulata and assignment of the Tabulata to the Cnidaria Anthozoa.^1";
- 6335 s[6332] = "LEE D.-J., NOBLE J.P.A. (1988).- Evaluation of corallite size as a criterion for species discrimination in favositids.- Journal of Paleontology 62, 1: 32-40.- FC&P 17-1, p. 26, ID=2136Topic(s): classification criteria; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Of all the morphologic characters used in favositid taxonomy, corallite size has most frequently been given more weight than others because of its relative ease of measurement and because it has been generally believed to be less variable. This study evaluates the reliability of corallite size as a criterion by a statistical

treatment of several populations of favositids in the Upper Silurian West Point Reef Complex in Gaspé, Quebec. Calculation of corallite cross-sectional area was made feasible by computer-based image analysis which provides a quick and accurate measure of size. The present study shows that the mean of the largest 10 percent corallite areas in mature parts of colonies with a minimum sample size of 100 corallites per cross section is the best approximation available of mean adult corallite size. It is suggested that intraspecific variability of corallite size is often too large for this character to be used in practice, probably due to phenotypic plasticity. The same may be true of most other morphologic characters. In some cases, however, one or two characters remain in variate within a species and can be used diagnostically. The same characters may be extremely variable in other species.^1";

6336 s[6333] = "YAN YOUYING, CHI YONGYI, WU YAOCHEG (1988).- Q-Mode Cluster Analysis of Genus Favosites.- Acta Palaeontologica Sinica 27, 4: 498-513.- FC&P 18-1, p. 43, ID=2279^Topic(s): numerical classification; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Since tabulatomorph corals have been studied for more than a hundred years, the related scholars have laid a good foundation for their classification. Now it is essentially clear about the classification above the genus level, but, there are still some problems about the classification below the genus level, especially the species. The obvious difficulty lies in the distinction of species with too little difference and in the large number of synonyms, which cause some confusions in classification. For instance, two specimens might have been identified as different species or subspecies only because of the very little difference between their individual sizes. Thus, there would be an overflow of species names and it would become more and more difficult to master and apply the criterion for species identification.^1";

6337 s[6334] = "KAZMIERCZAK J. (1991).- Further evidence for Poriferan Affinities of Favositids.- In: Reitner J. & Keupp H. (eds): Fossil and Recent Sponges: 212-223; Springer.- FC&P 20-2, p. 62, ID=2954^Topic(s): as Porifera; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The new findings of spicule-bearing specimens of typical favositids confirm previous suggestions of a sponge (sclerosponge) nature of these common Palaeozoic fossils. Similar to the calcareous skeletons of other modern and fossil sclerosponges (coralline sponges), favositid fossils are basally excreted hard parts of various demosponges and, as such carry little information about the biological organization of the organisms producing them. The kinds of spicules occurring in favositids, though generally monaxonid in character, indicate that the forms assigned to Paleofavosites and Favosites, which have ophirhabds and ?heloclones, are related to choristid and/or sublithistid demosponges, whereas those assigned to Mesofavosites, enclosing fusiform oxeas in their calcareous skeleton, are related to monactinellid or ceractinellid demosponges. Further examination of favositids is needed before new taxonomy of this enormously splintered group can be established, which will take into account its poriferan affiliation. Nevertheless, terms such as &corallum&; &corallites&; &colony&; &coenosteum&; and others stemming from the long-accepted cnidarian attribution of the favositids should be abandoned. The poriferan affinity of favositids requires also a considerable reevaluation of their paleoecology, particularly concerning the role they played in ancient communities. ^1";

6338 s[6335] = "KAZMIERCZAK J. (1993).- Sclerite-bearing alveolitid favositids from the Devonian of central Poland.- Paläontologische Zeitschrift 67, 1-2: 27-44.- FC&P 22-2, p. 84, ID=3517^Topic(s): sclerites; Tabulata, Favositida;

Systematics: Cnidaria; Tabulata; Stratigraphy: ;
 Geography: ^Calclitic and pyritic pseudomorphs of originally
 siliceous monaxonic sclerites (predominantly heloclone-like monocrepid
 desmas) have been found entrapped within calcareous skeletons of
 alveolitid favositids identified as Squamealveolites fornicatus
 (Schlueter 1889) derived from Lower and Middle Devonian (Emsian and
 Eifelian) deposits of central Poland. The sclerites are arranged in a
 system of subvertical tracts forming a loose palisade along the midwall
 of skeletal tubes. Poorly preserved remnants of such palisades
 correspond to the so-called "median line" or "median
 suture" of typical favositids. The finding supports the hypothesis
 of poriferan affinity of favositid Tabulates and indicates that these
 common Palaeozoic fossil cannot be longer classified as Cnidaria. They
 should, on the basis of the sclerites, be regarded as remnants of
 monaxial and / or sublithistid demosponges, which - like the
 members of modern and fossil demosponges called sclerosponges or
 coralline sponges - had the ability to produce a basally secreted
 calcareous skeleton in addition to siliceous sclerites.^1";

6339 s[6336] = "KAZMIERCZAK J. (1994).- Confirmation of the poriferan status
 of favositid tabulates.- Acta Palaeontologica Polonica 39, 3: 233-245.-
 FC&P 24-1, p. 65, ID=4483^Topic(s): as Porifera,
 Lithistida; Tabulata, Favositida; Systematics: Cnidaria;
 Tabulata; Stratigraphy: ; Geography: ^Reported are
 findings of calcitic pseudomorphs of monaxonic sclerites (heloclones
 and ophirhabds) occurring as highly ordered vertical tracts and
 subhorizontal strands in the midwall of calcareous skeletal tubes of a
 common Silurian favositid species, Favosites hisingeri, from Gotland.
 The discovery ends conclusively the current controversy about the
 nature of favositids and related tabulomorphs in favour of the
 neglected early suggestion of Kirkpatrick (1911) that these fossils can
 be basal calcareous secretions of siliceous sponges similar to those in
 living Merlia normani. The type of sclerites found in F. hisingeri and
 other favositids indicate that favositids are closely related to fossil
 and extant sponges classified within the order Lithistida (class
 Demospongia) as the so-called sublithistids.^1";

6340 s[6337] = "FLUGEL H.W. (1973).- Zur Kenntnis von Asterosalpinx Sokolov
 und anderer Sternstrukturen bei Favositinae (Tabulata).-
 Paläontologische Zeitschrift 47, 1-2: 54-68.- FC&P 3-1, p.
 25, ID=4880^Topic(s): structures; Tabulata, Favositida;
 Systematics: Cnidaria; Tabulata; Stratigraphy: ;
 Geography: ^Starlike structures situated in the corners of the
 corallites of Favosites are known from the Upper Silurian to
 Lower-Middle Devonian. They have been described from Europe, Asia, and
 Australia, by Etheridge, Frech, Tchernychev and others. Sokolov (1948,
 1962) has named these structures Asterosalpinx, Antherosalpinx, and
 Actinosalpinx. He was [of] the opinion that they are tubes and
 commensales (Serpulidae) of Favosites. * The study of a specimen from
 the Devonian of Karaburun (Anatolia) under both light microscope and
 scanning electron microscope made it clear that Asterosalpinx cannot be
 a tube. It is a node-like structure with a microstructure consisting of
 two layers: a dark middle zone built up of homogenous calcite, probably
 diagenetic, and a peripheral zone consisting of normal fibrous calcite.
 These nodes are primary trabeculare structures built in the corners of
 Favosites-like Tabulate corals. It seems necessary to erect a separate
 Tabulate genus for forms exhibiting this feature. Therefore, Porfireus
 (1937) genus Asteriophyllum should be reinstated.^1";

6341 s[6338] = "TESAKOV Yu.I. (1973).- Variation du diamètre des polypiers
 et des pores chez les Favosites gothlandicus et la relation de cette
 variation avec les conditions d'habitat.- Trudy Inst. Geol.
 Geofiz. Moscou 169: 84-92. [en russe].- FC&P 3-1, p. 30,
 ID=4897^Topic(s): variability; Tabulata, Favositida;
 Systematics: Cnidaria; Tabulata; Stratigraphy: ;
 Geography: ^^1";

- 6342 s[6339] = "SCHOUPPE A.von, OEKENTORP Kl. (1974).- Morphogenese und Bau der Tabulata unter besonderer Beruecksichtigung der Favositida.- Palaeontographica A145, 4-6: 79-194.- FC&P 4-1, p. 38, ID=5134^Topic(s): morphogeny; Tabulata; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^A long study about the soft parts, the morphogenesis of the skeleton (wall, pores, septal formations and the tabulae) and histology. Numerous microstructures which cannot be accounted for morphogenetically, found in the Tabulata and also in other fossils of the Madreporaria, are dealt with in a chapter devoted to secondary structures. These structural units which have been described especially in more recent writings have no taxonomic importance. They owe their origin to secondary, postmortal processes occurring during fossilization.^1";
- 6343 s[6340] = "LAUB R.S. (1976).- The holotype of Favosites favosus (Goldfuss) 1826.- FC&P 5, 1: 9-11.- FC&P 5-1, p. 9, ID=5469^Topic(s): type material; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^[paleontological note]^1";
- 6344 s[6341] = "OEKENTORP K. (1976).- Revision ans Typisierung des Genus Paleofavosites Twenhofel 1914.- Paläontologische Zeitschrift 50, 3-4: 151-192.- FC&P 6-1, p. 24, ID=5471^Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Favosites asper d'Orbigny 1850 (described by Lonsdale 1839 as a minor variety of Favosites alveolaris Goldfuss) was assigned to the genus Paleofavosites Twenhofel as type species. Misinterpretations and lack of knowledge about the type specimen always led to an erroneous synonymy with Paleofavosites alveolaris (Goldfuss 1829). The present revision is intended as a correct typisation and a new description of the holotype of the type species. In this connection Paleofavosites alveolaris (Goldfuss) and the major variety named by Lonsdale and until now in synonymy with Paleofavosites alveolaris are described, and as a result of this revision, the latter has to be placed to Paleofavosites rugosus Sokolov 1951. [original summary; taken from FC&P 5, 1: 34]^1";
- 6345 s[6342] = "STEL J.H., OEKENTORP K. (1976).- On the solenid growth habit of Paleofavosites.- Geologie en Mijnbouw 55, 3/4: 163-174.- FC&P 6-1, p. 24, ID=5472^Topic(s): growth habit; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The formation of the so called "solenia", which gives the colonies- of Multisolenia Fritz 1937 the peculiar and striking appearance, is considered to be the same as that of normal pores in favositoid corals. The solenia occur in species of Multisolenia and related genera as well as in Paleofavosites Twenhofel 1914, observed for example in the type specimen of type species P. asper, e.g. in paleofavositoid forms with corallites possessing only small diameters (less than 1mm). These small measurements cause an adjoining of four corallites - instead of normally three, where the diameters reach more than 1mm - and, based on that arrangement, a crosswise, dumbbell-like connection of neighbouring individuals by pores situated in the corallite corners. Therefore the authors are of the opinion that Multisolenia and the related genera are junior synonyms of Paleofavosites. [taken from FC&P 5, 1: 34]^1";
- 6346 s[6343] = "OEKENTORP K. (1977).- Palaeofavosites Twenhofel in place of Calamopora Goldfuss and the spelling of Palaeofavosites.- FC&P 6, 1: 13-14.- FC&P 6-1, p. 13, ID=5489^Topic(s): nomenclature; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The decision to the proposal forwarded by Oekentorp (1971, 1974) on "Palaeofavosites Twenhofel 1914 (Anthozoa, Tabulata): proposed validation under the Plenary Powers" has, in the meantime, been published by the International Commission on Zoological Nomenclature in Opinion 1059. According to this, the generic name Calamopora Goldfuss 1829, has been

abandoned in favour of Palaeofavosites Twenhofel 1914, and listed on the Official Index of Rejected and Invalid Generic Names in Zoology (under No. 2073). Palaeofavosites was included in the Official List of Generic Names in Zoology (under No. 2028) as well as relating names of species asper and alveolaris (No. 2576 and 2577 respectively). * Though in this approval, the generic name Palaeofavosites was used in the latinized writing and not in the original writing as given by Twenhofel as Paleofavosites (see Caramanica 1975). The original citation in question could not be traced at the time of publication. The writing introduced by me in this approval was furthermore based on the - correct - latinized form generally common in literature as e.g. Lang, Smith & Thomas (1940), Sokolov (1955), Hill & Stumm (1956) and Sokolov (1962) or Flügel (1970). According to the IRZN, however, this was an unjustified emendation (article 33, see also article 32 a (ii)). In accordance to this the correct mode of writing Paleofavosites was to be continued (see Oekentorp 1976). But according to Opinion 1059, Palaeofavosites is firmly established again - based on sequently unfortunate errors. Therefore, and to avoid any further confusion and also considering the correctly latinized form of writing, it is recommended that this writing should remain as Palaeofavosites. [full text of a nomenclatorial note; originally accompanied by a list of references]^1";

6347 s[6344] = "FLUGEL H.W. (1976).- Ein Spongienmodell fuer die Favositidae.- Lethaia 9: 405-419.- FC&P 6-1, p. 22, ID=5492^Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The opinion that the Favositidae are a group of the Madreporaria is based on a paper by Edwards & Haime 1849. These authors mentioned no reason for their assumption. A critical review of the skeletal material, microstructure and morphology shows that it is difficult to compare this group with the true Madreporaria. On the other hand, the discovery of the sclerospongiae has shown that they are recent organisms which are similar in their material and morphology to the Favositidae. The only difference is the occurrence of wall pores in the Favositidae and of astrorhizae in the Sclerospongiae. Like the primary wall grooves of the upper edge of the walls of the Favositidae, which are the primary stadium of the pores, the astrorhizae are initial grooves on the surface of the Sclerospongiae. Therefore the formation of the pores and of the astrorhizae is similar. If the Favositidae are interpreted as Porifera, the wall grooves would analogically be the impression of excurrent canals of the soft part on the surface of the skeleton. The main difficulty in an interpretation of the Favositidae as a new subphylum of the Porifera is that we are not yet informed about the formation of the basal skeleton of the Sclerospongiae. [original abstract]^1";

6348 s[6345] = "MELVILLE R.V. (1977).- Paleofavosites / Palaeofavosites.- FC&P 6, 2: 30-31.- FC&P 6-2, p. 30, ID=5551^Topic(s): ; Tabulata, Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^[nomenclatorial note]^1";

6349 s[6346] = "OEKENTORP K. (1985).- Spicules in favositid Tabulata - remarks to J. Kazmierczak's interpretation.- FC&P 14, 1: 34-35.- FC&P 14-1, p. 34, ID=6620^Topic(s): ; Tabulata Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Kazmierczak's argumentation for the existence of spicules in favositid structures doesn't seem valid enough to me. Most probably these structures could have originated from boring organisms [concludes Oekentorp]^1";

6350 s[6347] = "OLIVER W.A.jr (1986).- Favositids are corals - further remarks.- FC&P 15, 1.2: 19-21.- FC&P 15-1.2, p. 19, ID=6724^Topic(s): systematic position; Tabulata Favositida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^In the last issue of Fossil Cnidaria, Oekentorp and

Stel (1985) drew attention to Copper's (1985) important paper on fossilized polyps. In my opinion, they correctly emphasized the importance of Copper's work while expressing some reluctance to accept Copper's conclusions without further analysis. I would disagree, however, with the Oekentorp and Stel assumption that prior to Copper's work most Paleozoic coral workers had adopted the sponge model of favositid relationships. I think instead that, with the stimulus of the rediscovery of living sclerosponges, many students of corals have had to reconsider some fundamental questions; and, in the excitement of the moment, there have been more papers analyzing possible sponge relationships than renewing arguments for coral or cnidarian affinities. This is appropriate to the time and indicates the fundamental importance of the question, but it does not suggest that a new consensus had been achieved. [introductory remarks]^1";

6351 s[6348] = "POTASHOVA M.N. (1979).- Ob obyome rodov *Thamnopora* Steininger i *Gracilopora* Chudinova. [on extent of the genera *Thamnopora* Steininger and *Gracilopora* Chudinova; in Russian].- Trudy Inst. geol. geofiz. AN SSSR, Sib. otd. 401 [O.A. Betekhtina & R.T. Gratsianova (eds): Fauna i stratigrafiya srednego i verkhnego paleozoya Sibiri]: 44-48.- <FC#038;P 8-2, p. 45, ID=5719^Topic(s): Tabulata, taxonomy; Systematics: Cnidaria; Tabulata; Stratigraphy: Geography: ^Morphological features of representatives of the genera *Thamnopora* Steininger and *Gracilopora* Chudinova are compared with one another. Based on investigations from a collection of the representatives of either genera from the Devonian deposits in different areas of the USSR, combined with details from the literature, it is necessary to interpret *Gracilopora* as a younger synonym of *Thamnopora* Steininger. There is no difference in morphological features.^1";

6352 s[6349] = "DUBATOLOV V.N. (1974).- Filogeniya Tabulyat podotryada Favositina.- Akademiya Nauk SSSR, Sibirskoye Otdeleniye; Etyudy po stratigrafii: . : 134-153.- <FC#038;P 7-1, p. 20, ID=0171^Topic(s): phylogeny; Tabulata, Favositina; Systematics: Cnidaria; Tabulata; Stratigraphy: Geography: ^The next three papers concern palaeobiogeographical aspects of the Devonian in Siberia and are especially based on Tabulate corals - but also on Rugose corals - listed in a tabular form and on additional maps.The following results can be given:Distribution of the Devonian corals in the Sibirian seas and contiguous realms was conditioned by palaeogeographic environments. During the early Devonian there were large geographical barriers between the seas of the Altai-Sayan, Indigiro-Kolymian, and Mongolo-Okhotsk provinces that made an exchange of coral species of adjacent seas difficult. These conditioned sharp geographical differentiation of the faunas. In the Indigiro-Kolymian province the Tabulate fauna was rather uniform. Favositids predominated, e.g above all, the *Favosites socialis* group. Alveolitids, and later on *Striatopora*, *Gracilopora*, etc. were abundant as well as *Squameofavosites* etc. On the other hand, *Pleurodictyum* is the characteristic genus in the Mongolo-okhotian province but also species of *Favosites* different from those of the former province. Same facts are noted for the Rugose corals: *Taimyrophyllum* characterizes the Indigiro-Kolymian province, whereas *Lindstroemia* is a representative of the Mongolo -Okhotian area.In the Middle Devonian, boundaries of the provinces became obliterate. It resulted in the fact that the constant content of fauna in different basins was more uniform. Faunal integration continued up to the end of the Frasnian.^1";

6353 s[6350] = "JENKINS C.J. (1977).- Wall microstructure and relationship of Halysites.- Bureau Recherches Geologiques et Minieres Memoir 89: 87 [Proceedings of Second International Symposium on Corals and Fossil Coral Reefs, Paris 1975].- <FC#038;P 6-2, p. 19, ID=0151^Topic(s): microstructures; Tabulata, Halysites; Systematics: Cnidaria; Tabulata; Stratigraphy: Geography: ^Two types of walls in Halysites are observed: an

exterior and an intercorallite wall, both of which show a different structure, fibronormal resp. trabecular. The trabecular nature of the intercorallite walls is to be seen as a similarity with comparable structures in Heliolites. And - concerning the mode of secretion of the skeleton - in both, Halysites and Heliolites. this is entirely secreted by the basal ectoderm of the polyps and the coenosarc. Moreover, analogous coenosteal structures, for instance in Propora and Cystihalysites, Heliolites and Halysites, led to a question the close relationship of these two different groups but which evolve independently and apart of the Tabulata.^1";

6354 s[6351] = "KAZMIERCZAK J. (1988).- Halysitid tabulates: sponges in corals' clothing.- Lethaia 22: 195-205.- FC&P 18-2, p. 37, ID=2485^Topic(s): as Porifera; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Abundant pyritic pseudomorphs of monaxonic siliceous spicules (ophirhabds and ?heloclones) have been found entrapped in the calcareous skeleton of the halysitid tabulate Quepora ? agglomeratiformis (Whitfield) from late Ordovician limestones of Frobisher Bay, Baffin Island, Canada. The finding indicates a poriferan (choristid or sublithistid) affinity of halysitids, early Palaeozoic marine fossils related so far to corals. They probably derived from a moaxonic group of early demosponges that adapted during the Ordovlcian to Ca2+ stress conditions in epicontinental seas by excreting the excessive Ca2+ influx to their tissues as variously designed chains of basally secreted calcareous tubes.^1";

6355 s[6352] = "WOOD R.A., COPPER P., REITNER J. (1990).-'spicules" in halysitids: a reply.- Lethaia 23, 1: 113-114. [polemical note] - FC&P 19-1.1, p. 34, ID=2611^Topic(s): spicules ?; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^ […] the structures discussed by Kazmierczak represent extensive post-mortem infestation by endolithic organisms, and the finding of these structures within specimens of the associated fauna of brachiopods and trilobites from Baffin Island would provide definitive proof. We welcome Kazmierczak's comments on the intriguing problem of the convergent formation of calcareous skeletons in sponges, and are equally eager to increase our understanding of reef-building forms. However, we feel that the inclusion of favositid and halysitid tabulates within the ranks of Porifera is unfounded on the evidence available. [final conclusions of the note]^1";

6356 s[6353] = "LEE D.-J., NOBLE J.P.A. (1990).- Colony development and formation in halysitid corals.- Lethaia 23: 179-193.- FC&P 20-1.1, p. 60, ID=2794^Topic(s): colony growth; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Modes of colony formation and their relationship with colony morphology, size and substrate characteristics in species of halysitid corals have been studied. Two distinctive modes of colony formation in halysitids are proposed. In the monoplanulate mode, represented by Catenipora simplex, the colony is developed from a single protocorallite and colony formation is achieved by a combination of asexual increase and intracolony fusions. In contrast, the polyplanulate mode is demonstrated by C. escharoides, in which the early colony formation is achieved primarily by fusions of many "incipient colonies" of more than a single planulate origin and of different generations. The latter mode has not previously been described in tabulates and has significant implications for coloniality, reproductive and life history characteristics, histo-compatibility and adaptative ecology. The colony size and morphology, and the distribution of halysitid species were primarily determined by the modes of colony formation and the substrate characteristics. Colonies of the monoplanulate mode, when developed on soft substrates, exhibit a small and spherical morphology with isolated distribution patterns, while those developed on hard substrates are

- tabular and variable in size, depending on the availability of substrate. In colonies of the polyplanulate mode, on the other hand, the size of the colony is largely dependent on the frequency and timing of allograft fusion. They are characteristically found on soft substrates, often as dense monospecific thickets. The mode of colony formation in halysitids is probably species-specific and results in the adaptation to substrates.^1";
- 6357 s[6354] = "HAMMER O. (1998).- Regulation of astogeny in halysitid tabulates.- Acta Palaeontologica Polonica 43, 4: 635-651.- FC&P 28-1, p. 27, ID=3962^Topic(s): astogeny regulation; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The question of whether branching and budding in halysitid tabulate corals was regulated by the availability of nutrients or exposure to waste products is important for taxonomy. Moreover, such regulation could have implications for paleoenvironmental interpretation. Although the statistical and morphological evidence presented here is not unequivocal, it is suggested as a working hypothesis that halysitid astogeny was indeed regulated. This would be in accordance with current theories on the growth of Recent corals and sponges. The simulation results are used to reevaluate functional advantages of the regulation of the halysitid colony.^1";
- 6358 s[6355] = "SPANOVA N.K. (1994).- On the Halysitinae.- Izvestiya AN Respubliki Tajikistan, otd. nauk o Zemle 2, 5: 8-14. [in Russian].- FC&P 24-1, p. 49, ID=4458^Topic(s): ; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6359 s[6356] = "TESAKOV Yu.I. (1973).- Variation exceptionnelle du diamètre des polypiers chez une colonie de Halysites.- Trudy Inst. Geol. Geofiz. Moscou 169: 92-93. [en russe].- FC&P 3-1, p. 30, ID=4898^Topic(s): variability; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6360 s[6357] = "PREOBRAZHENSKIY B.V. (1979).- O Khalyzitidakh. [on Halysitida; in Russian].- Izv. AN Est. SSR, geol. 28, 1: 1-17.- FC&P 8-2, p. 46, ID=5720^Topic(s): ; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^On account of a critical reflection on monographical literature as well as personal observations, it is concluded that the Halysitida is a polyphyletical order, as the chain-like hereditary factors appear in different corals. The halysitoid shape of the corallum only represents a polymorphic modification of spatial arrangement of the corallites and, therefore, does not prove a hereditary relationship between taxons. It is proposed to abandon the order Halysitida, to place the genera Halysites, Cystihalysites, Spuamaeolites and Hexismia into the subclass Heliolitoidea and to connect the genera Catenipora, Vacuopora, Tollina and Eocatenipora to the order Lichenariida (subclass Tabulata).^1";
- 6361 s[6358] = "STASINSKA A. (1981).- Aggregated character of the colony in Catenipora and Halysites.- Acta Palaeontologica Polonica 25, 3-4: 493-496.- FC&P 10-1, p. 35, ID=5958^Topic(s): aggregated colonies; Tabulata, Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6362 s[6359] = "REITNER J. (1989).- Are Halysitid tabulates sponges? Some remarks to J. Kazmierczak's "spicules" in Quepora ? agglomeratiformis (Whitefield).- FC&P 18, 2: 22-25. [short note] - FC&P 18-2, p. 22, ID=6780^Topic(s): Porifera?; Tabulata Halysitida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The badly preserved "spicules" within one single specimen of the halysitid Quepora are very doubtful and can better be interpreted as traces of microborings! Not all longitudinal, pyritic structures within tabulates and other problematic benthic organisms, e.g. stromatoporoids, are

- spicules. Arrangements and spicule types must be carefully analysed and compared with other similar structures, like borings. These features are a trap! * Nevertheless, microborings in an Ordovician shallow marine benthic organism are important and should be carefully described. * The question if halysitid tabulates are cnidarians or sponges, cannot be answered by this particular specimen [described by Kazmierczak, 1989; concludes Reitner].^1";
- 6363 s[6360] = "BOER P.L.de (1973).- On the presumed dimorphism within Halysites colonies.- Geologie en Mijnbouw 52, 4: 221-225.- FC&P 3-1, p. 23, ID=4877^Topic(s): polymorphism; Tabulata, Halysitidae; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^Dimorphism does not exist in Halysitidae. The mesocorallites as defined by Buehler (1955) and the microcorallites and mesocorallites as defined by Hamada (1958) are considered filling structures, the author prefers the more descriptive term tubules for these skeletal features. The taxonomic importance of the distribution of these tubules in the corallum is questioned.^1";
- 6364 s[6361] = "PLUSQUELLEC Y., LAFUSTE J., WEBB G.E. (1990).- Organisation de type tetracoralliaire des rides septales de Palaeacis (Cnidaria, Carbonifere).- Lethaia 23: 385-397.- FC&P 20-1.1, p. 58, ID=2806^Topic(s): tetracoral septal arrangement; Tabulata, Pleurodictyiformes; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The tetracoral pattern of septal ridges described in Kerfordictyum (Devonian Pleurodictyum-like coral) is scarce in the Tabulata, but has been found in Palaeacis sp. from the Visean of Algeria and in P. cuneiformis subsp. A from the Visean of Australia. Palaeacis sp. shows a strong cardinal septal ridge in peripheral position, just opposite the counter ridge, thus creating a plane of bilateral symmetry; an area on both sides, which is always blurred, indicates the position of the alar ridges. Counter-lateral ridges are not easily identified and yield differing interpretation. Compared with the Rugosa this area presents distinctive features. In P. cuneiformis subsp. A, transverse section exhibits four well-developed septal ridges than coalesce in the axis of the corallite with obvious bilateral symmetry. The systematic position of the genus Palaeacis is questioned: Rugosa it is not; it may belong to Tabulata; however, erecting a new higher taxon for Palaeacis, Trachypsammia and other Pleurodictyum-like corals is premature at our present state of knowledge.^1";
- 6365 s[6362] = "DUBATOLOV V.N. (1997).- Original microstructure of skeletal tissue in tabulate corals of the family Rhipaeolitidae Dubatolov.- Coral Research Bulletin 05: 135-140.- FC&P 27-1, p. 81, ID=3821^Topic(s): microstructures; Tabulata, Rhipaeolithidae; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6366 s[6363] = "CHUDINOVA I.I. (1986).- Sostav, sistema i filogenija iskopaemych korallov otrjada Siringoporida.- Trudy paleont. Inst. AN SSSR 216: 205 pp., 70 figs., 4 tabs., 32 pls. [in Russian: Content, systematics and phylogeny of fossil corals of the order Siringoporida].- FC&P 24-1, p. 66, ID=4486^Topic(s): ; Tabulata, Siringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6367 s[6364] = "CHUDINOVA I.I. (1980).- O morfologii syringoporid. [on morphology of syringoporids; in Russian].- Korally i rify fanerozoja SSSR [B.S. Sokolov (ed.)]: 49-56.- FC&P 10-2, p. 70, ID=5805^Topic(s): morphology; Tabulata, Siringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";
- 6368 s[6365] = "CHUDINOVA I.I. (1981).- Morphogenesis of Siringoporida.- Acta Palaeontologica Polonica 25, 3-4: 505-511.- FC&P 10-2, p. 70, ID=6087^Topic(s): morphogenesis; Tabulata, Siringoporida; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^^1";

- 6369 s[6366] = "WENDT J. (1989).- Tetradiidae - first evidence of aragonitic mineralogy in tabulate corals.- Paläontologische Zeitschrift 63, 3-4: 177-181.- FC&P 19-1.1, p. 52, ID=2667^Topic(s): aragonite; Tabulata, Tetradiidae; Systematics: Cnidaria; Tabulata; Stratigraphy:; Geography:^Tabulate corals exhibit well preserved microstructures when observed at low magnifications, but reveal various degrees of diagenetic overprint when analyzed at high SEM magnifications. This evidence suggests an original MG-calcitic mineralogy. In contrast to all other examined genera of the order, the skeletons of the family Tetradiidae are completely replaced by neomorphic spar, indicating an original aragonitic composition.^1";
- 6370 s[6367] = "YANG LING, STEARN C.W. (1990).- Ichnofossils within Tetradium and related genera.- Journal of Paleontology: 881-885.- FC&P 20-1.1, p. 60, ID=2800^Topic(s): ichnofossils within; ichnofossils; Systematics: Cnidaria; Tabulata; Stratigraphy:; Geography:^An ichnofossil formed by an organism that preferentially burrowed the micritic sediment filling corallites of tetradiids has an axial passage that may be filled with sediment of calcite spar and a surrounding affected zone of concentric structure formed by the alignment of grains. More than one such burrow may occur in a single corallite. A larger ichnofossil that destroyed both septa and walls of the corallites is associated with the smaller ichnofossil.^1";
- 6371 s[6368] = "DUBATOLOV V.N. (1987).- Skeletal morphology, structure, phylogeny, and the system Tabulata of Suborder Thecostegina Lin.- Akademiya Nauk SSSR, Sibirskoe Otdeleniye, Institut Geologii i Geofiziki Trudy 688 [Dagic A. S. (ed.), The systematics and phylogeny of fossil invertebrates]: 4-14 [in Russian].- FC&P 18-1, p. 36, ID=2240^Topic(s): systematics; Tabulata, Thecostegina; Systematics: Cnidaria; Tabulata; Stratigraphy:; Geography:^1";
- 6372 s[6369] = "ZHANG SONG-LIN, YAN YOU-YIN (1995).- An approach to automatic identification of tabulatomorphic corals.- Acta Palaeontologica Sinica 34, 1: 119-127.- FC&P 25-1, p. 39, ID=3024^Topic(s): numerical identification; tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy:; Geography:^The automatic identification of tabulatomorphic corals is realized by the following steps. First of all, hundreds of retrieval tables of the fossil-identification features of each taxonomic unit from the genus above are created, on the basis of the currently published 3 superorders, 10 orders, 15 suborders, 85 families, 15 subfamilies, and 476 genera of the subclass Tabulatomorpha in the world and 2 225 species found in China. Secondly, after the coding of the identification features, these tables are stored under a tree structure database system by applying dBASE-II, with each table corresponding to a database. Finally, according to the systematic taxonomy of tabulatomorphic corals, the automatic identification of an unknown specimen is progressively proceeded from a higher taxonomic unit to a lower unit until species. If the unit is from the genus above, the degree of membership is determined after the weighing of the features, with the highest degree indicating the belongingness of the unknown specimen to a specific unit. On the other hand, in case the unit is the species, a similarity coefficient is used to measure the similarity of an unknown specimen to each species of a specific genus based on the numerical taxonomy of the already known specimens of the genus, which redefines the species of the genus through scaling the features, weighing the features, determining the similarity coefficient between every two of the known specimens, and cluster analysis of all the known specimens. The best coefficient shows the species decision of the unknown specimen. An identification example is given in this paper, with very satisfying result.^1";
- 6373 s[6370] = "LIN BAOYU, LI YAOXI, DENG ZHANQIU, LI ZHIMING, XU SHOUYONG, TCHI YONGYI, JLN CHUNTAI, (1996).- Ultra-microskeletal Structures,

Classification, Evolution and its Use in Taxonomy of Tabulatormorph Corals.- Geological Publishing House, Beijing: 125 pp., 56 pls, 34 textfigs.- FC&P 25-2, p. 27, ID=3078^Topic(s): SEM microstructures; tabulatomorpha; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^The present monograph is based on the examination of 101 genera of tabulatormorph corals (79 genera of Tabulata, 15 genera of Heliolitoidea and 7 genera of Chaetetoidea). Data on skeletal microstructure were obtained from thin sections and SEM observation. SEM photographs were all made from lightly acetic acid-etched surfaces. Microskeletal structures of Tabulatormorph corals, investigated by SEM, revealed three fundamental kinds: 1, the crystal granules, with calcite granules; 2, the crystal flakes, with calcite flakes and slabs and 3, the crystal fibrous, with brachycolumns and needles. The three kinds of fundamental units combined with each other in various ways to form seventeen types (or patterns) of micro structure such as: 1, the granular type; 2, the double-comb type; 3, the com type; 4, the hemi-pinnate type; 5, the pinnate type; 6, the fan-like type; 7, the fibro-lamellar type; 8, the paratrabecular type; 9, the trabecular type; 10, the rhabdotrabecular type; n, the eotrabecular type; 12, the parallel lamellar type; 13, the plicated lamellar type; 14, the V-shaped type; 15, the "A"-shaped type; 16, the "Y'-shaped type and 17, the zigzag type. The first type belongs to the crystal granular kind; the second to the 12th ones belong to the fibrous kind and the 13th to the 17th ones belong to the crystal flake kind. The crystal granular kind of fundamental units of microstructure is the oldest one in the three fundamental ones. It developed in the oldest tabulatormorph corals such as in Lichenariida, Tetradiida and some Cambrian Auloporida. The crystal flake and the crystal fibrous kinds are the younger ones. It were very common in Upper Ordovician to Mesozoic tabulatormorph corals. The use of microstructure in taxonomic studies of tabulatormorph corals are very important. The different fundamental kinds are as the specific character of Superorders, Orders, and the different microstructural types (or patterns) to characterize families, genera have been quite successful. This book is intended for palaeontologists, Geologists and stratigraphers.^1";

6374 s[6371] = "YAN YOUYIN, ZHANG SONGLIN, LIN BAoyu, TCHI YONGYI, WU YAocheng (1991).- The microcomputer processing system for the identification of Tabulatormorphic corals genera - species.- Geological Memoirs 2, 16; vi + 140 pp. [in Chinese, with English abstract].- FC&P 22-1, p. 30, ID=3383^Topic(s): numerical classification; tabulatomorpha, species genera; Systematics: Cnidaria; Tabulata; Stratigraphy: ; Geography: ^with the rapid development and extensive application of computer science, it is high time to introduce advanced microcomputer technology into the field of paleontology. Automatic processing of paleontology data with microcomputer is a kind of vanguard which paves the way for vigorous development of paleontology. It plays a particularly important role in "automatic" identification of fossils. The key to microcomputer automatic processing of paleontology data lies with integration of traditional processing methods and computer technology. The book, based on the currently published 3 superorders, 10 orders,. 15 suborders, 85 families, 15 subfamilies, and 476 genera of the subclass Tabulatomorpha in the world and 2225 species found in China, explores the way to the realization of computerized processing of fossil Tabulatormorphic Corals, its process and mathematical models. [first part of extensive summary]^1";

6375 s[6372] = "NOBLE J.P.A., LEE D.-J. (1990).- Ontogenies and astogenies and their significance in some favositid and heliolitid corals.- Journal of Paleontology 64: 515-523.- FC&P 20-1.1, p. 60, ID=2796^Topic(s): ontogeny, astogeny; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: ; Geography: ^The level of colony integration in tabulate

corals is the degree of colony unity with respect to behavior, physiology, and development of individual organs or organ complexes within colonies. These are difficult to assess in fossils, but the level of colony integration can be tested by analyzing ontogenies and astogenies of two common Paleozoic tabulate coral groups, favositids and heliolitids. Favositids have been previously interpreted as highly integrated colonies, but results of the present examination suggest that the level of colony integration in favositids was rather lower than hitherto assumed. The ontogenies and astogenies in favositid colonies are not correlatable; thus, the significance of ontogenetic and astogenetic variations for systematic and phylogenetic resolution in favositids is difficult to assess at present. In contrast, astogenetic developmental sequences are recognized in heliolitids. Ontogenies in heliolitids were subordinated to the astogeny of the colony. This is closely related to the high degree of colony integration with respect to behavior and physiology of individual organs or organ complexes within colonies. Individual corallites were well linked and coordinated so that the whole colony could have functioned as a single individual. As a result, evolution in heliolitids operated at the colony level and by heterochronic (and other) modifications of astogenies rather than of ontogenies.¹¹;

6376 s[6373] = "LELESHUS V.L. (1970).- Rate of evolution in Tabulata and Heliolitida. Method of study.- Izv. A.N. Tadjik. SSR, Otd. fiziko-math. i geologo-khim. nauk 4, 38: 70-77.- FC&P 2-1, p. 17, ID=4722^Topic(s): research methods; Tabulata, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: ; Geography: ^^1";

6377 s[6374] = "YOUNG G.A., ELIAS R.J. (1993).- Biometry and intraspecific variation in favositid and heliolitid corals.- Courier Forschungsinstitut Senckenberg 164: 283-291. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 19, ID=3463^Topic(s): biometry, variability; Tabulata, Favositida, Heliolitida; Systematics: Cnidaria; Tabulata Heliolitida; Stratigraphy: ; Geography: ^Measurements of corallite size and spacing are useful as species discriminators and as indicators of variability in tabulate corals, but it must be recognized that these characters are affected by corallite packing in massive colonies. A new, practical method for corallite size measurement in favositids is based on an aspect of their packing: polygonality. Corallites with six and more sides are considered to be adults. They have virtually normal size-frequency distributions on both dimetric and non-dimetric transverse sections, making possible the use of basic statistics. The method has been found to work consistently for many species, regardless of corallite size or colony form. Comparisons between favositids and heliolitids indicate that corallite size distribution is related to packing and rates of offsetting. Differences in size distribution between favositids and most heliolitids are due to colony design; rates of corallite and tabularium expansion were constrained by physical packing. The heliolitid coenenchyme permitted a greater flexibility of growth strategy than the contiguous corallites of favositids.¹¹;

6378 s[6375] = "DUBATOLOV V.N., IVANOVSKIY A.B. (1977).- Ukazatel' rodov Tabulyat [index of genera of Tabulata].- Trudy Instituta Geologii i Geofiziki AN SSSR (Sibirskoe Otdeleniye) .- FC&P 7-1, p. 23, ID=0182^Topic(s): index of genera; Tabulata, Heliolitida, Chaetetida; Systematics: Cnidaria Porifera; Tabulata Heliolitida Chaetetida; Stratigraphy: ; Geography: ^This book is an up-to-date summary of well known genera of Tabulata, Heliolitoida and Chaetetida. It contains their original diagnosis, all data of their type species and the type material (bibliography of first description, type locality, depository) and sometimes the results of revisions.¹¹;

6379 s[6376] = "DUBATOLOV V.N., SOKOLOV B.S. (1973).- Tabulata, Heliolitidae, Chaetetidae. [en russe] .- Trudy Inst. Geol. Geofiz. AN

SSSR 131: 31-37; Moskva.- **FC&P 3-2**, p. 37, ID=4944^**Topic(s):** **Tabulata, Heliolitida, Chaetetida;** **Systematics:** **Cnidaria Porifera; Tabulata Heliolitida Chaetetida;** **Stratigraphy:** **Geography:** **^^1**;

6380 s[6377] = "LAFUSTE J., PLUSQUELLEC Y. (1990).- Les genres *Utaratuia*, *Tabellaephyllum*, *Michelinia* et la distinction *Tabulata-Rugosa*.- *Annales de Paléontologie (Vert.-Invert.)* 76, 1: 13-39.- **FC&P 20-1.1**, p. 59, ID=2803^**Topic(s):** **microstructures; Tabulata, Rugosa;** **Systematics:** **Cnidaria; Tabulata Rugosa;** **Stratigraphy:** **Geography:** **The genera *Utaratuia* (Rugosa), *Tabellaephyllum* (Rugosa or Tabulata ?) and *Michelinia* pro parte (Tabulata) form a set linked by synonymy. * Revision of the holotype of *Utaratuia laevigata* Crickmay 1960 from the Hume Formation, early Givetian, Northwest Territories, Canada, allows to establish the microlamellar constitution of the wall, to confirm the fibrous constitution of the septal ridges and their non trabecular structure. * The holotype of *Tabellaephyllum peculiaris* Stumm 1948, possibly from the Escabrosa Limestone, Lower Mississippian of SE Arizona, is a completely silicified specimen and its microstructure remains unknown; mural pores on the centers of the faces and at the angle between faces are described. * A comparative and preliminary study of *Michelinia expansa* White 1883 from the type area (Chouteau limestone, Sedalia, Missouri, Lower Mississippian) and from the Western Interior Province (Redwall Limestone, Arizona Lower Mississippian) shows that they seem to belong to two different species. * The specimens from Missouri are completely silicified and their precise generic attribution is impossible. Those of the WIP are sometimes well preserved, the microstructure of the wall is microlamellar and they are to be assigned to *Tumacipora* Lafuste & Plusquellec 1985. A comparison of the different features of the *Tabulata* and *Rugosa* shows that a lot of features are common and that only the true mural pores do not exist in the *Rugosa*. The following systematic attributions are proposed: *Utaratuia* is a *Rugosa* for the same reason as pointed out by Jell and Hill, *Tabellaephyllum peculiaris* is a michelinimorph *Tabulata* probably to be assigned to the genus *Tumacipora* but to the species *expansa*.^1";**

6381 s[6378] = "OLIVER W.A. jr (1996).- Origins and relationships of Paleozoic coral groups and the origin of the Scleractinia.- *Paleontological Society Papers* 1 [Stanley G. D. jr (ed.): *Paleobiology and Biology of Corals*]: 107-134.- **FC&P 25-2**, p. 41, ID=3125^**Topic(s):** **phylogeny; Tabulata, Rugosa, Scleractinia;** **Systematics:** **Cnidaria; Tabulata Rugosa Scleractinia;** **Stratigraphy:** **Geography:** **Two major groups of corals have essentially continuous records from the Early Ordovician (Tabulata) and Middle Ordovician (Rugosa) to the end of the Permian. A third major group, the living Scleractinia, range from Middle Triassic to Holocene. Additional groups have shorter ranges within the Paleozoic. The origins and relationships of these groups have been discussed for over 100 years. Relations between the *Rugosa* and *Scleractinia* have attracted the greatest interest because of their morphologic similarities and the time sequence. Arguments involve the significance of serial versus cyclic septal insertion, calcitic versus aragonitic skeletal mineralogy, and the time gap between the last rugosans and first scleractinians (there are no known Lower Triassic corals). Discussions of relationships among the various Paleozoic groups are commonly based on detailed morphological comparisons because of their overlapping stratigraphic ranges. Recent work on the living corals and anemones supports a closer relationship between groups than is suggested by placing them in different orders or suborders. The paleontological record of &anemones&; is slight, but it is reasonable to assume that one or more groups of skeletonless zoantharians persisted through long parts of the Phanerozoic. It is suggested that the major groups of zoantharian corals originated through the development of skeletons in various anemone groups at**

- several different times.^1";
- 6382 s[6379] = "SORAUF J.E. (1993).- The coral skeleton: analogy and comparisons, Scleractinia, Rugosa and Tabulata.- Courier Forschungsinstitut Senckenberg 164: 063-070. [P. Oekentorp-Kuster (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 1].- FC&P 22-2, p. 11, ID=3438^Topic(s): skeletal analogies; Tabulata, Rugosa, Scleractinia; Systematics: Cnidaria; Tabulata Rugosa Scleractinia; Stratigraphy: ; Geography: ^The analogy between modern scleractinian corals and Paleozoic rugose and tabulate corals can add to understanding of their skeletal structures and method of formation. It is based on similarities in overall morphology of corallites, polyps, and in the supposed formation of exoskeleton by polypal ectoderm utilizing organic matrix in all three groups. Skeletal structures in Paleozoic corals and scleractinians suggest that a similar model for biocrystallization is applicable for major portions of both groups. The scleractinian coral skeleton is characterized by combinations of trabecular and fibrous structures only. As there is no major variation in these two basic skeletal structures in the Order Scleractinia, such variation is not expected at the genus or species level in Paleozoic corals. A general model for biocrystallization in most Rugosa and Tabulata can resemble that for the scleractinians in all essential ways except mineralogy. The origin of lamellar skeletal structures remains an enigma, as it is not explained by this model for skeletogenesis. Mineralogy of Paleozoic corals was calcitic, with a postulated MgCO3 content of 5 to 8 mol percent.^1";
- 6383 s[6380] = "KRASNOV Ye.V., PREOBRAZHENSKIY B.V. (1972).- Nature et signification des formes de vie chez les Tabules et les Scleractinies coloniaux. [en russe] .- Paleontologicheskii Zhurnal 1972, 2: 156-140.- FC&P 3-2, p. 39, ID=4955^Topic(s): ; Tabulata, Scleractinia; Systematics: Cnidaria; Tabulata Scleractinia; Stratigraphy: ; Geography: ^^1";
- 6384 s[6381] = "ZHURAVLEVA I.T., LUCHININA V.A. (1977).- Role des algues dans l'etablissement de constructions organogenes.- Memoires du BRGM 89 [J.P. Chevalier (ed.): Second Symposium international sur les coraux et recifs coralliens fossiles; Paris, 1975]: 535-542.- FC&P 6-1, p. 30, ID=0106^Topic(s): ; reefs; Systematics: algae; Stratigraphy: ; Geography: ^^1";
- 6385 s[6382] = "DOTY M. (1974).- Coral reef roles played by free living algae.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 27-33.- FC&P 4-1, p. 16, ID=4997^Topic(s): reefs; Systematics: algae; Stratigraphy: ; Geography: ^^1";
- 6386 s[6383] = "HILLIS-COLINVAUX L. (1974).- Productivity of the coral reef alga Halimeda (Order Siphonales).- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 35-42.- FC&P 4-1, p. 16, ID=4998^Topic(s): coral reef algae; Algae, Halimeda; Systematics: algae; Stratigraphy: ; Geography: ^^1";
- 6387 s[6384] = "FLUGEL E. (1984).- Algae in reefs.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 24.1-24.28.- FC&P 13-1, p. 12, ID=6337^Topic(s): reefs; Algae reefs; Systematics: algae; Stratigraphy: ; Geography: ^Calcareous algae are a highly artificial group that includes (1) various families and subgroups of benthonic and planctonic algae whose thalli contain biochemically precipitated aragonitic or calcitic skeletal material (e.g. corallinacean red algae, dasycladacean green algae); (2) mechanically / biochemically accumulated deposits of calcium carbonate caused by an interaction of biological and physical/chemical processes (e.g. algal mats, algal-laminated sediments, stromatolites, oncoids). * About 6-8 % of

- recent algae can be regarded as calcareous algae. [introductory part]^1";
- 6388 s[6385] = "GRASSHOFF M. (1993).- Die Evolution der Tiere in neuer Darstellung.- Natur und Museum 123, 7: 204-215.- FC&P 22-2, p. 78, ID=3493^Topic(s): phylogeny; Animalia; Systematics: Animalia; Stratigraphy: ; Geography: ^^1";
- 6389 s[6386] = "CHEETHAM A.H., HAYEK L.C., THOMSEN E. (1980).- Branching structure in arborescent animals: models of relative growth.- J. theor. Biol. 85: 335-369.- FC&P 10-1, p. 58, ID=6009^Topic(s): branching morphology; arborescent animals; Systematics: Animalia; Stratigraphy: ; Geography: ^^1";
- 6390 s[6387] = "KOBAYASHI M., SATOH N. (1997).- Molecular Evidence for Early Evolution of Metazoa Developmental Biology, Physiology, and Ecology.- In: Sponge sciences: multidisciplinary perspectives [Y. watanabe & N. Fusetani (eds); 458pp; Springer Verlag (ISBN 4-431-70205-9)].- FC&P 27-1, p. 16, ID=6896^Topic(s): early phylogeny; Metazoa; Systematics: Animalia; Stratigraphy: ; Geography: ^^1";
- 6391 s[6388] = "GRASSHOFF M., GUDO M. (2002).- The origin of Metazoa and the main evolutionary lineages of the animal kingdom: The Gallertoid hypothesis in the light of modern research.- Senckenbergiana lethaea 82, 1: 295-314.- FC&P 31-2, p. 26, ID=7125^Topic(s): gallertoid hypothesis; Metazoa; Systematics: Animalia; Stratigraphy: ; Geography: ^A scenario for the evolutionary history of the Metazoa is presented, including the evolution of the Urmetazoa and the Ctenophora, Porifera, Coelenterata, and early Bilateralia. The reasoning about evolutionary transformations is based on engineering morphology, and includes the results of comparative anatomy and of molecular research. According to their evolutionary model, the specific metazoan multicellularity, which is different of that of fungi and plants, evolved in multinucleate heterotroph unicellular organisms by the deposit of gelatinous / fibrous substance into the endoplasmatic reticulum. The multitude of cells, the syncytia, and the extracellular matrix with gelatinous properties and containing collagenous fibers, developed dependent of each other and simultaneously. The resulting ancestral metazoan, the ur-metazoan, was named 'gallertoid' (German: Gallerte = gelatine) for the main feature of its body support, viz. the gelatinous / fibrous material. By further internal differentiation of gallertoids several evolutionary lineages developed independently: Trichoplax, the Ctenophora, the Porifera, the Coelenterata, and the Bilateralia (= Coelomata), which soon split into two lines, the Notoneuralia and the Gastroneuralia. [original summary]^1";
- 6392 s[6389] = "PHILIP J. (1984).- Les bioconstructions à Rudistes: paléocéologie, paléogéographie, sédimentologie.- Géologie et paléocéologie des récifs [J. Geister & R. Herb (eds)]: 21.1-21.12.- FC&P 13-1, p. 11, ID=6334^Topic(s): reefs rudist; rudist buildups; Systematics: Mollusca; Stratigraphy: ; Geography: ^Ce cours est consacré aux bioconstructions à rudistes. Il nous a semblé nécessaire d'aborder cette question d'une manière aussi complète que possible. C'est ainsi que nous traiterons de problèmes variés touchant à la paléobiologie, la paléocéologie, la sédimentologie, la paléogéographie des bioconstructions à Rudistes et des formations qui leur sont associées. * Le cours est divisé en trois parties. La première traite des rudistes, de leur classification et de leur paléocéologie; nous insisterons tout particulièrement sur les rudistes bioconstructeurs. La deuxième partie aborde la question des bioconstructions à rudistes aussi bien dans leur aspects paléocéologique que morphologique ou textural. La troisième partie, enfin, est consacrée aux formations à rudistes; elle est illustrée par l'étude de quelques modèles qui ont fait l'objet des recherches de l'auteur ou de ses élèves. [introduction]^1";
- 6393 s[6390] = "CUFFEY R.J. (1974).- Delineation of bryozoan constructional

roles in reefs from comparison of fossil bioherms and living reefs.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 1: 357-364.- FC&P 4-1, p. 17, ID=5001^Topic(s): constructional role; bryozoa reefs; Systematics: Bryozoa; Stratigraphy: ; Geography: ^^1";

6394 s[6391] = "LATYPOV Yu.Ya., DAUTOVA T.N., MOSCHENKO A.V. (1998).- Principy i metody klassifikatsii knidariy.- Dalnauka, Vladivostok, 244 pp.- FC&P 32-2, p. 54, ID=1413^Topic(s): classification; Cnidaria; Systematics: Cnidaria; Stratigraphy: ; Geography: ^The book accounts the main results of more than 20 years of investigation in systematics and taxonomy of the Cnidaria, which is difficult for taxonomy. The modern ideas about the criteria for taxon definition of the fossil and recent corals, actinia, hydroids are shown. Morphologic and genetic differences and taxonomic value of the ethologic and ecologic characteristics are considered. Using numerous examples the significance of the various features, definition of the limits of their variability, methods of the resolving of the inevitable problems, which take place in the identification and classification of Cnidaria, are shown. ^1";

6395 s[6392] = "MARFENIN N.N. (1992).- Variacii v stroenii "modulej" u knidarij kak pokazatel fenotipicheskoy izmenchivosti [variation of structural of "modules" in Cnidaria as indicator of phenotypic changes].- In Sokolov B.S. & Ivanovskiy A.B. (eds): Vnutrividovaya izmenchivost korallov i stromatomorfid [intraspecific variability in corals and stromatomoroids]. Ross. Akad. Nauk, otd. Geol., Geofiz., Geochim. i Gorn. Nauk; Paleont. Inst.; 101 pp.- FC&P 22-1, p. 30, ID=3370^Topic(s): modular structure; Cnidaria; Systematics: Cnidaria; Stratigraphy: ; Geography: ^^1";

6396 s[6393] = "GRASSHOFF M., GUDO M. (1998).- Die Evolution der Coelenterata. II. Solitare und koloniale Polypen.- Natur und Museum 128, 10: 329-341.- FC&P 28-1, p. 26, ID=3900^Topic(s): phylogeny; Coelenterata polyps; Systematics: Cnidaria; Stratigraphy: ; Geography: ^All anthozoan types apart of the octocorallia are basically solitary polyps, some secondarily developing polyp colonies; in all the inner gelatinous-fibrous mass is largely reduced, forming a thin layer; the body motility is high, and no internal skeletons are formed; rigid skeletons are external productions (or, in Zoantharia, secondarily incorporated particles). For engineering reasons, the body shape of solitary polyps without (external) skeleton and of polyps with skeleton but single mesenteries is restricted to a cylindrical form; only polyps with paired mesenteries and skeleton, viz, scleractinia, are able to expand laterally during growth. Apart of the Anthozoa, the evolutionary lineage to the Tetrzoa, (the Scyphozoa, Hydrozoa, and Cubozoa), characterized by alternating polyp/medusae generations, can be explained as an offshoot of the ancestral gelatinoid coral. [excerpt from a summary]^1";

6397 s[6394] = "LENHOFF H.M., MUSCATINE L., DAVIS L.V. (eds), (1971).- Experimental Coelenterate Biology.- Univ. of Hawaii Press, Honolulu; 282 pp.- FC&P 1-2, p. 11, ID=4623^Topic(s): experimental biology; Cnidaria; Systematics: Cnidaria; Stratigraphy: ; Geography: ^This book is stated to be "the product of a summer course in which students were trained to investigate the biology of coelenterates by using a variety of experimental procedures". Neither this statement nor the title is likely to attract the attention of paleontologists and even many neontologists may "put it off". This would be unfortunate, because there is something of interest in this book for a variety of specialists. The book consists of 25 papers in four sections - growth

and development, feeding and metabolism, endosymbiosis with algae, and calcification. Hydroids were the most common subject of observation and experimentation but scleractinian corals are the immediate subject of 7 papers, and 4 more papers report broad surveys that included corals. The section on calcification begins with a general review paper and proceeds to papers on sources of carbon, temperature effect on rate of calcium-45 uptake, and organic matrices. These and a report on raising planulae and newly settled polyps, will be the most useful for those primarily interested in coral morphology and growth. Other papers include many observations on behavior and natural history that will inevitably make corals more understandable to those who are not actively working with the living animals. [abstract by William A. Oliver jr]^1";

- 6398 s[6395] = "SOKOLOV B.S., IVANOVSKIY A.B., KRASNOV E.V. (eds) (1972).- Morphology and Terminology of Coelenterata.- Akademiya Nauk SSSR, Siberian Branch; Trudy Inst. geol. i geofiziki 133; 159 pp.- FC&P 2-1, p. 24, ID=4624Topic(s): morphology, terminology; Cnidaria; Systematics: Cnidaria; Stratigraphy: ; Geography: ^Generalities on morphology of Hydraria, Tetracoralla and Scleractinia. Important glossary for the terminology of these groups [in Russian with the terms in original language].^1";
- 6399 s[6396] = "OEKENTORP K. (1974).- Electron-microscopic studies on skeletal structures in Coelenterata and their systematic value.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 321-326.- FC&P 4-1, p. 18, ID=5028Topic(s): microstructures; Cnidaria; Systematics: Cnidaria; Stratigraphy: ; Geography: ^^1";
- 6400 s[6397] = "IVANOVSKIY A.B. (1980).- Evoluciya Cnidaria. [in Russian].- Paleontologiya. Stratigrafiya: pp. ???; Nauka, Moskva.- FC&P 9-1, p. 39, ID=5793Topic(s): phylogeny; Cnidaria phylogeny; Systematics: Cnidaria; Stratigraphy: ; Geography: ^^1";
- 6401 s[6398] = "SORAUF J.E. (1981).- Biomineralisation, structure and diagenesis of the coelenterate skeleton.- Acta Palaeontologica Polonica 25, 3-4: 327-343.- FC&P 10-1, p. 46, ID=5977Topic(s): mineralogy, microstructures; Cnidaria skeletons; Systematics: Cnidaria; Stratigraphy: ; Geography: ^[a review of biomineralization and microstructure in the major cnidarian groups]^1";
- 6402 s[6399] = "BRIDGE D., CUNNINGHAM C.W., DeSALLE R., BUSS L.W. (1995).- Class-level relationships in the phylum Cnidaria: Molecular and morphological evidence.- Molecular Biology and Evolution 12, 4: 679-689.- FC&P 29-1, p. 48, ID=7040Topic(s): classification, molecular data; Cnidaria; Systematics: Cnidaria; Stratigraphy: ; Geography: ^The evolutionary history of cnidarian life cycles has been debated since the 1880s, with different hypothesis favored even by current textbooks. Contributing to the disagreement is the fact that the systematic relationships of the four cnidarian classes have received relatively little examination using modern systematic methods. Here we present analyses of class-level relationships based on 18S ribosomal DNA (rDNA) sequence, mitochondrial 16S rDNA sequence, mitochondrial genome structure, and morphological characters. DNA sequences were aligned using a repeatable parsimony-based approach incorporating a range of alignment parameters. Analyses of individual data sets and of all data combined are unanimous in grouping the classes possessing a medusa stage, leaving the holobenthic Anthozoa basal within the phylum. [original summary]^1";
- 6403 s[6400] = "BONDARENKO O.B., MIKHAILOVA I.A. (1984).- Kratkiy opredeletel iskopaemykh bespozvonochnykh [short guide to fossil invertebrates].- Bestimmungsbuch fossiler Wirbelloser: 88-106.- FC&P 14-1, p. 43, ID=0952Topic(s): atlas of fossils; Cnidaria, Porifera; Systematics: Cnidaria Porifera;

- 6404 s[6401] = "Stratigraphy: ; Geography: ^^1";
"GRASSHOFF M., SCHEER G. (1991).- Die Publikationsdaten von E.J.C. Esper "Die Pflanzen-thiere".- Senckenbergiana biologica 71, 1/3: 191-208.- FC&P 22-1, p. 29, ID=3367^Topic(s): Cnidaria, Porifera; Systematics: Cnidaria Porifera; Stratigraphy: ; Geography: ^The publication data of E.J.C. Esper's "Die Pflanzenthiere…" and "Fortsetzungen der Pflanzenthiere…" (1788-1830) are listed in detail. Concerned are: Porifera, Cnidaria-Anthozoa, Cnidaria-Hydrozoa, Bryozoa, Crinoidea, [and Rhodophyta!].^1";
- 6405 s[6402] = "STANLEY G.D.jr, STURMER W. (1987).- A new fossil ctenophore discovered by x-rays.- Nature 328: 61-63.- FC&P 17-1, p. 18, ID=2114^Topic(s): x-rays study; Ctenophora; Systematics: Ctenophora; Stratigraphy: ; Geography: ^^1";
- 6406 s[6403] = "OLIVER W.A.jr (1974).- Disconia westphal 1974 is not a coral.- FC&P 3, 1: 9.- FC&P 3-1, p. 9, ID=6250^Topic(s): misidentified coral; false coral; Systematics: Echinodermata; Stratigraphy: ; Geography: ^K.W. westphal (author of the genus), N.G. Lane and J.T. Sprinkle (pelmatozoan specialists) and I are agreed that the genus Disconia (Journal of Paleontology 48, 1: 79-80, pl. 1,2) is based on an echinoderm rather than a coral. According to Prof. Lane, it is probably a junior synonym of Lichenocrinus Hall 1866. [original text of a note]^1";
- 6407 s[6404] = "WESTPHAL K.W. (1974).- Disconia is not a coral.- Journal of Paleontology 48, 5: 1096.- FC&P 4-1, p. 40, ID=6285^Topic(s): misidentified coral; false coral; Systematics: Echinodermata; Stratigraphy: ; Geography: ^^1";
- 6408 s[6405] = "PERRIN C. (1987).- Solenomeris: un Foraminifere Acervulinidae constructeur de r cifs.- Revue de Micropaleontologie 30, 3:197-206.- FC&P 23-1.1, p. 11, ID=4052^Topic(s): reef forming; forams; Systematics: Foraminifera; Stratigraphy: ; Geography: ^^1";
- 6409 s[6406] = "VAVRA N. (1978).- Sphaerogypsina Galloway 1933 (Foraminifera) - von Reuss (1848) als Bryozoe (Ceriopora globulus) und als Koralle (Chaetetes pygmaeus) beschrieben.- Neues Jhb. Geol. Palaeontol. Mh. 12: 741-746.- FC&P 10-1, p. 57, ID=6304^Topic(s): misidentification; foram non coral; Systematics: Foraminifera; Stratigraphy: ; Geography: ^^1";
- 6410 s[6407] = "HAMADA T. (1977).- Miscellaneous notes on fossils and fossilization. 1 Medusae and their conditions to be fossilized. [in Japanese].- Kaseki (fossils) 27: 61-75.- FC&P 7-2, p. 25, ID=5656^Topic(s): fossilization; Medusae; Systematics: Cnidaria; Stratigraphy: ; Geography: ^^1";
- 6411 s[6408] = "FLUGEL E., HILLMER G., SCHOLZ J. (1993).- Microbial Carbonates and Reefs: An Introduction.- Facies 29: 1-2.- FC&P 23-1.1, p. 86, ID=4201^Topic(s): microbial carbonates; reefs; Systematics: Monera; Stratigraphy: ; Geography: ^^1";
- 6412 s[6409] = "DI SALVO L.H. (1973).- Microbial Ecology.- In Jones O.A. & R. Endean (eds): Biology and Geology of Coral Reefs, vol. 2, Biology 1 (Academic Press, New York and London): 1-15.- FC&P 3-2, p. 36, ID=4928^Topic(s): ecology; Systematics: Monera; Stratigraphy: ; Geography: ^^1";
- 6413 s[6410] = "VACELET J. (1990).- Storage cells of calcified relict sponges.- In Rutzler K. (ed.): New Perspectives in Sponge Biology; Smithsonian Institution Press; 533 pp: 144-152.- FC&P 21-1.1, p. 60, ID=0903^Topic(s): storage cells; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^Cells at the base of the soft tissue enclosed in the skeletons of

- Merlia, Acanthochaetetes and Petrobiona are dormant bodies involved in the regenerative process or in wintering. Evidence of repeated regeneration after growth stoppage in stromatoporoids and chaetetids may indicate that they had similar reserve cells in their skeletons.¹¹;
- 6414 s[6411] = "REITNER J., KEUPP H. (1989).- Basalskelette bei Schwämmen: Beispiel einer polyphyletischen Entwicklung.- Geowissenschaften 7, 3: 71-78.- FC&P 18-1, p. 51, ID=2302^Topic(s): skelelel structures, polyphyly; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6415 s[6412] = "SENOWBARI-DARYAN B. (1989).- Spicula in segmentierten Schwämmen.- Berliner geowissenschaftliche Abhandlungen A106: 473-516.- FC&P 18-2, p. 47, ID=2510^Topic(s): spiculae; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6416 s[6413] = "WOOD R.A. (1990).- Reefbuilding Sponges.- American Scientist 79: 224-233.- FC&P 19-2.1, p. 43, ID=2783^Topic(s): reef builders; sponges; Systematics: Porifera; Stratigraphy: ; Geography: ^This review article summarizes the different kinds of sponges, their organization, the history of the discovery of "coralline sponges" with their aspiculate skeletons and traces their relationships to archaeocyathids, sphinctozoans, stromatoporoids, and chaetetids. An extensive historical review of opinions about the affinities of these four groups is presented. The viewpoint that the solid skeletons are a convergent feature of diverse sponge lineages and hence express a stage of evolution rather than characterizing a monophyletic taxon is endorsed. Sponge faunas of the upper Paleozoic are claimed to fill the gap between mid-Paleozoic and Mesozoic stromatoporoids. Many features of corals and sponges are convergent and should not be the basis of definitions of taxonomic groups. Only spicules are reliable for determinations of affinity and phylogeny of sponges.¹¹;
- 6417 s[6414] = "WOOD R.A. (1991).- Problematic reef-building sponges.- In Simonetta A. and Conway Morris S. (eds.): The Early Evolution of Metazoa and the significance of problematic taxa. Proceedings of an International Symposium, University of Camerino. Cambridge University Press: 113-124.- FC&P 20-2, p. 75, ID=2804^Topic(s): reef builders?; sponges; Systematics: Porifera; Stratigraphy: ; Geography: ^Spicules reveal a polyphyletic origin for stromatoporoids, chaetetids, and sphinctozoans within the Demospongiae and Calcarea. Calcareous skeletons have been independently acquired and are easy to secrete through a limited number of biomineralization mechanisms. The calcareous skeletons are of little value in assessing evolutionary ancestry. These groups are regarded as grades, not reflecting systematic position but determined ecologically. Archaeocyaths inhabited soft substrates in unstable conditions and were unable to construct a reef framework. They gave rise to some sphinctozoan- and stromatoporoid-grade forms. Stromatoporoids and chaetetids are modular organisms with great plasticity of growth morphology. Their encrusting growth allowed them to build mid-Paleozoic reefs. Sphinctozoans are solitary or pseudomodular, small and fragile; they were dwellers and bafflers. Corals became dominant reef-builders of the Mesozoic and Tertiary presumably due to the acquisition of more porous skeletons and their faster calcification rates aided by zooxanthellae. Modular grades of sponges may be derived from solitary ones by pedomorphosis.¹¹;
- 6418 s[6415] = "ZHURAVLEV A.Yu., DEBRENNE F., WOOD R.A. (1990).- A synonymized nomenclature for calcified sponges.- Geological Magazine 127: 587-589.- FC&P 20-1.1, p. 80, ID=2882^Topic(s): glossary of terms, homologies; calcified sponges; Systematics: Porifera; Stratigraphy: ; Geography: ^[To show homology, the terms used for stromatoporoids and chaetetids by Wood (1987), for sphinctozoans by Finks (1983), and for archaeocyaths by Debrenne, Zhuravlev and Rozanov (1989) are arranged in a table.]¹¹;

- 6419 s[6416] = "MEHL D., REISWIG H.M. (1991).- The presence of flagellar vanes in choanomerites of Porifera and their possible phylogenetic implications.- Z. zool. Evolut.-forsch. 29: 312-319.- FC&P 20-2, p. 70, ID=2972^Topic(s): flagellar vanes, monophyly; Porifera, flagellar vanes; Systematics: Porifera; Stratigraphy: ; Geography: ^wing-shaped projections (vanes) of the flagella of choanomerites are documented from the hexactinellid sponge Aphrocallistes vastus. This observation completes the report of such flagellar structures from the major taxa of the Porifera: Demospongiae, Calcareia and Hexactinellida. It thus allows us to assume flagellar vanes being an autapomorphy of the monophylum Porifera. The wing-shaped flagellar vanes of sponge choanomerites often have been compared with appendages of choanoflagellates, e.g. Codonophora, but fundamental differences seem not to allow any homologization of these structures. Only extensive comparative TEM studies on well-fixed tissues, e.g. from fresh water sponges such as Ephydatia, will settle this question.^1";
- 6420 s[6417] = "RIGBY J.K. (1995).- Sponges as microfossils.- Paleontological Society Short Course Notes in Paleontology 8 [Babcock L.E. & Ausich W.I. (eds): Siliceous Microfossils]: 1-17.- FC&P 25-1, p. 45, ID=3048^Topic(s): microfossils; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6421 s[6418] = "DIAZ M.C. (1996).- visual keys for sponge species identification: an evaluation of the current Linnaeus II software.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 73-80.- FC&P 25-2, p. 29, ID=3095^Topic(s): classification software; Porifera classification; Systematics: Porifera; Stratigraphy: ; Geography: ^The application of "IdentifyIt" from Linnaeus II to create a visual sponge identification guide is explored. A model for a field key using morphological characters with its various states represented graphically is developed. Taxonomic characters that can be easily and accurately represented and interpreted by an inexperienced user are chosen. These characters include shape, surface, oscule morphology and arrangement with a range of 3-15 character states each. A graphic representation of the skeletal characteristics and/or whole animal pictures, stored in the "Species card" mode of Linnaeus II, will allow further corroboration of the identification produced by the search from the "IdentifyIt" key. The graphic capabilities and limitations of the current Linnaeus II software to create and use a visual identification system are discussed. [original abstract]^1";
- 6422 s[6419] = "DOMINGO M. (1996).- Models of practical taxonomic reasoning in knowledge-based systems: an application to Porifera.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 27-35.- FC&P 25-2, p. 29, ID=3096^Topic(s): taxonomy, practical aspects; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^When identifying a specimen, experts in systematics are able to draw sound conclusions even in the presence of uncertain and incomplete data. The purpose of this paper is to report on how expert system technologies enable us to model taxonomic expertise and simulate some of the experts' reasoning skills. We emphasise the reasoning strategies of SPONGIA, an expert system to help in the identification of marine sponges. It has been implemented using the MILORD II language for the construction of expert systems. We illustrate how the richness of taxonomic knowledge has been represented by means on rules and meta-rules. In addition, we show how the uncertainty handling and deduction mechanisms make it possible to emulate complex identification strategies such as those exhibited by experts in systematics. [original

- abstract]^1";
- 6423 s[6420] = "HAJDU E., SOEST W.M.van (1996).- Choosing among Poriferan morphological characters within the cladistic paradigm.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 81-88.- FC&P 25-2, p. 29, ID=3097^Topic(s): cladistics; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^A protocol is proposed by which certain classes of characters may be selected for use in phylogenetic reconstruction due to their overall better consistency in phylogenies. Alternatively, they could receive additional weight as opposed to classes that show an overall poor consistency and should be down weighted. We recognized 16 classes of characters within previously published data matrices of 17 poriferan phylogenies involving 221 OTUs (Operational Taxonomic Units, = terminal taxa). Only five classes occur in samples of large enough size that can allow discussion of observed trends. The high consistency observed in choanosomal architecture characters is possibly an artefact. Megascleres and microscleres show opposing results and these are discussed with reference to function and adaptation. In general, results are deemed preliminary because sample sizes are too small for the majority of recognized classes of characters, and different classes of characters may perform differently in different taxa, a suspicion which calls for an even larger sample base. [original abstract]^1";
- 6424 s[6421] = "LE RENARD J., LEVI C., CONRUYT N., MANAGO M. (1996).- Sur la representation et le traitement des connaissances descriptives: une application au domaine des eponges du genre Hyalonema.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 37-48.- FC&P 25-2, p. 29, ID=3099^Topic(s): ; Porifera hyalonema; Systematics: Porifera; Stratigraphy: ; Geography: ^Sponges of the genus Hyalonema were used as an application domain for conceiving, developing and evaluating softwares that cover a great part of the taxonomist needs: acquiring and managing descriptions, processing characters for classification purpose, building expert systems based on induction or case-based reasoning technologies for identification purpose. All these tools are relying on a new representation formalism of descriptions, which is naturally structured. The structure is elaborated by representing all what is observable in a descriptive model. The multiple interests of this methodological approach are discussed, in particular its affinity to high quality information exchanges between researchers, through networks. Some already available software tools are briefly presented. [English abstract of a paper in French]^1";
- 6425 s[6422] = "SOEST R.W.M.van, SCHALK P.H., SMITH K., PICTON B.E., BRUGMAN M., DIAZ M.C., SANDERS M.L., WEERDT de W.H., RUETZLER K. (1996).- Por-Linnaeus: The application of interactive multimedia software for species data storage and computer assisted identification of Porifera.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 63-72.- FC&P 25-2, p. 30, ID=3107^Topic(s): software for data storage & taxonomy; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^Poriferan species data storage and identification using ETL&s multimedia software package Linnaeus II were tested in several regional projects (Western Europe, Central West Atlantic and Papua New Guinea). Multimedia species data storage (texts, pictures, films) and retrieval with this software program appear to be easy to use, through pull down menus, button and text clicking, and uniformly applicable through standardized formats. Identification using multiple keys and a diversity of multi-media characters may be easily customized for different user groups. Regional

or taxonomic monographs are assembled on CD-ROM for cheap and easily accessible dissemination. The stored data will also be made accessible on line. [original abstract]^1";

- 6426 s[6423] = "VELDE van de W. (1996).- Requirements for a knowledge medium in sponge taxonomy.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 15-26.- FC&P 25-2, p. 30, ID=3112^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^This note discusses requirements for a knowledge medium in sponge taxonomy. Such a knowledge medium provides computer-support for the day-to-day scientific work of a group of expert-scientists, working in the field of systematics for sponges. It is also an instrument for the dissemination and use of the research results produced in it. The quality of such a knowledge medium depends on the extent in which it supports the daily practices of scientists working together, making abstraction of the differences in time, space and conceptual vocabulary that divides them. After a general motivation we describe a selection of functional and non-functional requirements and illustrate these with an experimental implementation based software agents on the world-wide web. [original abstract]^1";
- 6427 s[6424] = "GRASSHOFF M. (1992).- Die Evolution der Schwamme. I. Die Entwicklung des Kanalfiltersystems.- Natur u. Museum 122, 7: 201-210. [in German].- FC&P 21-2, p. 49, ID=3279^Topic(s): pore system; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^Die stammesgeschichtliche Ableitung der Schwamme, ebenso wie der anderen "Niederer Tiere", war bis in die neueste Zeit ein ungeloeses Problem der Zoologie. Das ist nicht etwa einem Mangel an Sachkenntnissen zuzuschreiben, die durchaus reichlich sind, sondern dem mangelhaften methodischen Ansatz und der duerftigen theoretischen Zugangsweise der bis heute ueblichen Stammesgeschichtsforschung: man glaubt die gewünschten Einsichten in Evolutionsablaufe dadurch zu erhalten, dass man anatomische (und auch physiologische) Gegebenheiten verschiedener Tiergruppen vergleicht und im Sinne der Homologienforschung reiht. Solche Vorgabe lasst aber jede beliebige Reihung zu und liefert somit ganzlich unverbindliche Ergebnisse. [first fragment of extensive summary]^1";
- 6428 s[6425] = "WOOD R.A. (1992).- Book review: Reitner J. & Keupp H. (eds) 1991. Fossil and Recent Sponges, xviii + 595 pp. Berlin, Heidelberg: Springer Verlag. ISBN 3 540 52509 2.- Geological Magazine 729: 381.- FC&P 21-2, p. 23, ID=3311^Topic(s): book review; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6429 s[6426] = "GRASSHOFF M. (1992).- Die Evolution der Schwamme. II. Bautypen und Vereinfachungen.- Natur u. Museum 122, 8: 237-247.- FC&P 21-2, p. 50, ID=3346^Topic(s): structures; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^Teil I des Aufsatzes im Juliheft von Natur u. Museum zeigte, auf welchem Wege die Korper-Konstruktion der urtuemlichen Gallertoide entstand. Das Ergebnis ist der Schwamm als hoechst effizientes Feinfiltersystem, welches feinste Partikel, vor allem auch Bakterien, als Nahrungs-basis nutzbar macht. Der Zusammenhalt des Korpers mit seiner nur geringen Masse ruht ganzlich auf Skelettstrukturen. In sie eingebunden ist das ausgedehnte Kanalsystem mit seinen weitlumigen Einstrom- und Ausstrom-Teilen und den Engstellen, in denen der Wasser-strom angetrieben und ausgefiltert wird. Die unterschiedlichen Ausgestaltungen lassen Entwicklungslinien erkennen, die von der ursprunglich komplizierten Form hin zu Vereinfachungen fuehren.^1";
- 6430 s[6427] = "ENGESER T., MEHL D. (1993).- Corrections and additions to the nomenclature of the Porifera in the Treatise on Invertebrate Paleontology (Part E).- Berliner geowissenschaftliche Abhandlungen E09:

183-190.- FC&P 22-2, p. 90, ID=3535^Topic(s):
 nomenclature; Porifera; Systematics: Porifera;
 Stratigraphy: ; Geography: ^The Treatise on Invertebrate
 Paleontology, Part E Porifera (De Laubenfels 1955) contains unusually
 many nomenclatorial errors and omissions. These are misspellings,
 unrecognized homonyms, unjustified replacement names, unrecognized
 objective synonyms, wrongly designated type species, wrong authorships
 and publication dates etc. and others. In this publication, they are
 corrected or the errors are pointed out respectively. Since younger
 subjective synonyms possibly exist, the homonyms here found with two
 exceptions are not replaced by new names. Manzonina Giattini 1904 non
 Manzonina Brusina 1870 nec Pomel 1883 is replaced by Manzoninospingia
 n.gen., a Tertiary hexactinellid sponge. For walcottella De Laubenfels
 1955 (nom.nov. pro Rhopalicus Schrammen 1936, non Foerster 1856) which
 is preoccupied by walcottella Ulrich & Bassler 1931 (Crust.) we
 propose Keuppiella nov.gen. Both genera keep their respective type
 species.^1";

- 6431 s[6428] = "CAVALIER-SMITH T., ALLOSOPP M.T.E.P., CHAO E.-E.,
 BOURY-ESNAULT N., VACELET J., (1996).- Sponge phylogeny, animal
 monophyly, and the origin of the nervous system: 18S rRNA evidence.-
 Canadian Journal of Zoology 74: 2031-2045.- FC&P 26-2, p.
 56, ID=3733^Topic(s): phylogeny, molecular evidence; Porifera
 phylogeny; Systematics: Porifera; Stratigraphy: ;
 Geography: ^We sequenced 18S rRNA genes of a calcareous sponge,
 Clathrina cerebrum, a demosponge, Axinella polypoides, and a zoanthid
 cnidarian, Parazoanthus arinellae. Our phylogenetic analysis supports
 the monophyly of kingdom Animalia and confirms that choanoflagellate
 protozoans are their closest relatives. Sponges as a whole are
 monophyletic, but possibly paraphyletic; demospunges and hexactinellids
 form a monophyletic group of siliceous sponges. Our phylogenetic trees
 support a monophyletic origin of the nervous systems in the immediate
 common ancestor of Cnidaria and Ctenophora. They weakly suggest that
 animals with a nervous system may be more closely related to clacareous
 sponges than to siliceous sponges; the nervous system might have
 originated in an early calcareous sponge. Our trees confirm that
 Myxozoa and Placozoa are animals that arose by secondary loss of the
 nervous system, but suggest that Myxozoa may be sisters of, rather than
 derived from, Bilateria. Kingom Animalia is divided into four
 subkingdoms: Radiata (Porifera, Cnidaria, Placozoa, Ctenophora),
 Myxozoa, Mesozoa, and Bilateria. The 18S rRNA evolution in early
 Bilateria followed by normal low rates for about 500 million years.^1";
- 6432 s[6429] = "WATANABE Y., FUSETANI N. (eds) (1997).- Sponge sciences:
 multidisciplinary perspectives.- In: Sponge sciences: multidisciplinary
 perspectives [Y. Watanabe & N. Fusetani (eds); 458pp; Springer
 Verlag (ISBN 4-431-70205-9)]. ISBN 4-431-70205-9.- FC&P
 27-1, p. 15, ID=3791^Topic(s): multidisciplinary research;
 poriferan research; Systematics: Porifera; Stratigraphy:
 ; Geography: ^"Sponge Sciences" is the proceedings
 of the International Coference on Sponge Science, held at the Lake Biwa
 Research Institute in March 1996. The conference was organized as a
 forum between meetings of the Porifera Congress, which are held every 7
 or 8 years. More than 100 researchers from 15 countries participated in
 the International Conference on Sponge Science, the first ever convened
 in the Japan-Asia region. A number of reports covering various aspects
 of sponge studies were presented at the conference, and those reports,
 with subsequent discussions, represent significant achievements in the
 field. * The important achievements that came out of the conference
 have been compiled in 35 research papers in this volume of
 proceedings.^1";
- 6433 s[6430] = "BOROJEVIC R., BOURY-ESNAULT N., DESQUEYROUX-FAUNDEZ R., LEVI
 C., PANSINI M., RUETZLER K., SOEST R.W.M. van, STONE S., URIZ M.-J.,
 VACELET J. (1997).- Thesaurus of Sponge Morphology.- Smithsonian
 contributions to Zoology 596 [Boury-Esnault N & Ruetzler K.

- (eds)]: 55 pp., 305 figs.- FC&P 27-1, p. 101, ID=3852^Topic(s): structures, glossary; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^This is a vademecum of terms for describing all aspects of sponge morphology, such as habit, surface structure, consistency, and anatomy. Definitions of microscopic features include aquiferous system, cytology, reproductive structures, skeletal architecture, and calcareous and siliceous spicules. Terms were selected and reviewed by an international group of 10 experts in sponge systematics, during several workshops. Each entry is accompanied by a precise diagnosis and an illustration. Terms listed as "rejected" are those judged unsuitable, redundant, or preoccupied. The thesaurus will aid descriptions in future systematic papers, computerized data banks, and identification keys. The literature cited presents a historical perspective on similar attempts to create a precise terminology of sponge morphology and helps to further clarify the selected terms.^1";
- 6434 s[6431] = "ZIEGLER B.J. (1995).- Application of fluid transport design theory to sponge functional morphology.- Indiana University, Bloomington; unpublished M.Sc. thesis; 79 pp.- FC&P 27-1, p. 112, ID=3871^Topic(s): fluid transport theory; Porifera, fluid transport theory; Systematics: Porifera; Stratigraphy: ; Geography: ^Certain extant sponges exhibit canal architecture consistent with engineering fluid transport design theory and this has been used to interpret functional morphology of putative fossil sponges (stromatoporoids). Canal systems of two species of modern sponges were impregnated with colored resins and canal diameters were measured. Three functional models were tested: diffusion-based transport; non-optimal bulk-flow transport; and optimal bulk-flow (Murray's Law) transport. Optimal bulk-flow transport minimizes the metabolic costs of moving fluid through the system and the metabolic costs of maintaining the system. A diffusion-based transport system, regulated by Pick's first law, would exhibit uniform cross-sectional areas within the aquiferous modules. In this type of system the sum of all canal diameters squared should therefore remain constant. In non-optimally designed bulk-flow systems, governed by Poiseuille's Law, flow is proportional to the fourth power of the radius, and the diameters to the fourth power would sum to a constant. Systems obeying Murray's Law would exhibit a cubic relationship and the diameters to the third power would sum to a constant. For the modern sponges statistical tests show that the diffusion-based hypothesis can be rejected while both non-optimal and optimal bulk-flow hypotheses are accepted. Murray's Law assumes an optimal design, and morphology does not have to optimize a function to have adaptive significance. If a putative fossil sponge conforms to Murray's Law, then a sponge affinity is logical. However, if the architecture is inconsistent with Murray's Law, a sponge affinity cannot be rejected. [abstract condensed by C.W. Stearn]^1";
- 6435 s[6432] = "ZHURAVLEV A.Yu. (1998).- A sponge season in Paris.- Znanie-sila 1998, 4: 60-7. [???].- FC&P 28-1, p. 17, ID=3959^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: ???; Geography: ^^1";
- 6436 s[6433] = "BOIKO E.V. (1991).- Variety of skeletal structures in chamber sponges.- Proceedings of the Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Science 793 [Problems of fossils in the USSR]: 119-129.- FC&P 23-1.1, p. 39, ID=4101^Topic(s): structures; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6437 s[6434] = "MARIN F., GAUTRET P. (1994).- Les teneurs en acides amines des matrices organiques solubles associees aux squelettes calcaires des demosponges et des cnidaires: une implication possible dans leur transformation diagenetique.- Bulletin de la Societe geologique de France 165, 1: 77-84.- FC&P 23-1.1, p. 60, ID=4131^Topic(s): aragonite vs calcite; Porifera;

Systematics: Porifera; Stratigraphy: ; Geography: ^The two common calcium carbonate polymorphs, calcite and aragonite, have been alternatively predominant in both sediments (Sandberg 1983) and in skeletal carbonates (Wilkinson 1979), in particular in those secreted by sponges (Cuif and Gautret 1991a). Changes in water chemistry and variations in temperature are often used to explain these oscillating global trends (Railsback and Anderson 1987). However, these parameters are not adequate to justify why, under the same diagenetic conditions, the skeletons of sponges and corals do not undergo the same mineralogical transformations, especially in Upper Triassic deposits. To interpret this anomaly it is necessary to take into account the peculiar feature of biogenic carbonates produced by the two taxa, the presence of an organic matrix closely linked to the mineral phase. This matrix, secreted during skeletogenesis, has two presumed functions: binding of calcium ions and orientation of crystal growth. Even after death and burial of the organisms, strong molecular interactions between the organic - mainly proteinaceous - and the inorganic phases will be maintained. The divergent diagenetic trends observed in sponge and coral skeletons could be partially induced by the biochemical differences in the organic matrix. [part of extensive summary]^1";

- 6438 s[6435] = "RIGBY J.K., BUDD G.E., WOOD R.A., DEBRENNE F. (1993).- Porifera.- The Fossil Record 2 [M.J. Benton (ed.)], chapter 5: 71-99.- FC&P 23-1.1, p. 80, ID=4182^Topic(s): paleontology; Porifera, review; Systematics: Porifera; Stratigraphy: ; Geography: ^[Most of this summary is devoted to the sponges and archaeocyathids. The section on the chaetetids has been updated from data in Hill (1981). That on Mesozoic "stromatoporoids" is data from Lecompte (1956) updated by Wood. The section on Paleozoic stromatoporoids is based on Lecompte (1956) and Stearn (1980).]^1";
- 6439 s[6436] = "FOURCADE E., TERMIER G., TERMIER H. (1975).- Sur la proche parenté de Verticillites DeFrance 1829 et d'Ellipsactinia Steinmann 1878 (Spongiaires hypercalcifiés).- C. R. Acad. Sci. Paris 280, 12, sér. D: 1441-1443.- FC&P 4-1, p. 47, ID=5190^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6440 s[6437] = "LEVI C., BOURY-ESNAULT N. (eds) (1980).- Biologie des Spongiaires.- Coll. Int. CNRS 291 (Biologie des spongiaires); 531 pp; Lyon.- FC&P 9-1, p. 57, ID=5847^Topic(s): biology; Porifera, biology; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6441 s[6438] = "SAROOP H.C. (1984).- The Sponge Organisms: Discussion and Comments.- FC&P 13, 2: 29.- FC&P 13-2, p. 29, ID=6370^Topic(s): phylogeny, systematics, sponges; Systematics: Porifera; Stratigraphy: ; Geography: ^Speculations about the origin of early archaeocyathid sponges and coelenterates have caused many authors to reexamine data of such fossils as the Stromatactis problematica, the stromatoporoid and the lithistid faunas. But the sponges can also be classified as organisms occupying a position in an hierarchic energy-flow between flora and fauna. In terms with the palaeontological taxonomy they should be placed within the Archaeocyatha super-phylum or the sponge organisms. The super-phylum would include the Archaeocyatha phylum (sub-phylum Stromatactis problematica and sub-phylum Archaeocythidae with intermediate class of the petrobionid flora, including the Receptaculites biocoenosis type A) and, of course, the Porifera phylum. * The Porifera phylum includes the Porifera sub-phylum and a newly defined Stromatoporata sub-phylum. The Stromatoporata sub-phylum, showing signs of renaissance, envelopes the classes Stromatoporidae, Chaetetidae (including Tabulaospongiae) and the Sclerospongiae (as described by E.F. Goreau & W.D. Hartman 1969: 8th Meeting, Association Island Marine Laboratories, Jamaica). * The petrobionid floral organisms should also be considered within the sub-phylum to

- accord with their type and spicules in so far, as regulations of water flow and aquasity are concerned (see G. Termier: FC&P 6, 1:). * Several studies made on sclerosponges and demi-sclerosponges (i.e. Chaetetidae) show wide histological and structural variations (cf. J. Vacelet & C. Levi 1958: C.R. Acad. Sci. Paris 246; C.W. Stearn 1972: Lethaia 5), leading many scientists to consider the Porifera as animals. * Mais, les sponges: d'organisation au d'animaux? Stromatatactis problematica may well claim dinoflagellate symbionts. [full text of a paleontological note]^1";
- 6442 s[6439] = "WEBBY B.D., DEBRENNE F., KERSHAW S., KRUSE P.D., NESTOR H., RIGBY J.K., SENOWBARI-DARYAN B., STEARN C.W., STOCK C.W., VACELET J., WEST R.R., WILLENZ P., WOOD R.A., ZHURAVLEV A.Yu. (2010).- Glossary of terms applied to the hypercalcified Porifera.- Treatise Online 04, Part E, Revised, Vol. 4, Chap. 8: 21 pp.paleo.ku.edu/treatiseonline. [book chapter] - FC&P 36, p. 47, ID=6426^Topic(s): sponges hypercalcified; hypercalcified sponges; Systematics: Porifera; Stratigraphy: ; Geography: ^[this glossary contains the definitions of 480 terms associated with the hypercalcified sponges]^1";
- 6443 s[6440] = "SALOMON D. (1989).- On the origin of Hexasterophora and Amphidiscophora with a special remark on Itararella gracilis and Microhemidiscia ortmanni Kling & Reif (1969); an important but largely disregarded documentation.- FC&P 18, 2: 26-28. [short note] - FC&P 18-2, p. 26, ID=6781^Topic(s): spicules; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^In some hexasterophoran taxa (the dictyonal Hexactinosa and Lychniscosa, and partly the lyssakine Euplectelliidae) the main parenchymalian spicules are fused into a siliceous basal skeleton. The resulting rigid skeletons are likely to be preserved as fossils, and thus the hexasterophoran hexactinellids are well-documented in the fossil record (e.g. in the Upper Jurassic of Swabia and in the Upper Cretaceous of Northern Germany). * In contrast no recent Amphidiscophora possess fused spicules, and so far we have no evidence of any fossil amphidiscophoran hexactinellids with rigid skeletons. For this reason, the fossil record of amphidiscophoran hexactinellids is extremely poor and mainly consists of isolated amphidiscs. [fragments of a short note]^1";
- 6444 s[6441] = "LEVI C. (1999).- Sponge science, from origin to outlook.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 1-9.- FC&P 28-2, p. 7, ID=6930^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6445 s[6442] = "BERGQUIST P.R. (1999).- The present state of sponge science.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 23-27.- FC&P 28-2, p. 7, ID=6932^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6446 s[6443] = "VACELET J. (1999).- Outlook to the future of sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 27-33.- FC&P 28-2, p. 7, ID=6933^Topic(s): ; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6447 s[6444] = "ADAMS C.L., McINERNEY J.O., KELLY M. (1999).- Indications of relationships between poriferan classes using full-length 18s rRNA gene sequences.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 33-45.- FC&P 28-2, p. 7, ID=6934^Topic(s): classification, molecular data; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6448 s[6445] = "MULLER W.E.G., MULLER I.M. (1999).- Origin of the Metazoa: A review of molecular biological studies with sponges.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 381-398.- FC&P 28-2, p. 9,

- ID=6969^Topic(s): phylogeny; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6449 s[6446] = "SCHONBERG C.H.L. (1999).- An improved method of tissue digestion for spicule mounts in sponge taxonomy.- Memoirs of the Queensland Museum 44 [J.N.A. Hooper (ed.): Proceedings of the 5th International Sponge Symposium]: 533-540.- FC&P 28-2, p. 10, ID=6985^Topic(s): taxonomy; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6450 s[6447] = "MEHL-JANUSSEN D. (1999).- On the concept of "reticulate evolution" from a sponge's viewpoint.- FC&P 28, 2: 14-16.- FC&P 28-2, p. 14, ID=7003^Topic(s): evolution reticulate; Porifera; Systematics: Porifera; Stratigraphy: ; Geography: ^The assertion that "for most taxa, there is no meaningful interface between molecular systematics and morphological taxonomy" (Veron 1999: Sendai symposium, book of abstracts, p. 9) does not hold true. For many good reasons, some of which result directly from molecular biological research, we can safely reject the concept of "reticulate evolution". [excerpt from a short note]^1";
- 6451 s[6448] = "WHITE R.D. (1997).- A type catalogue of the fossil invertebrates (Archaeocyatha, Porifera, Receptaculitidae and Stromatoporoidea) in the Yale Peabody Museum.- Postilla, Peabody Museum of Natural History, Yale University, New Haven, No. 213, 23 pp.- FC&P 26-1, p. 79, ID=3655^Topic(s): fossil collections; type catalogue, Yale Peabody Museum; Systematics: Porifera Cnidaria; Stratigraphy: ; Geography: ^[stromatoporoid types that are listed are mostly from Parks's (1933) and Northrup's (1939) work in the Gaspé area of Canada, from Twenhofel's (1928) work on Anticosti Island, and from Girty's (1895) work in upstate New York]^1";
- 6452 s[6449] = "MOHN E. (1984).- System und Phylogenie der Lebewesen. Vol. 1. Physikalische, chemische und biologische Evolution - Prokaryonta - Eukaryonta (bis Ctenophora).- Schweizerbart, Stuttgart; 884 pp. [book] - FC&P 14-1, p. 71, ID=6628^Topic(s): phylogeny; Porifera, Cnidaria; Systematics: Porifera Cnidaria; Stratigraphy: ; Geography: ^^1";
- 6453 s[6450] = "MEHL D. (1996).- Organization and microstructure of the chancelloriid skeleton: implications for the biomineralization of the Chancelloriidae.- Bulletin de l'Inst. Oceanographique de Monaco, Special volume 14, 4: 377-385.- FC&P 26-1, p. 73, ID=3647^Topic(s): structures, microstructures; Porifera Chancelloriidae; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6454 s[6451] = "NITECKI M.H., DEBRENNE F. (1979).- The nature of Radiocyathids and their relationship to Receptaculitids and Archaeocyathids.- Geobios .: 5-27.- FC&P 9-1, p. 51, ID=0297^Topic(s): Receptaculitida; Radiocyathida, Archaeocyatha; Systematics: Porifera; Stratigraphy: ; Geography: ^The morphological analysis of the structural plan of the Radiocyathids skeleton implies a closer relationship to Receptaculitids and Archaeocyathids. As a working hypothesis, they may possibly form a link between part or all of these two groups.^1";
- 6455 s[6452] = "SOEST R.W.M.van, BRAEKMAN J.-C., FAULKNER D.J., HAJDU, E., HARPER M.K., VACELET J., (1996).- The genus Batzella: a chemosystematic problem.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 89-101.- FC&P 25-2, p. 30, ID=3108^Topic(s): chemosystematics; Systematics: Porifera; Stratigraphy: ; Geography: ^Biogenetically unrelated cyclic guanidine alkaloids and pyrroloquinoline alkaloids have been reported from sponges assigned to the genus Batzella. These sponges have been assigned to this genus because of their possession of a simple

complement of thin strongyles in irregular plumoreticulate arrangement. Cyclic guanidine alkaloids were first reported from an alleged axinellid species from the Caribbean, *Ptilocaulis* aff. *P. spiculifer*, and subsequently from a second Caribbean specimen identified as *Ptilocaulis spiculifer* and at the same time from a Red Sea poecilosclerid, *Hemimycale* sp. Closely related compounds were described from a Caribbean specimen identified as *Batzella* sp. and also from the poecilosclerids *Crambe crambe* (Mediterranean) and *Monanchora arbuscula* (Brazil). Isobatzellins (pyrroloquinoline alkaloids) were reported from a black deep-water species from the Bahamas identified as *Batzella* sp. [initial part of extensive summary]^1";

- 6456 s[6453] = "MISTIAEN B. (1984).- Comments on the Caunopora Tubes: stratigraphic distribution and microstructure.- *Palaeontographica Americana* 54: 501-508 [Oliver W. A. Jr et al. (eds): *Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria*].- FC&P 14-2, p. 39, ID=1050^Topic(s): distribution, microstructures; Caunopora Stroms; Systematics: problematica; Stratigraphy: ; Geography: ^Caunopores are usually considered tubes of commensal tabulates in stromatoporoids, and have been noted in 27 stromatoporoid genera. The stromatoporoid genera most often allied with caunopores are *Stromatopora*, *Stromatoporella* and *Clathrodictyon*. Caunopores are very frequent in Middle Devonian stromatoporoids, and possibly disappear at the top of the Givetian; indeed, the presence of caunopores in Frasnian stromatoporoids is doubtful. Caunopores are usually referred to *Syringopora* but the microstructure of the caunopores is very different from the lamellar microstructure of *Syringopora*. [original summary]^1";
- 6457 s[6454] = "KORDE K.B. (1980).- Nekotorye dannye o Hydroconozoa. [some data on Hydroconozoa; in Russian].- *Korally i rify fanerozoya SSSR* [B.S. Sokolov (ed.)]: pp- FC&P 9-1, p. 41, ID=5810^Topic(s): ; ? Hydroconozoa; Systematics: problematica; Stratigraphy: ; Geography: ^^1";
- 6458 s[6455] = "GAUTRET P., EZZOUBAIR F., CUIF J.-P. (1992).- Recherche sur les affinites des Spongiomorphae Frech 1890. 1 Caracteristiques microstructurales et mineralogiques de Spongiomorpha acyclica Frech 1890.- *Geobios* 25, 3: 345-355.- FC&P 21-2, p. 10, ID=3296^Topic(s): microstructures; Spongiomorphae; Systematics: Porifera; Stratigraphy: ; Geography: ^^1";
- 6459 s[6456] = "EZZOUBAIR F., GAUTRET P. (1993).- Recherche sur les affinites des Spongiomorphae Frech, 1890. 2 - Revision des caracteristiques microstructurales des especes initialement attribues aux Spongiomorphae.- *Geobios* 26, 3: 279-290.- FC&P 22-2, p. 91, ID=3536^Topic(s): microstructures; Spongiomorphae; Systematics: Porifera; Stratigraphy: ; Geography: ^Skeletal characters of Spongiomorphae have been established by reference to microstructural features of *Spongiomorpha acyclica* Frech. Also the other Triassic forms from Fischerwiese (Zlambach beds, South-Austria) initially gathered in Spongiomorphae are reexamined and their microstructures described. The study evidences the homogeneity of microstructures and modalities of growth in 5 among these species, otherwise strictly identical to a Triassic family of scleractinian corals, the *Astraeomorphae*, the diagnosis of which has been recently emended, taking in account microstructural features. It is proposed to integrate Spongiomorphae to this family, except for *S. (Heptastylopsis) ramosa* differing by its typically trabecular microstructural organization.^1";
- 6460 s[6457] = "COCKBAIN A.E. (1976).- *Stromatopora kimberleyensis* Etheridge, Jr. 1918, is a piece of bone.- *Report Geological Survey Western Australia* 1975: 133-135.- FC&P 6-1, p. 30, ID=0107^Topic(s): misidentified strom; stroms, false; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6461 s[6458] = "DUBATOLOV V.N., SPASSKIY N.Ya. (1973).- O principakh

- paleobiogeograficheskogo rayoniroyaniya morey.- Trudy Instituta Geologii i Geofiziki AN SSSR (Sibirskoe Otdeleniye) 169: 11-18.- FC&P 7-1, p. 20, ID=0172Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: ; Geography: ^(Principles of the formation of marine palaeobiogeographical provinces.)^1";
- 6462 s[6459] = "BETEKHTINA O.A., ZHURAVLEVA I.T. (1979).- Sreda i zhizn'v geologicheskom proshlom - Voprosy ekostratigrafii [environment and life in the geological past - problems of ecostratigraphy].- Izdatiel'stvo Nauka, Sibirskoye Otdeleniye, Novosibirsk.- FC&P 9-1, p. 50, ID=0295Topic(s): stratigraphy, ecostratigraphy; stratigraphy; Systematics: ; Stratigraphy: ; Geography: ^The work includes 16 articles, devided into 4 sections : I - Ecology and Systematics, II - Synecology, Ecostratigraphy and Paleobiogeography, III - Environment, IV - Organogenous buildups. Various aspects of the connection between the environment and the organism are considered in all the articles. Two first sections unite the articles dedicated to the methods of the use of the ecological observations necessary for the Systematics of some groups of biostratigraphical constructions. The articles of section III are dedicated to the characteristic of the environmental conditions of the organism's life, consider the significance of some nonbiotic factors for the development of the life on the Earth and peculiarities of settling of the organisms in the ancient basins as well. The last forth section includes two articles, considered various types of organogenous buildups and issues of the terminology.^1";
- 6463 s[6460] = "GEISTER J. (1983).- Facies geometries and preservational potential of Recent and fossil coral reefs.- Biologie et Geologie des Recifs coralliens; Society for Reef Studies, Colloque annuel (Nice 1983).- FC&P 13-1, p. 13, ID=0384Topic(s): facies, taphonomy; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6464 s[6461] = "GEISTER J., HERB R. (eds) (1984).- Géologie et paléoécologie des récifs.- Institut de Géologie de l'Université de Berne: 589 pp., 344 figs, 5 pls, 18 tabs.- FC&P 13-1, p. 13, ID=0386Topic(s): geology, ecology; reefs; Systematics: ; Stratigraphy: ; Geography: ^Dans le cadre du 3ème cycle en Sciences de la Terre des universités de Suisse romande l'Université de Berne a organisé en mars 1984 un cours sur la géologie et la paléoécologie des récifs. Ce cours s'est tenu à l'Institut de Géologie de l'Université de Berne et a duré 10 jours. * Le cours s'adressait aux géologues diplômés de toutes les universités de Suisse romande. Le but du cours était de donner une synthèse d'intérêt général des connaissances actuelles dans le domaine des récifs. Pour cela 22 spécialistes avaient été invités comme enseignants à donner les conférences. * Les contributions des différents conférenciers sont contenues sous forme condensée dans notre volume.^1";
- 6465 s[6462] = "TESLENKO, MAMBETOV, ZHURAVLEVA et al. (1983).- Bioherm layers of Dedebulaskaya and the story of their development.- Sreda i zhizn v Geologicheskom proshlom, Paleobiogeografiya i Paleoekologiya: 124-138 [Nauka, Novosibirsk].- FC&P 13-2, p. 50, ID=0583Topic(s): reefs; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6466 s[6463] = "ZHURAVLEVA I.T. (1983).- Methods of investigation of fossil organic buildups.- V Vsesoyuzny Simpozium po iskopaemym Korallam i rifam, Dushanbe; Izdatelstvo Donish [1983]: 43-44.- FC&P 13-2, p. 51, ID=0586Topic(s): research methods; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6467 s[6464] = "SCHOLLE P.A., BEBOUT D.G., MOORE C.H. (1984).- Carbonate depositional environments.- American Association of Petroleum Geologists Memoir 33; 708 pp.- FC&P 13-2, p. 59, ID=0610Topic(s): carbonates; carbonates; Systematics: ;

- 6468 s[6465] = "DIAMOND J.M. (1986).- Clones within a coral reef.- Nature 323: 109.- FC&P 15-2, p. 37, ID=0724Topic(s):clonal organisms; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6469 s[6466] = "HOOK J.E., GOLUBIC S., MILLIMAN J.D. (1984).- Micritic cement in microborings is not necessarily a shallow-water indicator.- Journal of sedimentary Petrology 54, 2: 425-431.- FC&P 15-1.2, p. 41, ID=0768Topic(s): microborings; diagenesis ecology; Systematics: ; Stratigraphy: ; Geography: ^Intragranular, micritic cement has been observed in microborings from deep-sea sedimentary particles (pteropod shells), depths 528 m to 871 m. It is particularly conspicuous in non-depositional environments such as the Blake Plateau. Such cementation may be concurrent and analogous to the formation of intergranular deep-sea cement. It can occur at such energy levels where particle-to-particle contacts do not persist for sufficient time to allow intergranular cementation.^1";
- 6470 s[6467] = "SHEEHAN P.M. (1985).- Reefs are not so different - They follow the evolutionary pattern of level-bottom communities.- Geology 13: 46-49.- FC&P 15-1.2, p. 43, ID=0774Topic(s):geohistory; reefs; Systematics: ; Stratigraphy: ; Geography: ^There is a pervasive attitude that reefs were isolated from the mainstream of evolution and that their history had quite a different pattern from the level-bottom marine biota. However, three striking similarities exist between the evolution of reefs and other marine communities. (1) Reef composition and ecologic structure were governed by the composition of the three Phanerozoic evolutionary faunas. (2) Reefs were decimated by the major extinction events of the geologic record. (3) Reefs conform to the pattern of level-bottom community evolution. Intervals when reefs were absent were due either to the absence of appropriate frame-building organisms in the biota (for example in the Middle and Late Cambrian) or to the absence of reefs following extinction events before frame-building organisms re-evolved a reef-building mode of life.^1";
- 6471 s[6468] = "FORTUNOVA N.K. (1981).- Porodoobrazuyushchiye organizmy.- Trudy VNIGRI 225 [Vsesoyuznyi Nauchno-issledovatel'skiy Geologorazvedochniy Neftyany Institut]: 17-49 [Il'in V. D. (ed.): Atlas Karbonatnykh Porod i Porodoobrazuyushchikh Organizmov Rifovykh Kompleksov Sredney Azii (Atlas of carbonate rocks and rock-forming organisms of the reef complexes of central Asia)].- FC&P 14-2, p. 44, ID=0935Topic(s): reef builders; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6472 s[6469] = "SANDO W.J. (1984).- Biostratigraphy.- Palaeontographica Americana 54: 439-440 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 50, ID=1004Topic(s): stratigraphy; stratigraphy; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6473 s[6470] = "TSIEN H.-H. (1984).- Organisms: their ecology and function in carbonate construction.- Palaeontographica Americana 54: 415-420 [Oliver W. A. Jr et al. (eds): Recent advances in the paleobiology and geology of the Cnidaria: Proceedings of the 4th International Symposium on Fossil Cnidaria].- FC&P 14-1, p. 57, ID=1058Topic(s): carbonates organogenic; paleontology, reef complexes; Systematics: ; Stratigraphy: ; Geography: ^The role of Stromatoporoids as indicators of water depth, water clarity, current and light conditions, seasonality, and salinity is briefly discussed.^1";
- 6474 s[6471] = "LOSER H. (2004).- PaleoTax - a database program for palaeontological data.- Computers & Geosciences 30, 5: 513-521.- FC&P 33-2, p. 8, ID=1092Topic(s): databases of fossils; fossils numerical methods; Systematics: ; Stratigraphy: ; Geography: ^PaleoTax is a windows-based

relational database program to record, analyse, and output palaeontological data. The program is taxon-based and handles taxonomic, stratigraphic, and geographic data. Its structure is relational and subdivided into literature, stratigraphy, geography, sample material, taxonomy, and literature citations. It encompasses 39 tables and 254 data fields. Additional tables and fields can be added, depending on the user's needs. The edit forms, which can also be modified, are not part of the program. The main purposes of PaleoTax are to record data obtained from the literature and to serve as an information system. Once they have been recorded, data can be sorted and searched for under various aspects. PaleoTax generates reports in ASCII, RTF, and HTML for the most important tables, such as species, genera, and localities, and can export the whole database as a large catalogue in the form of the classic Fossilium Catalogus or as an Internet application. Data analysis is an important part of PaleoTax: a program interpreter provided with PaleoTax makes it easy for the user to analyse the data and to display the results as graphs. The analytical results can also be exported as ASCII files. [original abstract]^1";

- 6475 s[6472] = "HLADIL J. (2005).- The formation of stromatactis-type fenestral structures during the sedimentation of experimental slurries - a possible clue to a 120-year-old puzzle about stromatactis.- Bulletin of Geosciences 80, 3: 193-211.http://www.geology.cz/bulletin/contents/art2005.03.193.- FC#038;P 34, p. 96, ID=1358^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: ; Geography: ^Sedimentation experiments with artificially prepared slurries of comparable complexity have resulted in the production of structures that are nearly identical to stromatactis, including the details of typical stromatactis formations and the changes in the surrounding sediment. These consistently repeatable experiments show clear cause-and-effect relationships between the processes and resulting fabrics. [end-fragment of extensive abstract]^1";
- 6476 s[6473] = "STOCK C.W. (2005).- Biogeographical barriers.- Paleontological Society Papers 11, pp. 89-102.- FC#038;P 34, p. 104, ID=1372^Topic(s): biogeography; biogeography; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6477 s[6474] = "HUBMANN B. (2004).- Univ.-Prof. Dr. Alexander von Schouppé - 26. Februar 1915 - 6. Juli 2004.- Jahrbuch der Geologischen Bundesanstalt 144 (3+4): 407-410.- FC#038;P 34, p. 110, ID=1382^Topic(s): biographical; biographic note; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6478 s[6475] = "KRASNOV Ye.V., PREOBRAZHENSKIY B.V., SAVITSKIY V.O. (1975).- Main development stages of reef building organisms.- Trudy dalnevostochn. nauchn. centr. Inst. Biol. Morya 4 [Ye.V. Krasnov (ed.): Paleobiology of bottom invertebrates of marine coastal zones]: 175-192; Vladivostok.- FC#038;P 11-2, p. 40, ID=1870^Topic(s): reef builders; reef builders; Systematics: ; Stratigraphy: ; Geography: ^The authors describe the major groups of marine animals and plants that did build organogenic structures, including reefs, in the seas of the Far East [of Russia] from Proterozoic to recent times. * Changes in composition and ecologic grouping of reef-forming organisms and their associations with the tectonics, volcanism and temperatures of ancient basins are also discussed. [original summary]^1";
- 6479 s[6476] = "ZUKALOVA V., KALVODA J., GALLE A., HLADIL J. (1981).- Biostratigraphy of the Paleozoic rocks in the deep boreholes southeast of Brno.- Biostratigrafie Paleozoika: 7-30; Hodonin.- FC#038;P 11-2, p. 44, ID=1878^Topic(s): biostratigraphy; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6480 s[6477] = "BEAUVAIS L. (1986).- Biological dolomite.- The Upper Paleozoic and Mesozoic fossils of West Thailand; 23 d CCOP Session, Nov. 1986,, Madang, New-Guinea: 139-140.- FC#038;P 16-1, p. 14,

- ID=1928^Topic(s): dolomite biogenic; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6481 s[6478] = "COATES A.G., JACKSON J.B.C. (1985).- Morphological themes in the evolution of clonal and aclonal marine invertebrates.- Jackson J. B. C., Buss L. V. et Cook R. E. (eds): Population biology and evolution of clonal organisms:, 67-106. [Yale University Press].- FC&P 16-1, p. 57, ID=1948^Topic(s): morphology, phylogeny; Rugosa fossils; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6482 s[6479] = "CUIF J.-P., DENIS A., JAILLARD L., ZHU M. (1987).- Discussion on Definition Method of Microstructural Units of Invertebrate Skeletons.- Acta Palaeontologica Sinica 26, 1: 49-54.- FC&P 17-2, p. 26, ID=2177^Topic(s): skeletal microstructures; invertebrates; Systematics: ; Stratigraphy: ; Geography: ^The use of microstructural characteristics of calcareous skeletons is rapidly growing in invertebrate palaeontology (Chen 1985). In the 19th century, the method was applied to some zoological groups (i.e. Madreporaria), but it was only after the great improvements given by Boggild and others that it has been generally accepted. These works are founded on the definition of different basic microstructural components, the arrangement of which provides various kinds of skeletal tissues. This paper makes an attempt to show that a relevant definition of these fundamental units requires progress in two directions of observation. Firstly, it is now obvious that the basic microstructural components (i.e. prisms, lamellae, etc.) may have greatly different internal organizations related to the diverse taxa in which they were observed. For instance, it is shown here that the so called simple prisms of two lamellibranch genera (Pinna and Trigonia) have very distinct structural features, which appear only in samples treated with adequate preparative methods (enzymatic proteolysis, or decalcification with fixative mixtures). Secondly, it also seems necessary to bear in mind the general organization of the secretory layer of the pallial edge, and its relations with the orientation of the microstructural components. Some evidences are given in this way by comparing the typical crossed-lamellar tissue of Acrosterigma and Vepicardium, with the external layer of the Dosinia, which has long been considered as some kind of prismatic composite.^1";
- 6483 s[6480] = "SCHROEDER J.H. (1988).- Spatial variations in the porosity development of carbonate sediments and rocks.- Facies 18: 181-204.- FC&P 17-2, p. 38, ID=2201^Topic(s): carbonates; carbonates; Systematics: ; Stratigraphy: ; Geography: ^Diagenetic sequences of many stages are known from various carbonate rocks but the diagenetic spatial variations within a given facies, outcrop, hand specimen or thin section are only gradually rediscovered and taken into account in porosity studies. The variations occur in various carbonate facies such as reefs, beachrocks, shallow-water deposits, hardgrounds and concretions. Multiple parallel diagenetic pathways branching in time are recognized in such cases. […] Realization of spatial variations in porosity development spoils fast and simple correlations, assessments, or predictions. The synthesis of the detailed analytical information, however, provides a route toward application of diagenetic complexities. [abridged extensive summary]^1";
- 6484 s[6481] = "COPPER P. (1988).- Paleoecology: paleoecosystems, paleocommunities.- Geoscience Canada 15, 3: 199-208.- FC&P 18-1, p. 19, ID=2207^Topic(s): ecosystems, biocoenoses; ecology; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6485 s[6482] = "WANG YIFENG, ZHANG YIKUN (1988).- Application of Artificial Intelligence Principle to Paleontologic Taxonomy.- Acta Palaeontologica Sinica 27, 4: 521-524.- FC&P 18-1, p. 46, ID=2287^Topic(s): numerical taxonomy; fossils; Systematics: ; Stratigraphy: ; Geography: ^This paper discusses

the automatic classification of paleontologic fossils by micro-computer. It is pointed out that the system of paleontologic taxonomy can be represented by predicate formulas and the fossils can be automatically classified by means of predicate calculus. Taking into consideration the features of paleontologic taxonomy, the authors have put forward a control strategy for the rule selection, which greatly raises the operating efficiency. The paper also discusses the computer program for paleontologic taxonomy. Through practice it has been proved that the approach given here is very effective.^1";

6486 s[6483] = "TALENT J.A. (1988).- Organic reef-building: episodes of extinction and symbiosis?.- Senckenbergiana lethaea 69, 3/4: 315-368.- FC&P 18-1, p. 48, ID=2291^Topic(s): history, episodicity; reefs; Systematics: ; Stratigraphy: ; Geography: ^A review of the geological record of reef-building activity shows it to have been episodic, the associations of the principal frame-builders tending to change from episode to episode. It is argued that this episodicity may have been, in part, a reflection of the changing pattern of symbiosis and extinctions through time, new groups of organisms, becoming associated with photosynthesizing algae and thus developing the capacity for extravagant, skeletal growth.^1";

6487 s[6484] = "STAFF G.M., POWELL E.N. (1988).- The paleoecological and differential preservation on macroinvertebrate species richness in death assemblages.- Palaeogeography, Palaeoclimatology, Palaeoecology 063, 1-3: 73-89.- FC&P 18-1, p. 50, ID=2299^Topic(s): ; fossils, ecology, taphonomy; Systematics: ; Stratigraphy: ; Geography: ^^1";

6488 s[6485] = "PERRY C.T., HEPBURN L.J. (2007).- Syn-depositional alteration of coral reef framework through bioerosion, encrustation and cementation: Taphonomic signatures of reef accretion and reef depositional events.- Earth-Science Reviews 86, 1-4: 106-144.- FC&P 35, p. 111, ID=2446^Topic(s): bioerosion; reefs; Systematics: ; Stratigraphy: ; Geography: ^The development of coral reef framework and the preservational character of both in-situ and rubble coral is strongly influenced by a range of physical, chemical and biologically-mediated taphonomic processes. These operate at, or just below, the reef framework-water interface and can be defined as having either a constructive or destructive effect upon primary reef framework (i.e., coral) constituents. Constructional activities add additional calcium carbonate to the primary framework structure via secondary framework growth and early cementation. Destructive processes, which remove or degrade primary (and secondary) framework carbonate, are associated with the effects of either physical (mainly storm) disturbance or biological erosion (termed bioerosion). Key bioeroding groups include the grazing fish and echinoid groups, as well as the activities of an array of infaunal borers. These include specific groups of sponges, bivalves and worms (termed macroborers), as well as cyanobacteria, chlorophytes, rhodophytes and fungi (termed microborers). The relative importance of each process and the rates at which they operate vary spatially across individual reef systems. In addition, many of these processes leave distinctive signatures on, or in, the coral framework. In some cases (e.g., calcareous encrusters) these are the skeletons of the organisms themselves, whilst in other cases the organism may leave behind a trace of their activity (e.g., macro- and microborers). These represent useful palaeoenvironmental tools, firstly because they often have good preservation potential and, secondly because the range and extent of many of the individual species, groups and processes involved exhibit reasonably well-constrained environment and/or depth-related distributions. As a result these taphonomically important organisms or processes can be used to delineate between reef environments in core or outcrop, and to aid the interpretation of reef depositional processes and 'events'. This review summarises current understanding regarding the distribution of these species/processes within

- contemporary reef settings and considers the suites of taphonomic signatures that may aid in the recognition and interpretation of depositional environments and events.¹¹;
- 6489 s[6486] = "SANTISTEBAN C., TABERNER C. (1988).- Sedimentary models of silicoclastic deposits and coral reefs interrelation.- In: Carbonate-clastic transitions [Doyle L. J. & Roberts H. H. (eds)]: 35-76; Elsevier, Amsterdam.- FC&P 18-2, p. 30, ID=2470^Topic(s): reefs - silicoclastics interactions; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6490 s[6487] = "KUHLMANN D.H.H. (1989).- Ecological adaption and a compensatory theory of coral assemblages in the maintenance of reef growth.- Mem. Ass. Australas. Palaeontols 8 [Jell P. A. & Pickett J. W. (eds): Fossil Cnidaria 5 (Proceedings of the Fifth International Symposium on Fossil Cnidaria including Archaeocyatha and Spongiomorphs)]: 433-438.- FC&P 19-1.1, p. 14, ID=2561^Topic(s): ecological adaptation, reef growth; ecological adaptation; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6491 s[6488] = "COPPER P., LONG D.G.F. (1989).- Stratigraphic revisions for a key Ordovician / Silurian boundary section, Anticosti Island, Canada.- Newsletters in Stratigraphy 21, 1: 59-73.- FC&P 19-1.1, p. 22, ID=2583^Topic(s): stratigraphy; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6492 s[6489] = "STEARNS C.W., CARROLL R.L. (1989).- Paleontology: The Record of Life.- John Wiley and Sons, New York, 453 pp.- FC&P 19-1.1, p. 24, ID=2587^Topic(s): ; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6493 s[6490] = "BEAUVAIS L. (1989).- Microfacies analysis of the Torinosu limestone of Sibaganding.- CCOP Techn. Publication 19 [Fontaine H. & Gafoer S. (eds): The Pre-Tertiary fossils of Sumatra and their environment]: 195-204.- FC&P 19-1.1, p. 28, ID=2592^Topic(s): carbonates; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6494 s[6491] = "SCRUTTON C.T. (1990).- Origin and early diversification: Reefs.- In Briggs D. E. G. & Crowther P. R. (eds): Palaeobiology: a synthesis. Blackwells Scientific Publications, Oxford.- FC&P 19-1.1, p. 33, ID=2609^Topic(s): origins, early diversifications; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6495 s[6492] = "FELDMANN R.M. (1990).- On Impacts and Extinction: Biological Solutions to Biological Problems.- Palaeontology 64, 1: 151-154.- FC&P 19-1.1, p. 39, ID=2612^Topic(s): extinctions, impacts; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6496 s[6493] = "OSPAANOVA N.K. (1989).- Voznikovenie skeleta na vendokembriyskom rubezhe. [origination of skeleton at the Vendian / Cambrian boundary; in Russian].- Dokl. Akad. Nauk Tadzhikskoy SSR, 32, 12: 843-846.- FC&P 19-1.1, p. 39, ID=2613^Topic(s): phylogeny, skeletogenesis; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6497 s[6494] = "BOSENCE D., WALTHAM D. (1990).- Computer modeling the internal architecture of carbonate platforms.- Geology 18: 26-30.- FC&P 19-1.1, p. 56, ID=2674^Topic(s): carbonate platforms; carbonate platforms; Systematics: ; Stratigraphy: ; Geography: ^^A numerical computer model is described that calculates the internal architecture of carbonate platforms In response to varying values of carbonate production, subaerial and submarine erosion, sediment redeposition, and sea-level changes. The computer-generated sections closely resemble large-scale outcrops and interpreted seismic profiles through carbonate platform. Stillstand and transgressive sequences have prograding and downlapping platform geometries with lagoons developing in transgressive systems. Regressive sequences have downlapping clinoforms and erosional upper surfaces.

- Glacioeustatic scale cycles have a major control on platform geometry with erosional sequence boundaries developing during low stands and platform drowning occurring during transgressive periods. Lowstand downlapping wedges are minor features when compared with clastic systems, and major progradation and downlap of slope deposits develop with transgressions and flooding of platform tops. Carbonate erosion rates are varied and have an important effect on the morphology of floodback surfaces, which have a major control on platform top production. The computer program contributes to the analysis of carbonate systems in two ways: it gives a visual picture of the quantitative effects of the many parameters controlling carbonate geometries, and it aids quantitative analysis of the architectures and time scales of ancient outcrop or seismic sequences.^1";
- 6498 s[6495] = "ADAMS C.G., LEE D.E., ROSEN B.R. (1990).- Conflicting evidence for tropical sea-surface temperatures during the Tertiary.- Palaeogeography, Palaeoclimatology, Palaeoecology 77: 289-313.- FC&P 19-2.1, p. 11, ID=2729^Topic(s): ecology; Systematics: ; Stratigraphy: ; Geography: ^1";
- 6499 s[6496] = "SORAUF J.E., TUTTLE D.W. (1988).- Dark-Field Illumination in Photography of Acetate Peels.- Journal of Paleontology 62, 1: 153-156.- FC&P 19-2.1, p. 24, ID=2736^Topic(s): research techniques, photography; acetate peels; Systematics: ; Stratigraphy: ; Geography: ^1";
- 6500 s[6497] = "KUZNETSOV V.G. (1990).- The Evolution of Reef Structures through Time: Importance of Tectonic and Biological Controls.- Facies 22: 159-168.- FC&P 19-2.1, p. 38, ID=2760^Topic(s): tectonism, geography; reefs; Systematics: ; Stratigraphy: ; Geography: ^The evolution of reefs is controlled by biological and global factors. The paper stresses the importance of the tectonic and paleogeographical control. The evolution of reefs is reflected by the changes in the composition of reef-building communities during geological time, by changes in the mineralogical composition of reef carbonates, and by changes in types, sizes and tectonic settings of reefs. The composition of reef-building communities is characterized by the development of new adaptive patterns with decreasing diversity, by migration of reef-building organisms to low-level communities, and by total or partial extinction of reef organisms. Several changes in the composition of reef carbonates (calcite, Mg-calcite, aragonite), strongly dependent on the skeletal mineralogy of the reef organisms, are evident during Riphean and Phanerozoic times. These changes coincide only roughly with the long-time intervals recognized for the mineralogical composition of non-reefal carbonates. Reef types started with the small organic buildups of the Proterozoic and the Early Cambrian followed by the differentiated reefs of the late Cambrian, the dome-shaped pinnacle reefs and atolls of the Ordovician, and the strongly differentiated reef-complexes of the Silurian and Devonian. The importance of bioherms decreased during the Mesozoic and Caenozoic. Reef structures increased in size during geological time from Precambrian and Cambrian (height - elevation above off-reef basinal bottom: several meters) to Ordovician (height several hundreds of meters), Devonian (more than 1000 meters) to Caenozoic reefs (up to 2000 meters). Increase in thickness (of the total reef structure) and elevation above sea bottom was connected with an increase in the number of facies types. [abbreviated summary]^1";
- 6501 s[6498] = "COPPER P., LONG D.G.F. (1990).- Stratigraphic revision of the Jupiter Formation, Anticosti Island, Canada: a major reference section above the Ordovician / Silurian boundary.- Newsletters in Stratigraphy 23, 1: 11-36.- FC&P 20-1.1, p. 17, ID=2792^Topic(s): stratigraphy; Systematics: ; Stratigraphy: ; Geography: ^[includes figures and references to reefs]^1";
- 6502 s[6499] = "DEBRENNE F., LAFUSTE J., LEMOINE M. (1991).- Les lames minces: un atout pour la paleontologie.- Rev. Palais de la Decouverte

- 38: 109-112.- FC&P 20-1.1, p. 81, ID=2887Topic(s):research techniques, thin sections; paleontological techniques;Systematics:Stratigraphy:Geography:^1";
- 6503 s[6500] = "KUHLMANN D.H.H. (1982).- Darwin's Coral Reef research - a Review and Tribute.- P.S.Z.N. I: Marine Ecology, 3, 3: 193-212.-FC&P 20-2, p. 67, ID=2964Topic(s):Darwin's contribution; reefs;Systematics:Stratigraphy:Geography:^1In remembrance of the death of Charles Darwin 100 years ago, a review is given on his coral reef research from the point of view of present knowledge. Although during Darwin's time no one was aware of the changing level of the glacial sea or of the important function of the symbiotic zooxanthellae in the life of hermatypic corals, his observations and considerations on the ecology of corals and on the formation of coral reefs are relevant to this day. But of course his ideas need new causal interpretations. The origin of the different reef types can no longer be explained by subsidence only, but by different modes biologists and geologists described during the following century. To summarize all the many existing theories, the all enclosing "theory of compensation" is put forward here in honor of this great man.^1";
- 6504 s[6501] = "LANGER W. (1991).- Der Palaeontologe und Geologe Carl Ferdinand Roemer. Erinnerung anlässlich seines 100. Todestages.- Natur und Museum 121, 12: 381-386. [in German].- FC&P 20-2, p. 67, ID=2965Topic(s):biographical;Systematics:Stratigraphy:Geography:^1";
- 6505 s[6502] = "SCHRODER W., STEIN H. (1991).- Als Geologe bei deutschen Auswanderern in Texas. Zum 100. Todestag von Ferdinand Roemer (1818-1891).- Natur und Museum 121: 387-400. [in German].- FC&P 20-2, p. 67, ID=2967Topic(s):biographical; biography;Systematics:Stratigraphy:Geography:^1";
- 6506 s[6503] = "CZABALAY L. (1994).- Korrelation der Molluskenfaunen des Urgons von Ungarn (Villany- und Mecsek-Gebirge) und Osterreich (Vorarlberg).- Jubilaeumsschrift 20 Jahre Geologische Zusammenarbeit Osterreich-Ungarn 2: 209-224. [in German].- FC&P 25-1, p. 40, ID=3028Topic(s):biostratigraphy;Systematics:Stratigraphy:Geography:^1Correlation of the Urganian Molluscan Faunas of Hungary (Villany and Mecsek Mountains) and Austria (Vorarlberg). Bivalve und gastropod faunas from Urganian facies were studied at various localities and through time, i.e. in Vorarlberg (Schrattenkalk: Upper Barremian-Lower Aptian), and in Hungary in the Villany Mountains (Nagyharsany Limestone Formation: Lower Barremian-Lower Albian), and in the Mecsek Mountains (Magyaregregy Conglomerate Formation: Upper Hauterivian-Lower Aptian). Some corals are reported from southern Hungary. [shortened abstract]^1";
- 6507 s[6504] = "MILLER S. (1996).- Carolina, the Keys, and Coral Reef Research.- Geotimes 41, 4 (Carbonates & Reefs): 24-22 [?!].- FC&P 25-1, p. 53, ID=3067Topic(s):reefs;Systematics:Stratigraphy:Geography:^1[underwater studies support the protection and use of coastal resources]^1";
- 6508 s[6505] = "PETERS E.C., McCARTY H.H. (1996).- Carbonate crisis.- Geotimes 41, 4 (Carbonates & Reefs): 20-23.- FC&P 25-1, p. 54, ID=3070Topic(s):carbonate platforms; carbonate crisis;Systematics:Stratigraphy:Geography:^1[discusses occurrence of black band disease, white band, bleaching, new diseases; areas include Florida, St. Croix; refers to relationship between disease and other disturbance of coral reef association]^1";
- 6509 s[6506] = "VIGNES R., LEBBE J. (1996).- Database management systems in systematics.- Bulletin de l'Institut royal des sciences naturelles de Belgique, Biologie 66, suppl. 1996 [Willenz P. (ed.): Recent advances in sponge biodiversity inventory and documentation]: 7-13.- FC&P 25-2, p. 30, ID=3113Topic(s):taxonomy

- databases; taxonomy; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6510 s [6507] = "LOSER H. (1996).- Erfassung und Auswertung palaentologischer Daten mit Personalcomputern.- Mitt. Abt. Geol. und Palaeont. Landesmuseum Joanneum 54: 189-214.- FC&P 25-2, p. 38, ID=3121^Topic(s): databases of fossils; paleontology, data bases; Systematics: ; Stratigraphy: ; Geography: ^The data occurring in palaeontology are analyzed. The characteristics of the extant and fossil organisms are divided into five basic units of data: - morphology, - ecology, - taxonomical relations, - stratigraphical and - (palaeo-) geographical occurrence. Six data complexes are divided from these units. Their relationships are defined and the database structures designed on the basis of the Entity-Relationship-Model. The data structures are described in detail and advice is given for building up databases. The various opportunities of querying the database and particularly of assessing the data are thoroughly discussed. Data obtainable by transactions on the stratigraphical and (palaeo-)geographical distribution of the organisms are considered. Finally, the database on post-Palaeozoic corals compiled by the author is introduced and some first results as well as future projects are represented.^1";
- 6511 s [6508] = "ALBRIGHT G.R. (1991).- Late Devonian and Early Mississippian paleogeography of the Death Valley region, California.- SEPM, Pacific Section [Field Trip Guidebook] 67 [Cooper J.D. & Stevens C.H. (eds.): Paleozoic paleogeography of the western United States II]: 253-269.- FC&P 21-1.1, p. 45, ID=3219^Topic(s): geography; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6512 s [6509] = "ARMSTRONG A.K., MAMET B.L. (1988).- Mississippian (Lower Carboniferous) biostratigraphy, facies, and microfossils, Pedregosa Basin, southeastern Arizona and southwestern New Mexico.- U.S. Geological survey Bulletin 1826; 40 pp.- FC&P 21-1.1, p. 45, ID=3220^Topic(s): biostratigraphy; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6513 s [6510] = "Geological Society of India (1991).- The Himalayan fossil controversy.- Geological Society of India Journal 37, 1: 80-88.- FC&P 21-1.1, p. 45, ID=3225^Topic(s): fraud data; Systematics: ; Stratigraphy: ; Geography: ^[Contains opinions on paleontological papers of V.J. Gupta, which introduced false data on distribution of some fossils, among them corals]^1";
- 6514 s [6511] = "AVLAR H., OEKETORP K. (1991).- Katalog der Typen und Belegstücke zur Paläozoologie im Geologisch- Paläontologischen Institut und Museum der westfälischen Wilhelms-Universität. I. Teil: Invertebrata - Coelenterata / Archaeocyatha.- Sammlung der Forschungsstelle für Korallenpaläozoologie. Geologisch-Paläontologisches Museum, Veröffentlichungen 5; 142 pp.- FC&P 21-1.1, p. 47, ID=3234^Topic(s): collections of fossils; collections fossils; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6515 s [6512] = "MILLER W.III (1991).- Hierarchical concept of reef development.- N. JB. Geol. Palaeont, Abh. 182, 1: 21-35.- FC&P 21-1.1, p. 55, ID=3266^Topic(s): hierarchy of reef development processes; reefs; Systematics: ; Stratigraphy: ; Geography: ^Reef development is usually described either in terms of long-term ecologic succession or merely as the result of facies migrations. In fact, many spatio-temporal levels of development could be represented by patterns preserved in reef sequences, including (in ascending scale): processes involving growth of individual organisms, colonization and ecologic interactions; ecologic succession and environmentally-driven succession-like processes; community replacement owing to habitat changes; large-scale regional processes of "reef growth"; and, at the most inclusive level, community

- evolution. Because of abundance of durable frame-building and binding organisms, and potential for rapid envelopment and early lithification, reefs and other bioconstructions may contain evidence of all these levels of biotic change through time.¹¹;
- 6516 s[6513] = "DANCHIN A., DEBRENNE F. (1992).- Les premieres formes de vie.- In Adoutte A. et al.: La memoire de la Terre; Points-Sciences Ed. Seuil: 151-167.- FC&P 21-1.1, p. 62, ID=3287^Topic(s): phylogeny early; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6517 s[6514] = "BERTRAND M., COEN-AUBERT M., DUMOULIN V., PREAT A., TOURNEUR F. (1993).- Sedimentologie et paleoecologie de l'Emsien superieur et de l'Eifelien inferieur des regions de Couvin et de Villers-la-Tour (bord sud du Synclinorium de Dinant, Belgique).- Neues Jahrbuch fuer Geologie und Palaeontologie, Abhandlungen 188, 2: 177-211.- FC&P 22-2, p. 24, ID=3473^Topic(s): sedimentology, ecology; Systematics: ; Stratigraphy: ; Geography: ^Three sections have been studied in the area between Couvin and Villers-la-Tour, at the southern margin of the Dinant Synclinorium. They expose Upper Emsian and Lower Eifelian strata (Eau Noire and Couvin Formations). The coral fauna (Rugosa, Tabulata and Chaetetida) has been examined in detail and a new species of the rugose coral genus *Thamnophyllon*, *T. turritum*, is described. Parasites and commensals of corals and Chaetetids are also recorded. Six microfacies families are described and interpreted in terms of sequential analysis. This analysis shows a regressive progradational megasequence on a ramp lacking a continuous rim and typical lagoonal facies.¹¹;
- 6518 s[6515] = "OLIVER W.A.jr (1992).- Fossil record and evolution.- In: McGraw-Hill Encyclopedia of Science and Technology: 658-659.- FC&P 22-2, p. 79, ID=3499^Topic(s): phylogeny, fossils; fossil record; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6519 s[6516] = "REITNER J., NEUEWILER F., GUNKEL F. (eds) (1996).- Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution.- Goettinger Arbeiten zur Geologie und Palaontologie, Special volume 2.- FC&P 26-1, p. 22, ID=3560^Topic(s): reefs geohistory; reefs history; Systematics: ; Stratigraphy: ; Geography: global^This volume provides a uniform documentation of scientific results achieved in the course of the Priority Program of the German Research Foundation (DFG) containing numerous "Research Reports".¹¹;
- 6520 s[6517] = "NEUEWILER F., REITNER J., ARP G. (1996).- Controlling Factors and Environmental Significance of Organomicrite Production and Buildup Development.- Goettinger Arbeiten zur Geologie und Palaeontologie, special volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 33, ID=3589^Topic(s): reefs, organomicrite; reefs organomicrite; Systematics: ; Stratigraphy: ; Geography: ^Data obtained from Lower Cretaceous mud mounds provide evidence for organic matrix mediated micrite production in place. Intracrystalline organic macromolecules are typically enriched in Asp and Glu. Mineralization is confined to non-living organic substrates (organomineralization of Trichet & Defarge 1995) originally derived from microbes, biofilms and / or metazoans. For seeding and epitaxial overgrowth organic substrates and seed crystals need a persistent interaction with the surrounding medium. Therefore, sedimentary starvation is required. Sedimentary starvation is realized via protected space (semi-closed cavities, interstitial pore space, sponge body container), via rapid sealevel rise (TST-confined mud mounds), via rapid drop of sealevel (emersion), and analogue episodes of low carbonate production presumably controlled by eutrophism. Crystal growth also requires an increased carbonate alkalinity. This is provided via sulfate reduction

on local scale and / or via continental weathering in the surrounding Paleozoic massifs. Genetically, mud mounds of the Soba Reef Area correspond to organomicrite reefs. These reefs are opportunistic, i.e. their occurrence within the photic zone indicates major crisis of the stenotopic scleractinian coral / calcareous algae community. Mud mounds of the Soba Reef Area share some important features with Albian / Cenomanian hardgrounds (organomicrite related lithification, dominance of active filter feeding organisms, restriction of sediment supply) but hardgrounds were influenced by stronger submarine dissolution and were exposed to relatively strong current systems.^1";

6521 s[6518] = "SCHWEIZER V. (1996).- Mineralogy of the Insoluble Residues of Upper Jurassic Limestones.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 39, ID=3600^Topic(s): carbonates; Systematics: ; Stratigraphy: ; Geography: ^In the area of the western Swabian Alb more than 1,000 samples of well bedded Upper Jurassic limestones, marls and of spongiolithic buildups were analyzed with regard to their insoluble residues. The silt-sized residues consist of quartz, feldspar, pyrite and rare apatite. The clay-sized residues consist of illite respectively illite / smectite mixed layer, chlorite and kaolinite. The distribution of both the clay mineral association and the geometry of the illite / smectite mixed layer X-ray pattern show distinctive differences within the sequence which can be used for a stratigraphic subdivision of the Upper Jurassic series.^1";

6522 s[6519] = "BECHSTADT T., ZUHLKE R. (1996).- Reef Evolution: Geometries and Stratigraphic Modeling.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 47, ID=3622^Topic(s): geology, stratigraphy; reefs; Systematics: ; Stratigraphy: ; Geography: ^Reef geometry is controlled by internal and external factors. Biological and paleoecological changes represent the most important internal factors. Changes in accommodation space due to (eustatic?) sealevel fluctuations and/or changes in total subsidence as well as variable sediment production and input constitute important external factors for reef development. Variations of any factor result in e.g. aggradational, progradational or retrogradational stratal patterns of reefs or in "drowning". On a broader scale, these internal and external factors influencing reef geometries also control the development and the different types of carbonate platforms (ramps, shelves, etc.). The resulting geometries can be modeled by stratigraphic simulation programs, e.g. PHIL 5.1, which are able to vary the important internal and external factors controlling sedimentation.^1";

6523 s[6520] = "FLUGEL E., KIESSLING W., GOLONKA J. (1996).- Phanerozoic Reef Patterns: Data Survey, Distribution Maps and Interpretation.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunke] F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- FC&P 26-1, p. 47, ID=3623^Topic(s): data base; reefs; Systematics: ; Stratigraphy: ; Geography: ^A comprehensive computer database of ancient reefs provides new insights in global and regional changes of positions of reefs (shown in updated paleogeographical maps), biotic composition and diversity as well as constructive and destructive processes. The investigation was focused on "Pangean reefs" (Carboniferous to Jurassic). Current studies enlarge the database and contrast reef distribution and composition data against secular Phanerozoic trends.^1";

6524 s[6521] = "HUSSNER H., ROSSLER J. (1996).- Modeling of Reef Growth in a

- 3-Dimensional Space.- Goettinger Arbeiten zur Geologie und Palaeontologie, Special Volume 2 [Reitner J., Neuwiller F. & Gunkel F. (eds): Global and Regional Controls on Biogenic Sedimentation I. Reef Evolution]: pp ???.- **FC**;P 26-1, p. 48, ID=3624^**Topic(s)**: **growth modeling**; **reefs**; **Systematics**; **Stratigraphy**; **Geography**^Reef growth is the outcome of a positive feedback between carbonate production and carbonate stabilization. This basic game has been played by a variety of organisms of many different taxa through the Phanerozoic. This self-enhancing growth potential is cut back by a number of environmental factors such as depth dependent growth potential, erosion and sealevel changes. This basic concept is the backbone of our computer-based reef model. It is cast into a mathematical form by a Fisher equation adapted to the specifics of reef growth, such as dependence of production rate on light and water depth, erosion and redeposition. The solution of this equation is the reef topography represented by reef height as a function of region and time. The solutions can be represented as 3-d topography or vertical sections thereof. The latter allow for sequence stratigraphic analysis.^1";
- 6525 s[6522] = "FERNANDEZ DIAS L., PUTNIS A., PRIETO M., PUTNIS C.V. (1996).- The role of magnesium in the crystallization of calcite and aragonite in a porous medium.- Journal of Sedimentary Research 66, 3: 482-491.- **FC**;P 26-1, p. 48, ID=3626^**Topic(s)**: **calcite**, **aragonite**; **Systematics**; **Stratigraphy**; **Geography**^Morphological development of calcite crystals is related to supersaturation conditions during growth. Crystallization of calcium carbonate (calcite and aragonite) as well as Mg-calcite was studied under controlled supersaturation conditions by the counter diffusion of Ca²⁺ and CO₃²⁻ ions through a porous transport medium (a column of silica gel). Under our experimental conditions, where ion transport is constrained to be diffusion controlled, nucleation and growth take place under conditions of high supersaturation, the actual threshold value of the supersaturation depending on the supersaturation gradient. In the pure CaCO₃ system, calcite grows at lower supersaturation than aragonite. The calcite develops relatively simple rhombohedra while the aragonite grows as spherulites. Presence of Mg²⁺ in the interstitial fluid inhibits nucleation, increasing the threshold supersaturation at which crystallization begins. The resulting Mg-calcite crystals show a range of morphologies depending on the Mg content and the supersaturation at the point of crystallization. At high values of supersaturation, up to 15 mol% MgCO₃ is incorporated into the calcite and the crystals form spheres. At lower supersaturations, Mg content decreases and morphologies change progressively through a well-defined and reproducible sequence from spheres to dumbbell-like forms to wheat-sheaf-like bundles and eventually single crystals with steep rhombohedral faces. The crystals are compositionally zoned, showing both sector and oscillatory zoning. The compositional evolution is related to the supersaturation and interface roughness during crystal growth.^1";
- 6526 s[6523] = "BENIER C., BERSET S. (1988).- Les collections du departement de geologie et de paleontologie des Invertebres du Museum Geneve. 26. La collection Alphonse Favre (Porifera, Polychaeta, Coelenterata, Echinodermata).- Revue de Paleobiologie 7, 2: 557-572.- **FC**;P 26-1, p. 66, ID=3636^**Topic(s)**: **collections of fossils**; **fossils collections**; **Systematics**; **Stratigraphy**; **Geography**^The specimens of the collection A. Favre are listed, among them numerous corals from the Jurassic and Cretaceous of Austria, France, Germany, Spain, Switzerland and the United Kingdom.^1";
- 6527 s[6524] = "FAGERSTROM J.A. (1997).- Reef-building: a biological phenomenon.- Boletin de la Real Sociedad Espanola de Historia Natural, Seccion Geologica 92, 1/4: 007-013.- **FC**;P 26-2, p. 20, ID=3697^**Topic(s)**: **biology**; **reefs**; **Systematics**; **Stratigraphy**; **Geography**^Marine organic reefs are

biological-paleobiological features; they are not sedimentologic-stratigraphic features resulting from locally over-thickened accumulations of sediment. The positive topographic relief of reefs is due to the relatively rapid upward growth, skeletal strength / rigidity and high packing density of the clonal (or gregarious) organisms comprising the reef framework. In modern, tropical reefs, these features reach their acme at the relatively narrow, shallow water crest marking the interface between the backreef lagoon or reef flat and the forereef or seaward slope. In ancient reefs, sediment commonly comprises a much greater volume of the reef than the framework. However, it is the organisms, preserved either in their original growth positions or in situ, that distinguish reefs from accumulations of transported skeletal debris on level-bottom substrates. Both modern and ancient reef communities have characteristic taxonomic compositions, diversities and guild structures. It is the relative skeletal volume (or areal coverage) of members of the constructor, baffler and binder guilds that controls the reef-building prowess and in ancient reefs becomes the basis for their classification as framestones, bafflestones and boundstones, respectively.^1";

6528 s[6525] = "GUDO M. (1997).- Ist Konstruktionsmorphologie ein Aktualistisches Prinzip der Palaeontologie? .- Courier Forschungsinstitut Senckenberg 201: 145-160.- FC&P 26-2, p. 58, ID=3735^Topic(s): constructional morphology; Systematics: ; Stratigraphy: ; Geography: ^Constructional Morphology was developed as a continuation of questions and methods introduced in the concept of aktuopaleontology. The foundation of the principle of "Aktualismus" or Uniformitarism is attributed to Lyell (1830-1833), Gressly (1838) and Walther (1893). Using the present conditions as a key to the past, Schaeffer (1962) developed the principle of uniformitarism into the concept of aktuopaleontology by drawing on several research methods such as ichnology, taphonomy, functional morphology and facies reconstructions. Presupposing that there is a difference in understanding functions in the environment and the working of the whole organism, the group "Kritische Evlutionstheorie" developed a new concept of organisms as hydraulic energy conducting entities. Reconstructions can be performed for recent as well as for fossil organisms; the analysis of fossil organisms makes reference to constructional models developed for recent organism. Many of the terms and concepts of the constructional theory of organisms are based on ideas of Schaeffer. In this text it is demonstrated that constructional morphology can be seen as a continuous development with aktuopaleontology as its starting point. It is shown to be a principle of uniformitarism. The soft body reconstruction of rugose corals is given as an example, based on the generalized representation of rugose skeleton ontogeny from Schindewolf (1950) and the constructional model for recent anthozoans.^1";

6529 s[6526] = "RAMSEYER K., MIANO T.M., d'ORAZIO V., WILDBERGER A., WAGNER T., GEISTER J. (1997).- Nature and origin of organic matter in carbonates from speleothems, marine cements and coral skeletons.- Org. Geochem. 26: 361-378.- FC&P 26-2, p. 61, ID=3740^Topic(s): carbonates; organic matter; Systematics: ; Stratigraphy: ; Geography: ^Organic matter in speleothem calcite, marine carbonate cements and aragonitic coral skeletons was studied to determine its location, molecular structure, functionality and effect on mineral growth. SEM analyses showed that inorganically precipitated carbonates incorporate, during growth, adsorbed organic matter between submicroscopic subunits of the crystals whereas biologically secreted carbonates incorporate biogenic tissue between the crystals. Molecular fluorescence spectroscopy indicated that low molecular weight fulvic acids are the most important constituents of the organic matter. The fulvic acids are probably derived from soils (speleothem calcite), dissolved organic matter

- (marine carbonates) and biological decay products (aragonitic coral skeleton).^1";
- 6530 s[6527] = "SOTO F., LIN BAOYU (1997).- Biostratigraphic and biogeographic affinities of Fammenian rugose corals in the Dzhungar-Hinggan Basin (Northern China).- Coral Research Bulletin 05: 239-246.- FC&P 27-1, p. 77, ID=3790^Topic(s): biostratigraphy, biogeography; Systematics: ; Stratigraphy: ; Geography: ^In this study the stratigraphic range and geographic distribution of Famennian solitary rugose corals, not or poorly dissepimented, corresponding to the Cyathaxonia-fauna and belonging to the Dzungar-Hinggan Basin (N China), were analysed in detail. Coral fauna is well preserved in the Hongguleleng (Hongguleleng area, North Xinjiang, NW China) Hongermiao (Xuguit Qi area, Inner Mongolia, NE China) and Upper Daminshan (Sonid Zuoqi-Abag Qi areas, Inner Mongolia, NE China) Formations. The studies of the distributions of sixteen generic taxa known up to now in this basin allows us to confirm the existence of endemic taxa (Honggulasma and Hebukophyllum), significantly amplify the stratigraphic distribution of Nicholsoniella and Caninia and to ratify for the rest of the genera (Petraiaella, Guerichiphyllum, Friedbergia, Gorizdronia, Kozlowskinia, Nalivkinella, Ufimia, Cyathaxonia, Catactotoechus, Metriophyllum, Syringaxon and Amplexus) a similar distribution to what other Famennian basins in the rest of the world have. Besides, the geographic distributions of these same taxa imply fairly strict relations of the Dzungar-Hinggan Basin with the North East of Siberia (Omolon Region), Urals and Eastern Europe (especially Poland), along the North and West edges of the Proto-Thetys Ocean.^1";
- 6531 s[6528] = "HLADIL J., CEJCHAN P., SEDLAK R. (1997).- Image analysis of thin sections: Implication for calcite fabric of diagenetically changed coral skeletons.- Coral Research Bulletin 05: 171-179.- FC&P 27-1, p. 51, ID=3807^Topic(s): carbonates; carbonates diagenesis; Systematics: ; Stratigraphy: ; Geography: ^Image analysis enables the detection, separation and series-ordering of diagenetical stages. Early diagenetical growth of fibral tufts was largely confirmed including the specific reactions with ambit of the sclerenchyme. The regularly dominant "tablet" [= short c-axis] crystal population are utterly assigned to late diagenetical stages. Eventual early populations of "tablet" calcite crystals are not satisfactory detected during our studies. Nevertheless, the crystallization of the early tablets is theoretically possible. The microenvironment of these domains has to be separated by membranes and the survived tablet generation has to be marked by solution-sutures on crystal margins. In previous studies on coral microstructures, the late origin of tablet crystals has been either supported (J. Sorauf) or refused (J. Lafuste). We can suggest a future test of the potentially conflicting results: a comparison of ultra-thin sections and image-analytic series based on thin sections (i.e. from approximately the same place of the skeleton).^1";
- 6532 s[6529] = "STEININGER F.F., MARONDE D. (1997).- Staedte unter Wasser - 2 Milliarden Jahre, Begleitheft zur gleichnamigen Ausstellung im Naturmuseum Senckenberg.- Kleine Senckenberg-Reihe 24; 186 pp; 160 figs.- FC&P 26-2, p. 6, ID=3879^Topic(s): exhibition catalogue; reefs; Systematics: ; Stratigraphy: ; Geography: ^Exhibition catalogue of the Senckenberg-Museum (Frankfurt am Main) incorporating 25 contributions of German reef-scientists compiled within the scope of the International Year of the Reef 1997. This booklet is meant as a catalogue to the special exhibition of the same name that can be visited until November 16, 1997 in the Senckenberg-Museum (Frankfurt am Main). It is about reefs, those spectacular settlements below the sea-level, which were built for example by corals, sponges and bivalves. It gives details on reefs and their constructors during the "Erdgeschichte". The first reefs developed at least two billion years ago, so called stromatolite-reefs,

which are the most important reefal structures at that time. Other types of fossil reefs and their constructors, for example coral reefs of the Devonian Era or the fascinating rudist-reefs of the Cretaceous, are described. Information about excursions to several localities of fossil reefs in Germany is given. Not only fossil reefs are considered, living coral reefs and the role they play for mankind (fishery, biological resources for pharmaceutical products, a.s.o.) are also taken into account. Several contributions cover the endangerment of recent reefs, caused by pollution of the oceans, the cut down of tropical rain forests or excessive tourism and give advice for travellers, visiting those areas, to save the marine rainforests. The booklet presents the results of research-projects within the scope of the development of reefs, promoted by the Deutsche Forschungsgemeinschaft (DFG). Articles are written in colloquial German and give an extensive information on the grand constructors below the sea not only for Paleontologists or Geologists but especially for the interested laymen. [translated from Natur und Museum 127, 9]";

6533 s[6530] = "OEKENTORP K. (1998).- Fossilien in der Sakralkunst - die Meistermann-Fenster im Paulus-Dom zu Muenster - Fossils in Ecclesiastical Art - The Windows of Meistermann in St. Paul's Cathedral, Munster.- N. Jb. Geol. Palaont. Abb. 208: 663-683.- FC&P 27-2, p. 46, ID=3902Topic(s): ecclesiastical art; fossils; Systematics: ; Stratigraphy: ; Geography: ^Fossils have already made their entry into the visual arts. Their usage in ecclesiastical art is doubtlessly novel. The new church windows in the choir of St. Paul's cathedral in Munster may even be unique. Designed by George Meistermann, perhaps the most important German glass painter of this century, the windows illustrate X-ray-photographs of fossils from the Hunsruck-shales of Bundenbach. This peculiarity within ecclesiastical art deserves treatment for its paleontological value. Meistermann surely was aware of the nature of fossils and knew of the importance of fossils in understanding the history of life and its evolution. Thus, the fossils illustrated in the St. Paul's cathedral windows reflect a further meaning: the representation of the perception of natural sciences within the arena of ecclesiastical thought.^1";

6534 s[6531] = "LATHUILLIERE B. (1998).- Visite des carrieres d'Euville et de Pagny sur Meuse.- Bulletin soc.geol. de l'Ardeche 178, 11 pp.- FC&P 28-1, p. 15, ID=3956Topic(s): geology; Systematics: ; Stratigraphy: ; Geography: ^^1";

6535 s[6532] = "BOLSHAKOVA L.N., BONDARENKO O.B., HECKER M.R., DUBATOLOV V.N., ZHURAVLEV, A.YU., ILINA T.G., ROZANOV A.YU., SAYUTINA T.A., SOKOLOV B.S., SYTOVA V.A., TESAKOV YU.I., ULITINA L.M., CHUDINOVA I.I., (1997).- Doroty Hill (1907-1997).- Paleontologicheskii Zhurnal 1997, 6: 111-112.- FC&P 28-1, p. 17, ID=3957Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^^1";

6536 s[6533] = "STANLEY S.M., HARDIE L.A. (1998).- Secular oscillations in the carbonate mineralogy of reef-building and sediment-producing organisms driven by tectonically forced shifts in seawater chemistry.- Palaeogeography, Palaeoclimatology, Palaeoecology 144: 3-19. [see also GSA today 9, 2: 1-7].- FC&P 28-1, p. 54, ID=3996Topic(s): aragonite - calcite epochs; carbonate mineralogy, calcifying organisms; Systematics: ; Stratigraphy: ; Geography: ^The primary mineralogy of oolites and early marine carbonate cements led Sanberg (Nature 305: 19-22) to divide the Phanerozoic Eon into three intervals of aragonite seas and two intervals of calcite seas. Hardie (Geology 24: 279-283) has shown that these oscillations, together with synchronous oscillations in the mineralogy of marine potash evaporites, can be explained by secular shifts in the Mg/Ca ratio of sea water driven by changes in the spreading rates along mid-ocean ridges. The Hardie model also predicts that high Mg-calcite

- should precipitate along with aragonite as it does in today's aragonite sea. We have encountered oscillations in the carbonate mineralogy of hypercalcifying organisms (ones that have produced mass skeletons, large reefs, or voluminous bodies of sediment) that correspond to Sandberg's aragonite seas and that are predicted by the Hardie model. Particular groups of corals, sponges, and algae appear to have been dominant reef builders only when favored by an appropriate Mg/Ca ratio in sea water. [part of extensive summary]^1";
- 6537 s[6534] = "STEARNS C.W. (1999).- Easy access to doubtful taxonomic decisions.- *Palaeontologia Electronica* 02, 1: 4p.- FC&P 28-2, p. 39, ID=4038Topic(s): taxonomy databases; databases; Systematics: ; Stratigraphy: ; Geography: ^The answers to specific questions addressed to paleontological databases will depend on the taxonomic biases of those entering the data. Recent revision of stromatoporoid genera has reduced generic diversity of Paleozoic stromatoporoids by one-third and affected both temporal diversity trends and paleogeographic diversity distribution. Revision of the genus *Amphipora* is used to illustrate the consequences of adopting a taxonomic philosophy of 'lumping' for studies in generic and specific diversity. The regulation of free access to databases on the internet has been studied by committees of the U. S. Congress and the U. N. World Intellectual Property Organization.^1";
- 6538 s[6535] = "LOSER H., LATHUILIERE B. (1993).- Die Struktur taxonomischer Daten in der Palaeontologie und ihre Verarbeitung in der Datenbasis.- *Beiträge z. Math. Geol. u. Geoinformatik* 5: 165-172.- FC&P 23-1.1, p. 93, ID=4051Topic(s): databases paleontological; paleontological data; Systematics: ; Stratigraphy: ; Geography: ^The structure of a data base for handling taxonomic data of paleontology is built up on the basis of the Rules of Zoological Nomenclature. The authors show that the successful use of data banks depends on their structure and that it is necessary to observe certain rules and principles of design. Numerous practical tips are given for readers who wish to build up their own data banks. The system was first used to store the data of the scleractinian corals from the Cretaceous. Several paleontologists prepare or consider to use the system for other fossil animal groups (foraminifera, paleozoic corals), too.^1";
- 6539 s[6536] = "DAUPHIN Y., PERRIN C. (1992).- Mise en évidence de la présence de matière organique dans un ciment d'aragonite botryoidale par spectrométrie infrarouge à transformée de Fourier (FTIR).- *N. Jb. Geol. Pal.* 186, 3: 301-319.- FC&P 23-1.1, p. 11, ID=4055Topic(s): aragonite cements; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6540 s[6537] = "TSIEN H.-H. (1994).- Contribution of reef building organisms in reef carbonate construction.- *Courier Forschungsinstitut Senckenberg* 172 [Oekentorp-Kuester P. (ed.) *Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera*, Vol. 2]: 95-102.- FC&P 23-1.1, p. 15, ID=4067Topic(s): reef-building processes; reef builders; Systematics: ; Stratigraphy: ; Geography: ^The reef phenomenon is essentially a biological phenomenon; therefore, it is important to emphasize its biological and ecological aspects in terms of reef construction. However, the role of organisms in the construction of a reef is manifold. Many organisms play more than one role in the production of reef carbonate. They may produce reef carbonates, either independently or by cooperation with other groups of organisms. The ways in which organisms contribute to reef construction can be classified as follows: 1. Framework construction: Production of solid reef bodies with heavily calcified colonies. 2. Consolidation: Cryptic reef organisms occur in cavities and interstices. They encrust and bind reef colonies to consolidate the reef framework. 3. Binding: Encrusting organisms overgrow and bind blocks and debris together to form rigid reef carbonates. 4. Baffling: Branching colonies can slow down water movement and allow sediments to

settle. 5. Stabilizing: Lamellar organisms may cover the debris or loose sediments and would protect them, thus enabling their rapid cementation to form rigid reef carbonate. 6. Biocementing: In a protected environment, the colonization of microorganisms can produce large quantities of micrite cement as metabolic byproducts, which would fill the interstices and cement the debris and blocks into a solid reef carbonate. 7. Forming reef carbonate contributors: In clear water environment, microorganisms can immediately form important quantities of self-supporting rigid micritic reef carbonates. 8. Contribution to sedimentation: Their debris may become sediment. The vast quantities of blocks and debris produced by organisms that fill interstices of the frameworks of reef bodies help to increase the reef volume. 9. Co-building: Forming of reef carbonate by cooperation of several different organisms.^1";

6541 s[6538] = "LOSER H., LATHUILIERE B. (1994).- Data banks in palaeontology and the need for standardization.- Courier Forschungsinstitut Senckenberg 172 [Oekentorp-Kuester P. (ed.) Proceedings of the VI. International Symposium on Fossil Cnidaria and Porifera, Vol. 2]: 419-427.- FC&P 23-1.1, p. 26, ID=4098^Topic(s): databases paleontological; paleontological data; Systematics: ; Stratigraphy: ; Geography: ^Personal computers are increasingly used for scientific work. In palaeontology they are employed mainly for building up data banks on literature and localities, as well as on taxa with their morphological characteristics. Compared with card files and lists, data banks offer the following advantages: - They are not sorted according to a single criterion but allow universal searching according to all criteria. - They permit rapid access to information. - Several data banks can be interlinked. The acquisition of data is mostly a time-consuming process. In order to enable data banks to be exchanged without difficulty and thus to obviate the need for other institutions having to collect the same data all over again, colleagues are requested to consider the problem of compatibility in their choice of computers and data bank systems. Different computer systems and data formats have so far hampered exchanges. We therefore suggest introducing a data structure standard (especially for IBM compatible personal computers under the operating system MS-DOS).^1";

6542 s[6539] = "WOOD R.A. (1993).- Nutrients, predation, and the history of reef-building.- Palaios 8: 526-543.- FC&P 23-2.1, p. 69, ID=4186^Topic(s): geohistory; reefs; Systematics: ; Stratigraphy: ; Geography: ^The trophic structure of modern tropical benthic communities, especially reefs, is profoundly influenced by ambient nutrient levels and resultant predator characteristics. In oligotrophic regimes the presence of abundant specialist grazers promotes succession and yields climax-stage communities. Such communities produce the classic "framework" reef dominated by large, heavily calcified phototrophs and multiserial mixotrophs. These primary producers bear many antipredator adaptations and have a marked preference for hard-substrates. Increasing nutrient levels favor a transition in the benthos from photo- and mixotrophs via benthic algae to soft-substrate communities of solitary or uniserial heterotrophs feeding on planktonic primary producers. Under such high nutrient conditions, small heterotrophs are perpetually superior competitors, thus maintaining assemblages which resemble pioneer stages. Here, the history of Phanerozoic reef-building is reassessed according to an analysis of trophic structure. Broad global patterns may be largely explained by changes in nutrient availability. Differing rates of oceanic circulation linked to climatic fluctuations and sea-level changes determined the range of trophic regimes available in shallow marine tropical habitats. Most Phanerozoic reefal buildups are revealed as soft-substrate dwelling heterotrophic communities and as such were not well-adapted to oligotrophic conditions: they were trophically quite unlike modern coral reefs and had markedly different

environmental requirements. Prolonged phases when heavily calcified multiseriate metazoans, although available, did not form framework reefs are postulated as times when few oligotrophic regimes were present in tropical shallow seas, i.e., most of the early Carboniferous, Permian and mid-late Cretaceous. Acquisition of mixotrophic nutrition allowed invasion of previously inaccessible oligotrophic environments, but current evidence suggests that photosymbiosis was not acquired by reef-building organisms until the early to mid-Mesozoic onwards, with the possible exception of the mid-Palaeozoic. This may have been in response to increasing predation pressure and appears to have been facilitated by the creation of extensive oligotrophic regimes. The resilience of Tertiary scleractinian coral reefs to climatic vicissitudes might be largely explained by the rise of anti-fouling grazers, especially fish, during this time.¹;

6543 s[6540] = "KEUPP H., JENISCH A., HERRMANN R., NEUWEILER F., REITNER J. (1993).- Microbial Carbonate crusts - a Key to the Environmental Analysis of Fossil Spongiolites? .- Facies 29: 41-54.- FC#038;P 23-1.1, p. 88, ID=4203Topic(s): carbonates microbial; microbial crusts; Systematics: ; Stratigraphy: ; Geography: ^Morphological and geochemical comparisons between modern cryptic microbialites from Lizard Island / Great Barrier Reef and fossil counterparts in the Upper Jurassic (Southern Germany, Dobrogea / Romania) and late Lower Cretaceous (Aptian / Albian from Cantabria / Spain) spongiolitic environments show that there are common factors controlling the crust formations mostly independent of light despite of diverging (paleo) oceanographic positions as well as relationships of competitors. Factors such as increased alkalinity, oligotrophy, and reduced allochthonous deposition are of major importance. Thrombolitic microbialites are interpreted as biologically induced and therefore calcified in isotopic equilibrium with the surrounding sea water. Corresponding with shallowing upward cycles, microbial mats which produce stromatolitic peloidal crusts become more important. Different bio-markers are introduced for the first time extracted and analyzed from spongiolitic limestones of lower Kimmeridgian age from Southern Germany.¹;

6544 s[6541] = "DING YUNJIE, XIA G.Y., XU S.Y., ZHAO S.Y., LI L., ZHANG Y.X. (1991).- The Carboniferous-Permian boundary in China.- Geological Publishing House, Beijing, 170 pp. [in Chinese, with English abstract].- FC#038;P 23-2.1, p. 44, ID=4246Topic(s): stratigraphy; Systematics: ; Stratigraphy: ; Geography: ^^1";

6545 s[6542] = "KERSHAW S. (1994).- Classification and geological significance of biostromes.- Facies 31: 81-92.- FC#038;P 24-1, p. 87, ID=4450Topic(s): classification of biostromes; reefs; Systematics: ; Stratigraphy: ; Geography: ^Biostrome and bioherm were described as terms by Cumings (1932), and bioherm has become synonymous with reef because of the discrete mound or lens shape in vertical section. The phrase "reefs and biostromes" is common in the literature and emphasises that biostromes are normally regarded explicitly as not reefal structures, because of the lack of topographic relief and common absence of a framework. However, the position adopted here is that bioherm and biostrome are most usefully applied to simply describe the outline shape of an organic accumulation, and not to denote any particular inherent internal structural organisation. Furthermore, the view here is that biostromes are most usefully considered as single organic layers (i.e. beds). Observations of biostromes of numerous ages and settings indicate that a considerable variety of internal structure exists within the outline which defines biostrome. Often, the structure comprises frameworks and dense clusters of in-place organisms and is just as much "reefal" as similar constructions with a biohermal shape. In other cases biostromes consist of beds of skeletal debris consistent with the concept of biostrome used by many workers. These

differences demonstrate that classification of biostromes is needed in order to allow comprehensive palaeoenvironmental analysis, and highlight the long-standing problem of using reef to describe organic buildups. For biostromes, autobioströme, autoparabioströme, and parabioströme are introduced to describe a continuum from structures where the constructing organisms are mostly in place (autobioströmes), to mostly debris of the structure (parabioströmes), with autoparabioströme as intermediate. Allobioströme, describes biostromes formed of material derived from allochthonous sources, for example skeletal plankton sedimented onto the sea bed. Most biostromes are of calcareous construction and their composition is most adequately described by existing limestone classification terminology. [part of extensive summary]^1";

- 6546 s[6543] = "LELESHUS V.L. (1994).- The cycles of the continuous sea sedimentation in Middle Asian Phanerozoic.- Doklady Rossiiskoy Akademii nauk 1994, 3: 345-347. [in Russian].- FC&P 24-1, p. 48, ID=4452^Topic(s): geohistory; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6547 s[6544] = "DAI YONG-DING, LIU TIE-BING, SHEN JI-YING (1994).- Bio-ore formation and biomineralization.- Acta Palaeontologica Sinica 33, 5: 575-592.- FC&P 24-1, p. 55, ID=4461^Topic(s): biomineralization; Bio-ore Formation; Systematics: ; Stratigraphy: ; Geography: ^About fifty-five kinds of biominerals are listed and divided into four stages of amorphous, intermediate, matured and fossilized facies. The biominerals are mainly characterized by weak alkali and weak acid salts, calcareous compounds (25 kinds) oxides (12) and oxysalts (32), hydrated (25) or hydroxylated (6) minerals and uniaxial negative crystals or approximately the like. Based on comparison of the element abundance sequence with that in Lithosphere (Ls) and Biosphere (Bs) the biomineral elements can be divided into six groups: (1) Bs Ls Bm-Zn, Cu; (2) Bs Bm Ls - O, C, H, N, S, Cl, As, Se; (3) Bm Bs Ls - P, Br, I, B; (4) Bm Ls Bs - Ca, Sr; (5) Ls Bm Bs - Si, Al, Mg, Ba, F, Pb, Sn, Fe, Ti, Mn, V, Cr, Ni, Co; and (6) Ls Bs Bm - Na, K. Calcium is the most important metallic element in biomineral body because it has a greater cationic radius than Mg, Fe and Na that is demanded by large complex anions, weaker alkalinity than K and Na, and a larger abundance than Sr and Ba. [part of extensive summary]^1";
- 6548 s[6545] = "STEPHENS L.D., CALDER D.R. (1992).- John McCrady of South Carolina: pioneer student of North American Hydrozoa.- Archives of Natural History 19, 1: 39-54.- FC&P 24-1, p. 61, ID=4473^Topic(s): biographical; biographical; Systematics: ; Stratigraphy: ; Geography: ^South Carolina naturalist John McCrady (1831-1881), a protege of Louis Agassiz, was a pioneer in the study of Hydrozoa in North America. McCrady undertook investigations on hydrozoan life cycles, and provided thorough descriptions of most taxa. At least 20 of the families, genera, and species that he described and named are still recognised as valid. His ideas concerning classification and nomenclature within the Hydrozoa were remarkable for their time. As a result of the American Civil War, personal problems, cultural predilections, and preoccupation with other scientific interests, McCrady discontinued his hydrozoan research after 1860. Thereafter, his efforts in science were devoted to formulating a "Law of Development";, and to criticism of Darwinian theory.^1";
- 6549 s[6546] = "AYALON A., LONGSTAFFE F.J. (1995).- Stable isotope evidence for the origin of diagenetic carbonate minerals from the Lower Jurassic Inmar Formation, southern Israel.- Sedimentology 42, 1: 147-160.- FC&P 24-1, p. 82, ID=4515^Topic(s): stable isotopes; Systematics: ; Stratigraphy: ; Geography: ^The oxygen isotope compositions of diagenetic carbonate minerals from the Lower Jurassic Inmar Formation, southern Israel, have been used to identify porewater types during diagenesis. Changes in porewater composition can be related to major geological events within southern

Israel. In particular, saline brines played an important role in late (Pliocene-Pleistocene) dolomitization of these rocks. Diagenetic carbonates included early siderite (d18OSMOW = +24.4 to +26.5‰; d13CPDB = -1.1 to +0.8‰), late dolomite, ferroan dolomite and ankerite (d18OSMOW = +18.4 to +25.8‰; d13CPDB = -2.1 to +0.2‰), and calcite (d18OSMOW = +21.3 to +32.6‰; d13CPDB = -4.2 to +3.2‰). The petrographic and isotopic results suggest that siderite formed early in the diagenetic history at shallow depths. The dolomitic phases formed at greater depths late in diagenesis. Crystallization of secondary calcite spans early to late diagenesis, consistent with its large range in isotopic values. A strong negative correlation exists between burial depth (temperature) and the oxygen isotopic compositions of the dolomitic cements. In addition, the d18O values of the dolomitic phases in the northern Negev and Judea Mountains are in isotopic equilibrium with present formation waters. This behaviour suggests that formation of secondary dolomite post-dates the tectonic activity responsible for the present relief of southern Israel (Upper Miocene to Pliocene) and that the dolomite crystallized from present formation waters. Such is not the case in the Central Negev. In that locality, present formation waters have much lower salinities and d18O values, indicating invasion of freshwater, and are out of isotopic equilibrium with secondary dolomite. Recharge of the Inmar Formation by meteoric water in the Central Negev occurred in the Pleistocene, and halted formation of dolomite.¹¹;

6550 s[6547] = "HUSSNER H. (1994).- Reefs, an elementary principle with many complex realizations.- *Beringeria* 11: 1-99.- FC&P 24-1, p. 85, ID=4521Topic(s): feedback circuits; reefs; Systematics: ; Stratigraphy: ; Geography: ^In this work reefs are viewed as the result of self enhancing feedback circuits. Reef growth comprises enhanced production of carbonate compared to the surroundings and a better fixation of this carbonate as compared to the surroundings. Moreover both of these elementary principles of reef-growth enforce each other. This makes reefs different from physically dominated sedimentary processes. In reefs biological programs in multigeneration communities dominate the sedimentation process, which demand and allow upward growth rather than isotropic distribution. These principles are demonstrated in four case studies. [part of extensive summary]¹¹;

6551 s[6548] = "COPPER P. (1994).- Paleocene 14. Organisms and carbonate substrates in marine environments.- *Geoscience Canada* 19, 3: 97-112.- FC&P 24-2, p. 36, ID=4532Topic(s): benthos, carbonates; organisms, carbonates; Systematics: ; Stratigraphy: ; Geography: ^Carbonate substrates are normally produced in situ by organisms that live above, at or below the sediment-water interface; that is they represent a relatively self-enclosed ecosystem. During the last 3.5 billion years, there have been major cyclical variations in the global carbonate sediment budget in the oceans, and organisms have been, to a large extent, directly responsible for these variations. At the substrate level, there is a direct interplay between the planktic and nektic organisms that occupy the watermass above, and the benthic organisms that utilize the substrate as a food resource and domicile below though these relationships depend more on grain size, nutrient in the sediment, pore chemistry, and the general nature of the substrate (texture, fabric, etc.) than it does on the mineralogical differences between the siliciclastic or calcium carbonate composition of the sedimentary grains. This synthesis is an attempt to look at both the macrocosmos and microcosmos of organisms and the carbonate substrates they occupy. It will exclude the reef and intertidal-subtidal microbial mat environments, as well as terrestrial fresh water ecosystems. Trace fossils will be treated only in passing because of their importance to recognition of sediment cycling. Fossil organisms provide many clues to the ancient marine environment, as their distribution is limited by

physico-chemical factors such as temperature light, substrate and watermass chemistry (pH, Eh, solubles, salinity, etc.), gases (oxidizing, reducing etc.) ambient physical energy, random or predictable catastrophic effects (tides, storms, sea level change, etc.), the nature of the substrate (hard, soft, mobile, static, smooth, rough, grain size, etc.), and biological factors, such as their own functional limitations and relationships to other organisms occupying the substrate. [original introduction]^1";

6552 s[6549] = "TRIBBLE G.W., ATKINSON M.J., SANSONE F.J., SMITH S.V. (1994).- Reef metabolism and endo-upwelling in perspective.- Coral Reefs 13, 4: 199-201.- FC&P 24-2, p. 81, ID=4563^Topic(s): endo-upwelling; reefs; Systematics: ; Stratigraphy: ; Geography: ^Rougerie and Wauthy (1993) have recently advanced the concept of endo-upwelling to explain high rates of metabolism for oceanic coral reefs and atolls. The principal hypothesis advanced in this and previous papers (Rougerie and Wauthy 1986, 1988; Rougerie et al 1992) is that geothermal heat deep within the basalt and limestone underlying Pacific island reefs, stimulates nutrient-rich Antarctic Intermediate Water at depths of several hundred meters to flow upward through the reef structure. The emergence of this nutrient-rich water in the shallow surface water of reefs is used to explain high rates of carbon fixation, commonly measured on reef flats. There are two problems with this hypothesis, one of a general nature, and one that is specific to the data presented: (1) productivity on reefs does not require a large supply of "exotic" nutrients and (2) the data on nutrient concentration of interstitial water are easily explained by the oxidation of organic matter within the reef structure and sediments. [first fragment of a polemical short paper]^1";

6553 s[6550] = "WAGNER P.J. (1995).- Stratigraphic tests of cladistic hypotheses.- Paleobiology 21, 2: 153-178.- FC&P 24-2, p. 81, ID=4564^Topic(s): cladistics, stratigraphic testing; cladistics; Systematics: ; Stratigraphy: ; Geography: ^Cladograms predict the order in which fossil taxa appeared and, thus, make predictions about general patterns in the stratigraphic record. Inconsistencies between cladistic predictions and the observed stratigraphic record reflect either inadequate sampling of a clade's species, incomplete estimates of stratigraphic ranges, or homoplasy producing an incorrect phylogenetic hypothesis. A method presented in this paper attempts to separate the effects of homoplasy from the effects of inadequate sampling. Sampling densities of individual species are used to calculate confidence intervals on their stratigraphic ranges. The method uses these confidence intervals to test the order of branching predicted by a cladogram. The Lophospiridae ("Archaeogastropoda") of the Ordovician provide a useful test group because the clade has a good fossil record and it produced species over a long time. Confidence intervals reject several cladistic hypotheses that postulate improbable "ghost lineages". Other hypotheses are acceptable only with explicit ancestor-descendant relationships. The accepted cladogram is the shortest one that stratigraphic data cannot reject. The results caution against evaluating phylogenetic hypotheses of fossil taxa without considering both stratigraphic data and the possible presence of ancestral species, as both factors can affect interpretations of a clade's evolutionary dynamics and its patterns of morphologic evolution.^1";

6554 s[6551] = "PRATT B.R. (1995).- The origin, biota and evolution of deep-water mud-mounds.- Special Publications International Association of Sedimentologists 23: 49-123.- FC&P 24-2, p. 96, ID=4601^Topic(s): mud mounds, origin biota evolution; mud mounds, deep-water; Systematics: ; Stratigraphy: ; Geography: ^[minor contributions of stromatoporoids to Silurian and Devonian mounds is mentioned on pages 65-75, and to Mesozoic structures on pages 89 and 94; they are also mentioned in the review of the biota of the mounds on pages 101 and 107 and plotted on figures 57

- and 58]^1";
- 6555 s[6552] = "REITNER J., NEUWEILER F. et al. (1995).- Mud mounds: a polygenetic spectrum of fine-grained carbonate buildups.- Facies 32: 1-70.- FC&P 24-2, p. 103, ID=4616^Topic(s): mud mounds, polygenetic; reefs, mud mounds; Systematics: ; Stratigraphy: ; Geography: ^1This research report contains nine case studies (part II to X) dealing with Palaeozoic and Mesozoic mud mounds, microbial reefs, and modern zones of active micrite production, and two parts (I and XI) summarizing the major questions and results. The formation of different types of in situ formed micrites (automicrites) in close association with siliceous sponges is documented in Devonian, Carboniferous, Triassic, Jurassic and Cretaceous mounds and suggests a common origin with a modern facies found within reef caves. Processes involved in the formation of autochthonous micrites comprise: (i) calcifying mucus enriched in Asp and Glu, this type presumably is linked to the formation of stromatolites, thrombolites and massive fabrics; (ii) protein-rich substances within confined spaces (e.g. microcavities) result in peloidal pockets, peloidal coatings and peloidal stromatolites, and (iii) decay of sponge soft tissues, presumably enriched with symbiotic bacteria, lead to the micropeloidal preservation of parts of former sponge bodies. As a consequence, there is strong evidence that the primary production of micrite in place represents the initial cause for buildup development. The mode of precipitation corresponds to biologically-induced, matrix-mediated mineralization which results in high-Mg-calcites, isotopically balanced with inorganic cements or equilibrium skeletal carbonates, respectively. If distinct automicritic fabrics are absent, the source or origin of micrite remains questionable. However, the co-occurring identifiable components are inadequate, by quantity and physiology, to explain the enhanced accumulation of fine-grained calcium carbonate. The stromatolite reefs from the Permian Zechstein Basin are regarded as reminiscent of ancestral (Precambrian) reef facies, considered the precursor of automicrite / sponge buildups. Automicrite / sponge buildups represent the basic Phanerozoic reef type. Analogous facies are still present within modern cryptic reef habitats, where the biocalcifying carbonate factory is restricted in space.^1";
- 6556 s[6553] = "LELESHUS V.L., ZLOBIN Yu.G. (1971).- Experimental specific determination by aid of computer.- Izv. A.N. Tadjik. SSR., Otd. biol. nauk. 1, 42: 59-63.- FC&P 2-1, p. 16, ID=4719^Topic(s): species recognition, numerical taxonomy; species recognition; Systematics: ; Stratigraphy: ; Geography: ^1";
- 6557 s[6554] = "LELESHUS V.L. (1971).- Rate of evolution of paleozoic organisms.- Doklady A.N. Tadjik. SSR 14, 7: 51-55.- FC&P 2-1, p. 17, ID=4724^Topic(s): phylogeny, evolution rate; Systematics: ; Stratigraphy: ; Geography: ^1";
- 6558 s[6555] = "YONGE C.M. (1971).- Thomas G. Goreau: A Tribute.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: pp XXI-XXXV.- FC&P 2-2, p. 11, ID=4746^Topic(s): biographical; Thomas G. Goreau, in memoriam; Systematics: ; Stratigraphy: ; Geography: ^1";
- 6559 s[6556] = "BARNES J., BELLAMY D.J., JONES D.J., WHITTON B.A., DREW E.A., KENYON L., LYTHGOE J.N., ROSEN B.R., (1971).- Morphology and Ecology of the Reef Front of Aldabra.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 87-114.- FC&P 2-2, p. 11, ID=4750^Topic(s): reefs, ecology; Systematics: ; Stratigraphy: ; Geography: ^1";

- 6560 s[6557] = "FLEISSNER H., FLEISSNER G. (1971).- The Coral Gardens of Shadwan.- In Regional Variation in Indian Ocean Coral Reefs [D. R. Stoddart and Sir M. Yonge (eds): Proceedings of the 28th Symposium of The Zoological Society of London; published for The Zoological Society of London by Academic Press, London and New York]: 535-539.- FC&P 2-2, p. 12, ID=4760^Topic(s): reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6561 s[6558] = "WANG CHAOSIANG (1972).- Biography of Professor Ting-Ying H. Ma.- Acta Geologica Taiwanica 15: 1-8.- FC&P 2-2, p. 25, ID=4835^Topic(s): biographical; biography of T.-Y. H.Ma; Systematics: ; Stratigraphy: ; Geography: ^[listed are the papers of T.H. Ma (years 1932-1970)]^1";
- 6562 s[6559] = "BIRENHEIDE R. (1973).- Korallen-Duennschliffe.- Natur u. Museum 103, 7: 257-261.- FC&P 3-1, p. 11, ID=4837^Topic(s): research techniques; thin sections; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6563 s[6560] = "KUHN-SCHNYDER E. (1973).- Louis Agassiz (1807-1873) mit eine Portrait.- Mitteil. Palaeont. Inst. Univ. Zuerich 84 / Jber. u. Mitt. Oberrh. Geol. Ver. N.F. 55: 133-144.- FC&P 3-1, p. 12, ID=4839^Topic(s): biographical; Agassiz; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6564 s[6561] = "SCRUTTON C.T., HIPKIN R.G. (1973).- Long-term changes in the rotation rate of the Earth.- Earth. Sci. Rev. 9: 259-274.- FC&P 3-1, p. 13, ID=4842^Topic(s): Earth rotation rate, sclerochronology; Earth rotation rates; Systematics: ; Stratigraphy: ; Geography: ^In the last decade, major advances in both observational and theoretical fields have taken place in our understanding of the rotation of the Earth. with the adoption of Atomic Time, the rotation rate can now be measured with unprecedented precision and independently of planetary or lunar motions. Information from earlier observations is also being recovered more accurately: independent analyses and new data from ancient eclipse observations have increased confidence in the controversial results obtained earlier. Perhaps the most outstanding development is the tentative measurement of the mean rotation rate in the remote geological past, made possible by the study of periodicities in the skeletal growth of fossil organisms. The improved data have exposed new geophysical problems and accentuated earlier ones. An unexplained acceleration of the Earth's rotation is confirmed by the re-examination of ancient eclipse records. In addition, Darwin's theory of tidal friction now has the arbitrariness of its time-scale replaced by data from modern astronomical observations so that, in spite of various theoretical refinements, it leads to the unacceptable prediction of a catastrophic period in the history of the Earth-Moon system in the mid-Precambrian. Information from the study of fossil growth increments can make a vital contribution in both these problems. The palaeontological data have been gathered mainly from corals and bivalves, although several other groups with accretionary skeletons provide a few figures and are potentially useful. The unexpected cosmogonic applications of these data have stimulated research into the physiological and particularly the ecological factors controlling incremental growth in these organisms, especially the bivalves. The main problems center on the recording accuracy and the definition of the growth increments. The difficulty of eliminating irregular interference and of recovering geophysically useful measurements from the fossil record is discussed and we have tried to assess the reliability of the information already derived from this source.^1";
- 6565 s[6562] = "BOARDMAN R.S., CHEETHAM A.H., OLIVER W.A.jr (eds) (1973).- Animal colonies-development and function through time.- Dowden, Hutchinson and Ross, Inc., Stroudsburg, Pennsylvania (overseas by Wiley-Interscience).- FC&P 3-1, p. 14, ID=4843^Topic(s): colonial organisms; colonial organisms; Systematics: ; Stratigraphy: ; Geography: ^This volume brings together

the views of zoologists and paleontologists specializing in the study of metazoan colonies. Contents include expanded versions of papers from the symposium on animal colonies held at the November 1971 meeting of the Geological Society of America and the Paleontological Society, as well as additional commentary and papers of a review nature which provide an overall perspective. The contributors examine the basic nature of metazoan colonies, review much of the existing literature, and offer new morphologic data from both fossil and modern animals. The papers present new information on the development and function of key groups of living and fossil colonial animals. New descriptive data permit evaluation of the concept of coloniality as applied to the Porifera, Coelenterata, Bryozoa and Hemichordata (Class Graptolithina). The fossil records of these phyla are used to document the evolution of the colonial habit. The text is extensively illustrated with 140 line drawings and over 200 photographs. [from publishers notice]^1";

6566 s[6563] = "LAPORTE L.F. (1974).- Reefs in Time and Space.- SEPM Special Publication 18; 256 pp.- FC&P 3-1, p. 14, ID=4844^Topic(s): history; reefs; Systematics: ; Stratigraphy: ; Geography: ^This is a series of generally excellent papers on several aspects of living and fossil reefs. "Articles by Bloom, Purdy, and Goreau and Land emphasize the significance of Pleistocene events in determining present day reef geometry". Purdy's long paper (68pp) is especially notable in challenging some aspects of "Darwinian" theory on reef origin. He argues that "many, if not most, of the shape attributes of modern reefs are fundamentally karst-induced rather than growth-induced", and provides a wealth of experimental and observational data to support his conclusions. The paper by Heckel (65pp) is a thorough and excellent review of reefs and "reefs" through geologic time. He discusses terminology and reef classification with emphasis on differentiating between description and interpretation. After a system by system review of "reefs" in the geologic record and of the major biological contributors to these structures, he discusses modern analogs and origins. The papers by Krebs and by Bosellini and Rossi summarize their studies of classic ancient reef complexes of central Europe. Matthews reviews and analyzes the complexities of diagenesis in recent and ancient "reefs". Contents of the symposium are as follows: * Geomorphology of Reef Complexes, by Arthur L. Bloom; * Reef configurations: Cause and effect, by Edward G. Purdy; * Fore-Reef morphology and depositional processes, North Jamaica, by Thomas F. Goreau and Lynton S. Land; * Carbonate Buildups in the Geologic Record: a Review, by Philip H. Heckel; * Devonian Carbonate Complexes of Central Europe, by Wolfgang Krebs; * Triassic Carbonate Buildups of the Dolomites, Northern Italy, by Alfonso Bosellini and Daniele Rossi; * A Process Approach to Diagenesis of Reefs and Reef Associated Limestones, by R.K. Matthews.^1";

6567 s[6564] = "ELLOY R. (1973).- Quelques aspects de la sédimentation récifale.- Bulletin Centre Rech. Pau SNPA 7, 1: 137-142.- FC&P 3-1, p. 16, ID=4850^Topic(s): sedimentology; reefs; Systematics: ; Stratigraphy: ; Geography: ^Les récifs ont existé depuis les temps les plus reculés. Ils constituent fréquemment des pièges pour les hydrocarbures aussi bien que pour les métaux. Malgré les changements écologiques survenus depuis le Protérozoïque, certains aspects du paysage récifal demeurent identiques à eux-mêmes, en particulier les morphologies des organismes ainsi que différentes formes géométriques des appareils (angles des talus). Ces critères constants sont utiles à la compréhension et à la prospection des récifs quel que soit leur âge.^1";

6568 s[6565] = "FRIEDMAN G.M. (1973).- Cementation in Reefs.- Bulletin Centre Rech. Pau SNPA 7, 1: 171-176.- FC&P 3-1, p. 17, ID=4852^Topic(s): cementation; reefs; Systematics: ; Stratigraphy: ; Geography: ^Dans les récifs on peut observer deux sortes de cimentation: sous-marine et subaérienne. * Dans

La cimentation sous-marine des récifs, l'aragonite et la calcite magnésienne oblitèrent progressivement les pores existants. Quand le pH devient élevé (approximativement 9,0-10,0) les grains de quartz, dans les récifs, sont remplacés par le CaCO₃ qui précipite aussi sous forme de ciment. Une telle augmentation du pH est un processus biologique. * Dans la cimentation subaérienne, l'aragonite des cristaux est progressivement dissoute dans les récifs qui se trouvent au-dessus du niveau de la mer. Cette dissolution continue jusqu'à ce qu'il ne reste que des enveloppes micritiques. Les enveloppes micritiques consistent originellement en calcite magnésienne mais elles deviennent de la calcite peu magnésienne pendant la diagénèse subaérienne. La dissolution de l'aragonite crée une porosité et une perméabilité extrêmement importante. La formation subséquente de la calcite sur les enveloppes micritiques réduit les vides des pores secondaires. ^1";

6569 s[6566] = "GLOCKHOFF C. (1973).- Geotectonic evolution and subsidence of Bahama Platform.- Bulletin geological Society of America 84, 10: 3473-3482.- FC&P 3-1, p. 17, ID=4854^Topic(s):carbonate platforms; Bahama Platform; Systematics: Stratigraphy: Geography: ^^1";

6570 s[6567] = "PURDY E.G. (1974).- Reef configurations: cause and effect.- SEPM Special Publication 18 [Leo Laporte (ed.): Reef in Time and Space]: 9-76.- FC&P 3-1, p. 18, ID=4857^Topic(s):reef morphologies, causes vs effects; reef morphologies; Systematics: Stratigraphy: Geography: ^It has been generally assumed that the deep borings on Pacific atolls have confirmed Darwin's theory of coral reef development which holds that continued subsidence results in the successive appearance of fringing reefs, barrier reefs and atolls. It is certainly true that the considerable thicknesses of shallow water carbonates encountered in these core holes necessitates subsidence; however it does not necessarily follow that this subsidence has resulted in the genetic succession of reef types advocated by Darwin. It is the purpose of the present paper to enlarge on an alternate theory first presented by MacNeil, and in so doing to demonstrate that many, if not most, of the shape attributes of modern reefs are fundamentally karst-induced rather than growth-induced. There can be little doubt that the carbonate platforms beneath most modern reefs have suffered some degree of subaerial exposure. This general inference is warranted by the apparent thinness of Holocene shallow water carbonate deposits in conjunction with the low stand of sea level during the Wisconsin glaciation. Thus it seems logical to conclude that most modern reefs have developed on a karst substrate. The occurrence of drowned sink holes a few hundred feet deep on several modern carbonate platforms supports the same conclusion and more importantly suggests a potential for the development of considerable solution relief. * Experiments with limestone blocks indicate the feasibility of solution development of the diagnostic cross-section morphology of both barrier reefs and atolls. Tropical karst landforms are suggestive of the same conclusion. All that is apparently required is a large surface area of gently dipping beds that is bordered on one or more sides by a relatively steep slope. The dissolving action of meteoric water differentially lowers the central area relative to that immediately adjacent to the steep slopes and results in a partially or completely rimmed solution basin. Subsequent rise in sea level permits coral colonization of both the solution rim and the residual karst prominences within the basin. The resulting barrier reef or atoll, with its satellite lagoon reefs, is thus formed without recourse to a prior history of reef development. The attributes of the reefs themselves support this interpretation. Special pleas have been advanced for many of these, but all seem related to the development of a karst solution basin. Thus, drowned "atolls" reflect drowned karst topography; reef passes originate as drainage breaches in the solution rim; faroes are a karst product of breaching; peripheral limestone islands are exposures of the

- fossil drainage divide; and spurs and grooves are expressions of lapies. These karst-induced differences in relief are perpetuated, and indeed accentuated, by reef growth, but reef growth per se has little to do with the basic configuration.^1";
- 6571 s[6568] = "BRANDON D.E. (1973).- Waters of the Great Barrier Reef Province.- In O.A. Jones & R. Endean (eds): Biology and Geology of Coral Reefs; Academic Press New York and London; vol. 1: Geology 1: 187-232.- FC&P 3-1, p. 22, ID=4868^Topic(s): reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6572 s[6569] = "MONSEUR G. (1974).- Rythme sédimentaire et minéralisations stratiformes dans l''environnement récifal.- Geol. Rundschau 63, 1: 23-40.- FC&P 3-2, p. 31, ID=4913^Topic(s): reefs vs stratiform ore deposits; reefs; Systematics: ; Stratigraphy: ; Geography: ^During the International Sedimentological Congress of Heidelberg (Germany), the author - in collaboration with his colleague J. Pel of the University of Liege (Belgium) - has emphasized the influence of the sedimentary rythm about the location of the stratiform ore deposits in some facies of the reef environment and has proposed a first synthesis of the relations between several stratiform deposits of varying mineralogy and different ages also associated with reef complexes. * In this paper, the author illustrates the sedimentological method used previously in resting principally on a comparative analysis of the ore conditions which characterize the stratiform lead zinc deposits of Reocin (Spain), Eastern Alps (Bavaria, Austria), Pine Point (Canada) and SE Missouri (United States).^1";
- 6573 s[6570] = "PURDY E.G. (1973).- Formes récifales: cause et effet.- Sciences de la Terre 18, 3: 245-255 ; Nancy.- FC&P 3-2, p. 35, ID=4925^Topic(s): reef morphologies, causes vs effects; reef morphologies; Systematics: ; Stratigraphy: ; Geography: ^Bien que les principes généraux de la théorie de Darwin sur le développement récifal soient acceptés, l''auteur suggère que la configuration actuelle des récifs est surtout conditionnée par une morphologie karstique préexistante acquise par les plates-formes carbonatées durant la glaciation pleistocene. L''expérimentation confirme la théorie selon laquelle une plate-forme carbonatée exposée à la dissolution subaérienne se modifiera, à l''échelle régionale, pour donner une dépression centrale limitée par un ressaut bordier. A une échelle plus locale, la morphologie karstique est déterminée par le climat: les climats tropicaux donnent une topographie de karst conique tandis que les climats tempérés engendrent un paysage à dolines. Ces reliefs karstiques submergés tous d''une transgression ultérieure, influencent la géométrie de nouveaux récifs; les barrières récifales s''installent sur les ressauts bordiers tandis que localement des récifs de type "patch" se développent sur les parties hautes des karsts coniques.^1";
- 6574 s[6571] = "MONSEUR G., PEL J. (1974).- Reef environment and Stratiform ore deposits (Essay of a synthesis of the relationship between them).- In G.C. Amstutz & A.J. Bernard (eds): Ores in sediments: 195-207; Berlin.- FC&P 3-2, p. 40, ID=4961^Topic(s): reefs vs stratiform ore deposits; reefs; Systematics: ; Stratigraphy: ; Geography: ^Comparative analysis of Givetian reef complexes from Belgium and Aptian reef complexes from the Santander province in Spain displays an identical sedimentary rhythm. The study of the stratiform Reocin lead-zinc deposit, located in Aptian dolostones from this Santander province, has disclosed genetic relations between mineralization and location in the reef complex. These relations are dependent on the sedimentary rhythm. This observation affords a basis for comparing several stratiform deposits of varying mineralogy and different ages, also associated with reef complexes. Sedimentological analysis leads to an examination of other deposits related with peri-reef facies and eventually to a conclusion concerning the paleogeographical distribution of stratiform

- mineralization within reef complexes.^^1";
- 6575 s[6572] = "MASLOV V.P. (1973).- Atlas porodoobrazuyushchikh organizmov [atlas of rock-forming organisms].- Nauka, Moskva: 265 pp., 20 figs.- FC&P 4-1, p. 16, ID=4994^Topic(s): atlas of fossils; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6576 s[6573] = "FLOOD P.G. (1974).- Sand movements on Heron Island - a vegetated sand cay, Great Barrier Reef Province, Australia.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 387-394.- FC&P 4-1, p. 18, ID=5032^Topic(s): reefs sedimentology; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6577 s[6574] = "BARTHEL K.W. (1974).- Black pebbles, fossil and recent on and near coral islands.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 395-400.- FC&P 4-1, p. 18, ID=5033^Topic(s): reefs sedimentology; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6578 s[6575] = "MCLEAN R.F. (1974).- Geologic significance of bioerosion of beach-rock.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 401-408.- FC&P 4-1, p. 19, ID=5034^Topic(s): bioerosion; bioerosion; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6579 s[6576] = "DAVIES P.J. (1974).- Cation electrode measurements in the Capricorn area, southern Great Barrier Reef Province.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 449-455.- FC&P 4-1, p. 19, ID=5038^Topic(s): ; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6580 s[6577] = "KONISHI K., OMURA A., NAKAMICHI O. (1974).- Radiometric coral ages and sea level records from the late Quaternary reef complexes of the Ryukyu Islands.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 595-613.- FC&P 4-1, p. 19, ID=5051^Topic(s): geochronometry, eustacy; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6581 s[6578] = "SMITH D.F. (1974).- Ecosystem model extraction, an alternative to model building.- In Proceedings of the Second International Symposium on Coral Reefs (22nd June to 2nd July 1973, Brisbane); Published by The Great Barrier Reef Committee; vol. 2: 671-681.- FC&P 4-1, p. 20, ID=5056^Topic(s): ecosystems models; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6582 s[6579] = "BLOOM A.L. (1974).- Geomorphology of reef complexes.- SEPM Special Publication 18 [L. Laporte (ed.): Reefs in Time and Space]: 1-7.- FC&P 4-1, p. 20, ID=5058^Topic(s): geomorphology; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6583 s[6580] = "HECKEL P.H. (1974).- Carbonate buildups in the geologic Record: a review.- SEPM Special Publication 18 [L. Laporte (ed.): Reefs in Time and Space]: 90-154.- FC&P 4-1, p. 20, ID=5060^Topic(s): review; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6584 s[6581] = "MATTHEWS R.K. (1974).- A process approach to diagenesis of reefs and reef associated limestones.- SEPM Special Publication 18 [L. Laporte (ed.): Reefs in Time and Space]: 234-256.- FC&P 4-1, p. 20, ID=5063^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: ; Stratigraphy: ; Geography: ^^1";

- 6585 s[6582] = "ABRAHAMIAN M.S., ARAKELIAN R.A., PAPOIAN A.S. (1973).- La limite entre le Dévonien et le Carbonifère en Transcaucasie méridionale.- VIIème Congrès International de Stratigraphie et de Géologie du Carbonifère, Krefeld (23-28 août 1971), Compte Rendu 2: 21 pp., 2 figs, 1 tabl.- FC&P 4-1, p. 29, ID=5091Topic(s): stratigraphy; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6586 s[6583] = "IVANOVA E.A. et al. (1972).- Catalogue des originaux conservés à l'Institut de Paléontologie de l'Académie des Sciences de l'URSS. Liste des travaux, 1ère partie: Invertébrés, Algues, Problematica, Paléoécologie.- Inst. Paléont. AN SSSR, Moscou; 210 pp.- FC&P 4-1, p. 32, ID=5103Topic(s): catalogue of type specimens; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6587 s[6584] = "BUYNOVSKIY A., KOCHANOVA M. (1973).- Ustesy hlavného dolomitu revuckej doliny a ich megalodontova fauna [Récifs de Hauptdolomite et la faune de mégalodontes de la vallée Revucka Dolina].- Geol. Prace. 60: 169-195.- FC&P 4-1, p. 42, ID=5159Topic(s): reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6588 s[6585] = "FAIRBRIDGE R.W. (ed.) (1975).- The Encyclopedia of world Regional Geology. Part I: Western Hemisphere (Including Antarctica and Australia).- Encyclopedia of Earth Sciences Series, vol. III.- FC&P 4-2, p. 39, ID=5195Topic(s): geology; Systematics: ; Stratigraphy: ; Geography: ^[some articles contain information on Recent and fossil reefs]^1";
- 6589 s[6586] = "JEANSON C., VERBEKE R. (1975).- Nouvelles bases de consolidation des matériaux friables et des sols. Répercussion sur la fabrication des lames minces.- Proceedings of Section Lipids and Works of Art (Congrès Intern. Milan, 1974): 55-49; Artioli Edit., Modène (Italie).- FC&P 4-2, p. 39, ID=5196Topic(s): research techniques; polyester resins; Systematics: ; Stratigraphy: ; Geography: ^[technique de consolidation de roches meubles ou de fossiles au moyen d'une résine polyester; prévision et conduite de divers types de plastifications au moyen d'abaques; quelques résultats]^1";
- 6590 s[6587] = "WILSON L.R. (1975).- Presentation of the Paleontological Society Medal to John West Wells and response by J.W. Wells.- Journal of Paleontology 49, 3: 574-575.- FC&P 4-2, p. 40, ID=5197Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6591 s[6588] = "ARNAUD P.M. (1974).- Contribution à la bionomie marine benthique des régions antarctiques et subantarctiques avec en annexe la liste générale des espèces animales benthiques actuellement connues en Terre Adélie.- Tethys 06, 3: 467-653.- FC&P 4-2, p. 44, ID=5204Topic(s): benthos; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6592 s[6589] = "MONTY C. (1974).- Aspects of reef and sedimentological studies.- Annales de la Société géologique de Belgique 97, 1: 139-183.- FC&P 4-2, p. 47, ID=5217Topic(s): reefs sedimentology; reefs, sediments; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6593 s[6590] = "FUJINUKI T. (1975).- Chemical composition of reef sediments and palaeoenvironmental analysis.- Marine Sciences Monthly 7, 9 [Proceedings of the Ancient Reef Complex Symposium]: . ???.- FC&P 5-1, p. 16, ID=5333Topic(s): reef sediments, chemistry, ecology; reef sediments; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6594 s[6591] = "MORI K. (1975).- Changes of reef-builders in geological history.- Marine Sciences Monthly 7, 9 [Proceedings of the Ancient Reef Complex Symposium]: . ???.- FC&P 5-1, p. 16, ID=5334Topic(s): reef builders; reef builders; Systematics: ; Stratigraphy: ; Geography: ^^1";

- 6595 s[6592] = "OKIMURA Y. (1975).- Organic reef complex - Carbonate reef complex.- Marine Sciences Monthly 7, 9 [Proceedings of the "Ancient Reef Complex" Symposium]: . ???.- FC&P 5-1, p. 16, ID=5335^Topic(s): reef complexes; reef complexes; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6596 s[6593] = "AOYAGI K. (1975).- Reef as a petroleum reservoir rocks.- Marine Sciences Monthly 7, 9 [Proceedings of the "Ancient Reef Complex" Symposium]: . ???.- FC&P 5-1, p. 16, ID=5336^Topic(s): petroleum reservoirs; reefs; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6597 s[6594] = "RAVIKOVICH A.I., ZHURAVLEVA I.T. (1975).- Evolution of organogenic structures in the history of the Earth.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 11-19.- FC&P 5-2, p. 7, ID=5411^Topic(s): history; reefs; Systematics: ; Stratigraphy: ; Geography: ^An account of the succession of communities involved in reef building.^1";
- 6598 s[6595] = "TERMIER H., TERMIER G. (1975).- Role de la photosynthese dans le phenomene recifal.- Drevniye Cnidaria [B.S. Sokolov (ed.)], 2: 5-10.- FC&P 5-2, p. 8, ID=5419^Topic(s): photosynthesis; reefs; Systematics: ; Stratigraphy: ; Geography: ^General review of the role of photosynthesisers in reef formation.^1";
- 6599 s[6596] = "anonymous (1976).- Jon Weber (1935-1976).- FC&P 5, 1: 5.- FC&P 5-1, p. 5, ID=5467^Topic(s): biographical; obituary; Systematics: ; Stratigraphy: ; Geography: ^We regret to report the death in early June of Professor Jon N. Weber, geochemist, Pennsylvania State University. * Prof. Weber was born in Kitchener, Ontario, Canada in 1935, received his Ph.D. degree in geochemistry at Toronto (Ontario) in 1962, and taught at Penn State from that time. * He published several papers on skeletal composition of Holocene corals and was studying various aspects of coral and reef growth and composition at the time of his death.^1";
- 6600 s[6597] = "NEGUS P.E. (1976).- R. F. Tomes, FGS, 1823-1904.- FC&P 5, 1: 6-9.- FC&P 5-1, p. 6, ID=5468^Topic(s): biographical; biography; Systematics: ; Stratigraphy: ; Geography: ^[biography and list of publications]^1";
- 6601 s[6598] = "JEFFORDS R.M. (1977).- Nomenclatural status of taxa proposed as "varieties".- FC&P 6, 1: 14-15.- FC&P 6-1, p. 14, ID=5488^Topic(s): taxonomy nomenclature; nomenclature, variety; Systematics: ; Stratigraphy: ; Geography: ^Terms for subdivisions of species (variety, forma, mutant, subspecies) have been applied by paleontologists for many years without appreciable consistency. Commonly, a single taxon would be designated as a "variety", a "subspecies", or a "species" by workers with little regard for the rank assigned previously by others. The current International Code of Zoological Nomenclature is applicable to species-group taxa (i.e., species and subspecies), but it definitely excludes from availability and from formal zoological nomenclature (ICZN, Arts. 1, 15) those infrasubspecific taxa (i.e., varieties and formae) initially proposed after 1960. The essential equivalency, for practical purposes, of taxa cited as "subspecies", "formae", "variety", etc. in older publications was recognized in the Code (ICZN, Art. 45), however, so that all these taxa proposed prior to 1961 (and otherwise available) are to be regarded and cited as "subspecies". It seems undesirable and incorrect to cite available pre-1961 names as "A-us b-us var. c-us" now rather than as "A-us b-us subsp. c-us". [] Objectively unavailable infrasubspecific taxa also cannot serve as type species for genus-group taxa. Genus-group taxa based on such "type species", therefore, are unavailable. Removal from consideration of a "designated" taxon having an unavailable name, however, may originally fix as type species (e.g., by monotypy)

- another taxon having an available name so that the genus-group name may retain availability. [initial and final parts of a nomenclatorial note]^1";
- 6602 s[6599] = "WATERSTON C.D. (1977).- Ian Francis Sime (1902-1976).- FC&P 6, 2: 3.- FC&P 6-2, p. 3, ID=5530^Topic(s):biographical; obituary; Systematics: Stratigraphy: Geography: ^[obituary of Ian Francis Sime, 1902-1976]^1";
- 6603 s[6600] = "KATO M. (1977).- Ichiro Hayasaka (1891-1977).- FC&P 6, 2: 3-5.- FC&P 6-2, p. 3, ID=5531^Topic(s):biographical; obituary; Systematics: Stratigraphy: Geography: ^[obituary of Ichiro Hayasaka, 1891-1977,with list of his coelenterate papers]^1";
- 6604 s[6601] = "MORI K. (1978).- Professor Motoki Eguchi (1905-1978).- FC&P 7, 1: 3.- FC&P 7-1, p. 3, ID=5539^Topic(s):biographical; obituary; Systematics: Stratigraphy: Geography: ^[obituary of an author of over 100 papers on scleractinian corals]^1";
- 6605 s[6602] = "STRUSZ D.L. (1978).- Book review - D. Hill: Bibliography and index of Australian Palaeozoic corals.- FC&P 7, 2: 4. [book review] - FC&P 7-2, p. 4, ID=5567^Topic(s):bibliography; Systematics: Stratigraphy: Geography: ^^1";
- 6606 s[6603] = "SUTHERLAND P.K. (1979).- Memorial for Charles L. Rowett.- FC&P 8, 1: 5-7.- FC&P 8-1, p. 5, ID=5578^Topic(s):biographical; obituary; Systematics: Stratigraphy: Geography: ^[obituary of Charles Llewellyn Rowett jr (1931-1978), with a list of his publications]^1";
- 6607 s[6604] = "JONES O.A., ENDEAN R. (eds) (1977).- Biology and Geology of Coral Reefs 4 (Geology 2).- Academic Press, New York - San Francisco - London.- FC&P 7-1, p. 31, ID=5590^Topic(s):reefs; reefs; Systematics: Stratigraphy: Geography: ^^1";
- 6608 s[6605] = "JAMES N.P. (1978).- Facies Models 10. Reefs.- Geoscience Canada 5, 1: 16-26.- FC&P 7-2, p. 14, ID=5607^Topic(s):reef facies; reef facies; Systematics: Stratigraphy: Geography: ^^1";
- 6609 s[6606] = "FEDOROWSKI J. (1979).- Maria Rozkowska (1899-1979).- FC&P 8, 2: 11-13.- FC&P 8-2, p. 11, ID=5690^Topic(s):biographical; obituary; Systematics: Stratigraphy: Geography: ^[obituary of M. Rozkowska, with a list of her papers]^1";
- 6610 s[6607] = "LENZ A.C. (1979).- Robert Kingsley Jull (1938-1979).- FC&P 8, 2: 14-16.- FC&P 8-2, p. 14, ID=5691^Topic(s):biographical; obituary; Systematics: Stratigraphy: Geography: ^[obituary of R.K. Jull, with a list of his papers]^1";
- 6611 s[6608] = "BENTON M.J. (1979).- H.A. Nicholson (1844-1899): pioneer of thin section taxonomy.- FC&P 8, 2: 17-24.- FC&P 8-2, p. 17, ID=5692^Topic(s):biographical; paleontology, thin sections; Systematics: Stratigraphy: Geography: ^[contains biography, contribution to thin section method, data on Nicholson's collections, and on his work, list of his papers - with numerous references]^1";
- 6612 s[6609] = "SCRUTTON C.T. (1979).- The preparation of sections or peels of corals and stromatoporoids: a question of curatorial policy.- Spec. Pap. Palaeont. 22 [M.G. Bassett (ed.): Curation of palaeontological collections]: 97-101.- FC&P 9-1, p. 56, ID=5711^Topic(s):research techniques; thin sections, peels; Systematics: Stratigraphy: Geography: ^The need for the preparation of thin sections or acetate peels for the proper study of internal structures in corals and stromatoporoids is stressed. Type specimens of species in these groups which have not already been sectioned or peeled will ultimately require preparation for adequate revision. Curators are urged to allow such work to be done

- on type material in their care and a procedure is suggested to help them assess the need for preparation and to ensure that the original form of the specimen is adequately recorded. [original summary]^1";
- 6613 s[6610] = "NESTOR H. (1980).- Ob izmeneniyakh troficheskoy struktury i produktivnosti rifovykh ekosistem. [changing trophic structure and productivity in reefal ecosystems; in Russian].- Korally i rify fanerozooya SSSR [B.S. Sokolov (ed.)]: p. 14-18.- FC&P 9-1, p. 41, ID=5819^Topic(s): reef ecosystems, trophic structure; reef ecosystems; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6614 s[6611] = "BENTON M.J. (1979).- H.A. Nicholson (1844-1899), invertebrate palaeontologist: bibliography and catalogue of his type and figured material.- R. Scottish Museum, Inform. Ser.: 94 pp., 4 figs; Edinburgh.- FC&P 9-1, p. 54, ID=5844^Topic(s): biographical; biography; Systematics: ; Stratigraphy: ; Geography: ^[biography, bibliography & collections types]^1";
- 6615 s[6612] = "PICKETT J.W. (1980).- Catalogue of type and figured specimens of coelenterates, Geological and Mining Museum, Sydney.- FC&P 9, 2: 5-9.- FC&P 9-2, p. 5, ID=5848^Topic(s): collections of fossils; coelenterate collections; Systematics: ; Stratigraphy: ; Geography: ^[Geological and Mining Museum, Sydney - types and figured specimens of stroms, Rugosa, Tabulata and Conulata; with list of references]^1";
- 6616 s[6613] = "YU CHANGMING, LIN YINGDANG (1981).- Professor Yu Chien Chang (1898-1980).- FC&P 10, 1: 4-6.- FC&P 10-1, p. 4, ID=5851^Topic(s): biographical; obituary; Systematics: ; Stratigraphy: ; Geography: ^[obituary and list of main papers of Professor C.C. Yu, one of the most renowned palaeontologists and geologists of China; his main scientific work and field of research were in Paleozoic corals, nautiloid palaeontology and Palaeozoic and Late Proterozoic geology]^1";
- 6617 s[6614] = "MITCHELL M., SUTHERLAND P.K. (1980).- Published Papers of Stanley Smith.- FC&P 9, 2: 22-26.- FC&P 9-2, p. 22, ID=5872^Topic(s): biographical; bibliography, S. Smith; Systematics: ; Stratigraphy: ; Geography: ^[complete list of papers by Stanley Smith (1883-1955), mostly on fossil corals]^1";
- 6618 s[6615] = "HILL D. (1980).- Coral Bibliographies of some 20th century British geologists including their coral, biostratigraphical and palaeontological papers.- FC&P 9, 2: 27-39.- FC&P 9-2, p. 27, ID=5873^Topic(s): biographical; bibliographies, coral workers; Systematics: ; Stratigraphy: ; Geography: ^[bibliographies, and references to obituaries, if present, of: F.E.S. Alexander (nee Caldwell, 1908-1958), R.G. Carruthers (1880-1965), J.K. Charlesworth (1889-1972), A.E. Clark (?-?), J.M.M. Dingwall (Mrs J.V. Harrison, ?-1971), J.A. Douglas (1884-1978), E.J. Garwood (1864-1949), J.W. Gregory (1864-1932), F.J.W. Holwill (1925-1966), R.G.S. Hudson (1895-1965), W.D. Lang (1878-1966), H.P. Lewis (1895?-1947), E. Neaverson (1885-1972), Sir T.F. Sibly (1883-1948), L.B. Smyth (1883-1952), H.D. Thomas (1900-1966), A. Vaughan (1868-1915), A. Wilmore (1862-1932)]^1";
- 6619 s[6616] = "LAFUSTE J. (1980).- Sections ultra-minces de figures de corrosion a l'eau oxygenee. Procede et application aux lamelles et micro-lamelles de Tabulata.- Geobios 1980, 13, 6: 929-933.- FC&P 10-1, p. 23, ID=5895^Topic(s): research techniques; thin sections, Tabulata; Systematics: ; Stratigraphy: ; Geography: ^[La corrosion par ebullition dans l'eau oxygenee a 30 volumes fait apparaître des reliefs sur les surfaces polies des squelettes calcitiques. Les sections de ces reliefs presentent un aspect pectniforme typique, dont une des particularites est d'indiquer le sens de leur secretion.^1";
- 6620 s[6617] = "FLUGEL E. (1978).- Mikrofazielle Untersuchungsmethoden von

- Kalken.- Springer Verlag, Berlin, Heidelberg: xi + 454 pp., 33 pls, 68 figs, 57 tab.- FC&P 10-1, p. 25, ID=5897^Topic(s):carbonates; carbonates microfacies; Systematics:; Stratigraphy:; Geography:^handbook of microfacies analysis^1";
- 6621 s[6618] = "MORI K. (1980).- Professor Motoki Eguchi, April 21, 1905 - March 4, 1978. Obituary, Bibliography and Checklist of Corals.- Sci. Rep. Tohoku Univ., Ser. 2, 50, 1-2: 1-18.- FC&P 10-1, p. 32, ID=5943^Topic(s):biographical; obituary; Systematics:; Stratigraphy:; Geography:^[obituary; Eguchi M. (1905-1978)]^1";
- 6622 s[6619] = "JACKSON J.B.C. (1979).- Morphological strategies of sessile animals.- Biology and systematics of colonial animals [G. Larwood & B. Rosen (eds)]: 499-556; Academic Press, London.- FC&P 10-1, p. 58, ID=6012^Topic(s):benthos, morphological strategies; sessile animals; Systematics:; Stratigraphy:; Geography:^^1";
- 6623 s[6620] = "anonymous (1981).- Karl Werner Barthel (1928-1981).- FC&P 10, 2: 5.- FC&P 10-2, p. 5, ID=6042^Topic(s):biographical; obituary note; Systematics:; Stratigraphy:; Geography:^Prof. Dr. Karl Werner Barthel from the Institut f. Geologie und Palaeontologie der Technischen Universitaet Berlin, born 15 September 1928, died suddenly and unexpectedly on 13 October 1981. * His scientific field of work, filled with profound interest, was far-reaching. This is manifested in his numerous publications on various topics in stratigraphy and paleontology. Shortly before his death he was greatly involved in the organization of a Special Field of Research on "Geoscientific Problems in Arid Regions". * His inquiring mind induced him to occupy himself with a series of investigations on recent and fossil reefs. [abbreviated original note; accompanied by list of recent publications of Prof. Barthel]^1";
- 6624 s[6621] = "anonymous (1981).- Wolfgang Krebs (1933-1981).- FC&P 10, 2: 5.- FC&P 10-2, p. 5, ID=6043^Topic(s):biographical; obituary note; Systematics:; Stratigraphy:; Geography:^Prof. Dr. W. Krebs of Institut fuer Geologie und Palaeontologie der Technischen Universitaet Braunschweig, died on 10 November 1981 in a road traffic accident. One of his main fields of scientific interest was the study of fossil reefs and reef development. [fragment of an obituary note]^1";
- 6625 s[6622] = "SCHUHMACHER H. (1977).- Okologie der Anfangsstadien der Riffentwicklung mit besonderer Beruecksichtigung der Sedimentation.- Habilitationsschrift Bochum: 152 pp., 76 figs, 16 pls.- FC&P 10-2, p. 13, ID=6068^Topic(s):reefs initiation, sedimentation; reefs, initial phases; Systematics:; Stratigraphy:; Geography:^^1";
- 6626 s[6623] = "HILL D. (1981).- Select list of biographies and bibliographies of workers on the taxonomy and biostratigraphy of Palaeozoic corals.- FC&P 10, 2: 16-30.- FC&P 10-2, p. 16, ID=6072^Topic(s):biographical; coral workers; Systematics:; Stratigraphy:; Geography:^The list contains information predominantly on deceased coral research workers; selection of items for each worker was guided by relative completeness or ease of access to journals or books mentioned. * The chief first source of information used for those deceased prior to 1938 was K. Lambrecht, W. & A. Quenstedt, Fossilium Catalogus I: Animalia, pars 72 Palaeontologia, Catalogus bio-bibliographicus, 1938, Dr. W. Junk, Gravenshage, in the 1978 reprint Edition by the Arno Press Inc., New York. * The University of Queensland Library did not receive its copy of W.A.S. Sargent's 1980 Geologists and the History of Geology, 5 vols, New York, Arno Press in time for use in this issue of Fossil Cnidaria. * My starting point for names to be selected was the list of references in the Treatise on Invertebrate Paleontology, Part F

- Supplement I Coelenterata, Anthozoa subclasses Rugosa, Tabulata, 2 vols., 1981, Geological Society of America and University of Kansas Press. [original introduction; the "list" contains 212 names, from Othenio Abel to Karl Alfred Zittel]^1";
- 6627 s[6624] = "SEMENOFF-TIAN-CHANSKY P. (1982).- A la memoire de Jean-Pierre Chevalier (1926-1981).- FC&P 11, 1: 7-14.- FC&P 11-1, p. 7, ID=6111^Topic(s): biographical; obituary; Systematics: ; Stratigraphy: ; Geography: ^Il y a un an disparaissait brutalement Jean-Pierre Chevalier, l'accident fatal etant survenu sur une ile isolee des Australes. * Au Museum il etait notre Directeur, collegue et ami. Beaucoup de lecteurs du "Fossil Cnidaria" l'ont connu ou rencontre lors des congres sur les coraux fossiles ou actuels et notamment au Symposium de Paris qu'il avait dirige en 1975. […] C'est avec infiniment de tristesse que nous avons appris sa disparition en pleine mission. Ses amis et collegues garderont de lui le souvenir d'un homme ardent au travail, a l'exactitude rigoureuse, et dont la bienveillance et la modestie etaient reconnues de tous. [fragments of extensive obituary; it is followed by list of publications]^1";
- 6628 s[6625] = "GEISTER J. (1982).- Published coral papers by Professor Gottlieb von Koch.- FC&P 11, 1: 38-40.- FC&P 11-1, p. 38, ID=6117^Topic(s): biographical; bibliography, G. Koch; Systematics: ; Stratigraphy: ; Geography: ^The following is thought to be a complete list of the published works on corals by Gottlieb von Koch, the former director of the Zoology Department (1875-1914) of the Hessisches Landesmuseum of Darmstadt, Germany. The list is selected from the paper of G. Scheer, of 1959: Zur Geschichte der Korallenforschung, which appeared in Bericht 1958/59 naturwiss. Verein Darmstadt: 37-49.^1";
- 6629 s[6626] = "SOKOLOV B.S. (ed.) (1981).- Phanerozoic problematica.- Trudy [???] 481; 136pp; Nauka, Moskva.- FC&P 11-1, p. 55, ID=6128^Topic(s): paleontology, problematica; Systematics: ; Stratigraphy: ; Geography: ^three of the six articles are related to Archaeocyatha within the "subkingdom Archeata" Zhuravleva and Miagkova 1972; some new structures (redimiculi) are proposed for classification * microstructures of incertae sedis animals close to Archaeocyatha (Cribricyathida, Aphrosalpingata) are studied; a new form of life is presented again by Preobrazhenskiy; those who attended the 3rd Symposium in Warsaw would probably remember the slides of a brightly coloured "ball" with a top collar tentatively related to Coelenterata under the name Bothwellia australense]^1";
- 6630 s[6627] = "RONIEWICZ E. (1982).- Doctor Anna Stasinska (1920-1982).- FC&P 11, 2: 4-6.- FC&P 11-2, p. 4, ID=6139^Topic(s): biographical; obituary; Systematics: ; Stratigraphy: ; Geography: ^Doctor Anna Stasinska, renowned Polish specialist in Tabulata, died suddenly in Warsaw on July 14, 1982. [first fragment of an obituary, accompanied by list of publications]^1";
- 6631 s[6628] = "LAUB R.S. (1982).- Edward J. Buehler 1916 - 1982.- FC&P 11, 2: 7.- FC&P 11-2, p. 7, ID=6140^Topic(s): biographical; obituary; Systematics: ; Stratigraphy: ; Geography: ^It is with deep regret that I report the death of my friend and colleague, Edward J. Buehler, who succumbed after a period of illness, at his home in Amherst, New York, on 12 July 1982. [first fragment of an obituary]^1";
- 6632 s[6629] = "ROBERTS J., JELL P.A. (eds) (1983).- Dorothy Hill Jubilee Memoir.- Mem. Ass. Australas. Palaeontols 1 [J. Roberts & P.A. Jell (eds) Dorothy Hill Jubilee Memoir]; pp??.- FC&P 12-1, p. 11, ID=6173^Topic(s): biographical; paleontology, sponges, corals; Systematics: ; Stratigraphy: ; Geography: ^the first memoir of the Association of Australian Palaeontologists is appropriately the Dorothy Hill Jubilee Memoir, a collection of papers from the Jubilee meeting held in Brisbane on the

- 9th, 10th September 1982 to honour her 75th Birthday]^1";
- 6633 s[6630] = "anonymous (A.B.Ivanovskiy ?) (1983).- Bibliographies (papers on fossil corals) of some deceased Soviet paleontologists.- FC&P 12, 2: 21-27.- FC&P 12-2, p. 21, ID=6205^Topic(s):bibliography; bibliographies, fossil corals; Systematics: ; Stratigraphy: ; Geography: ^[contains lists of coral papers by K.G. Voynovskiy-Krieger (1894-1979), D.D. Degtyarev (1906-1978), N.V. Kabakovich (1914-1980), V.B. Goryanov (1935-1982), and E.I. Kachanov (1934-1983)]^1";
- 6634 s[6631] = "LAFUSTE J. (1974).- Amelioration de la technique des lames Ultra-minces. Emploi 1) de l'oxyde de Cerium, 2) du cavity cleanser.- FC&P 3, 1: 8-9.- FC&P 3-1, p. 8, ID=6249^Topic(s):research techniques; ultra-thin sections; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6635 s[6632] = "COATES A.G. (1973).- Memorial to Thomas Goreau (1924-1970).- FC&P 2, 2: 4-6.- FC&P 2-2, p. 4, ID=6272^Topic(s):biographical; Goreau T., obituary; Systematics: ; Stratigraphy: ; Geography: ^It seems appropriate, even three years after his death, to include in our Newsletter () a brief memorial to one of the most outstanding coral biologists of recent times; [first fragment of an obituary; listed are also publications of T. Goreau (years 1947 to 1970)]^1";
- 6636 s[6633] = "anonymous (1973).- Illustrated Catalogue of the type collections of the Palaeontological Museum of the University of Uppsala. I.- De Rebus paleontol. Mus. Upsaliensis 1973: 1-8, 7 figs.; Uppsala, Palaeontol. Inst.- FC&P 3-2, p. 43, ID=6280^Topic(s):fossils; Systematics: ; Stratigraphy: ; Geography: ^illustrated catalogue of types^1";
- 6637 s[6634] = "OLIVER W.A.jr (1975).- Memorial to Charles W. Merriam (1905-1974).- FC&P 4, 1: 6-7.- FC&P 4-1, p. 6, ID=6281^Topic(s):biographical; obituary; Systematics: ; Stratigraphy: ; Geography: ^Charles W. Merriam was born on July 6, 1905 in Berkeley, California USA and died a few miles away on July 7, 1974, in Menlo Park. Between these dates, Merriam had a varied career as paleontologist and stratigrapher in several institutions. * Through most of the time, his principal interest was in the Paleozoic rocks and corals of the Great Basin and Pacific Coast provinces of the United States, although his early studies include important work on Tertiary fossils (most notably a monograph on Turritella). His Devonian publications began in 1934 and extended to the year of his death. At the time of his death, he had just completed a manuscript on Silurian and Devonian rugose corals from southeastern Alaska. [Merriam's bibliography includes 42 titles. Listed below are those of interest to coral specialists. Specific studies of corals are marked with an asterisk (*); unmarked papers include significant observations on corals or their biostratigraphy. [first and last fragment of an obituary; accompanying list includes 21 selected papers]^1";
- 6638 s[6635] = "MASSE J.P. (1975).- Reef terminology.- FC&P 4, 2: 11-14.- FC&P 4-2, p. 11, ID=6294^Topic(s):reefs terminology; reefs terminology; Systematics: ; Stratigraphy: ; Geography: ^[report on special meeting held during the Paris Symposium of IASFCP in September 1975, chaired by J.P. Masse, aimed at clarification of terms pertaining to organic buildups]^1";
- 6639 s[6636] = "HOTTINGER L. (1984).- Stratégies vitales et processus écologiques sélectionnés régissant la constitution de corps bioconstruits.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 2.1-2.21.- FC&P 13-1, p. 10, ID=6315^Topic(s):reefs; reefs; Systematics: ; Stratigraphy: ; Geography: ^Une comparaison entre milieux terrestres que nous connaissons par notre vie quotidienne, et aquatiques qui nous sont étrangers, facilite la compréhension des

processus vitaux responsables de la formation des récifs (Fig. 1). Les différences écologiques les plus importantes sur terre et en mer résident dans la viscosité différente du milieu aérien dans lequel la vie terrestre évolue, et du milieu aquatique abritant la vie sous-marine. La viscosité aquatique a une multitude de conséquences directes et indirectes: (1) inertie relative du transport de substances dans le milieu aquatique et en particulier dans le sol; (2) restrictions des surfaces réactives dans le sol aux deux phases solides et fluides et restriction des modes possibles de réactions chimiques dans le sol par l'absence de la phase gazeuse; (3) importance physique des mouvements de l'eau souvent destructifs, limitant la vie; (4) absorption rapide de la lumière dans la colonne d'eau; (4) possibilité de se maintenir en suspens dans l'eau libre à peu de frais énergétiques (vie planctonique). * Les conséquences de ces quelques points (qui sont loin d'être exhaustifs) se reflètent dans la faible productivité relative du milieu aquatique et dans l'attrait vital du milieu terrestre dès que la quantité de l'eau transitant le système est suffisante. La différence de productivité terre - mer peut atteindre trois ordres de grandeur. [introductory chapter]^1";

- 6640 s[6637] = "MONTY C. (1984).- Mud-mounds: geology and palaeoecology.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 23.1-23.8.- FC&P 13-1, p. 11, ID=6336^Topic(s): mud mounds; mud mounds; Systematics: ; Stratigraphy: ; Geography: ^Mud-mounds are persistent carbonate build-ups ranging at least from Early Cambrian to Cretaceous and probably Recent times. Once interpreted as true ecological reefs built by stromatolite organisms, by bryozoans, stromatoporoids, etc., the recognition of the volumetric abundance of constitutive mud led many authors (Pray 1958; Lees 1964) to discard this interpretation. * Beside their considerable sedimentological and (micro-) palaeontological interest they are of great economic importance in terms of oil and ore deposits (lead-zinc). Their accretion appears to result from the superposition of sigmoidal muddy lenses eventually separated by clay seams or grainstone tongues of variable importance. This pattern may impart crude irregular bedding to the overall mound; in cases, stratification may be emphasized by alignment of lamellar organisms or of trains of fenestrae. Mud-mounds range from less than metric to hectometric dimensions in thickness and diameter; they may occur in fields of scattered mounds or coalesce laterally to form larger kilometeric banks. [initial parts of an introduction]^1";
- 6641 s[6638] = "DULLO W.-C. (1984).- Carbonate diagenesis: selected examples of Cenozoic and Mesozoic reefs.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 27.1-27.18.- FC&P 13-1, p. 12, ID=6340^Topic(s): reefs diagenesis; reefs, diagenesis; Systematics: ; Stratigraphy: ; Geography: ^Diagenesis starts directly after the formation or genesis of any skeletal grain. That means, for example, cementation occurs already in living corals in those parts, which are not more covered by the living tissue. Most of the non-skeletal grains therefore are either the products of primary diagenetic effects, like ooids, grapestones, or micritized grains, or are reworked grains, already influenced by diagenesis, like bio- or lithoclasts. Hence no carbonate rock exists on earth, neglecting the age, which is not a product of diagenesis. * Three main diagenetic environments can be distinguished: (1) submarine diagenesis (marine phreatic) in shallow seas or in deeper parts of the oceans; (2) vadose diagenesis under the influence of rain water; (3) freshwater phreatic diagenesis below or in the water table. [first part of an introduction]^1";
- 6642 s[6639] = "BOURROUILH-LE JAN F.G. (1984).- Les bauxites de karsts océaniques: gisements de bauxite dans les calcaires récifaux.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 30.1-30.11.- FC&P 13-1, p. 12, ID=6343^Topic(s):

- bauxites; bauxite deposits; Systematics: ; Stratigraphy: ; Geography: ^L'analyse systématique d'un certain nombre de plates-formes carbonatées du SW Pacifique a permis de mettre précédemment en évidence: (a) l'origine karstique de la morphologie dite: en "atoll soulevé"; (b) l'existence systématique de sols actuels plus ou moins épais, rouges, meubles (Terra Rossa), riches en alumine (bauxite) et phosphate, remplissant et recouvrant la surface karstique des plates-formes carbonatées; (c) la liaison entre certains sols, riches en alumine mais aussi en phosphate, avec l'arrivée de matériaux volcaniques, cendres, ponces et tephra, sur et à la périphérie de ces îles, et la maturation pédologique postérieure de ces matériaux volcaniques au niveau d'un sol (Tercinier 1972). [introductory chapter]^1";
- 6643 s[6640] = "BUROLLET P. (1984).- Récifs fossiles et géologie pétrolière.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 31.1-31.16.- FC&P 13-1, p. 12, ID=6344^Topic(s): reefs hydrocarbons; reefs petroleum; Systematics: ; Stratigraphy: ; Geography: ^Les récifs fossiles intéressent les géologues pétroliers depuis près de 100 ans. Ils représentent en effet des réservoirs prolifiques pour les hydrocarbures et ont été parmi les premiers découverts (Cemsah en Egypte par exemple). * Si certains récifs ont été aisés à découvrir, soit en liaison avec des indices de surface, soit par leur situation structurale élevée, d'autres ne peuvent être décelés qu'après des études géologiques et géophysiques; et la difficulté même de ces études laisse encore ouverte la porte à de nouvelles découvertes ou a des extensions, même dans des bassins déjà explorés de façon intensive. C'est pourquoi l'industrie pétrolière accorde une importance particulière à la recherche sur les constructions récifales: modèles dans l'actuel, études paléo-écologiques de l'environnement, conditions de diagenèse, détection géophysique avec amélioration continuelle des méthodes seismiques, utilisation faciologique des diagraphies différées dans les sondages. [introductory fragments]^1";
- 6644 s[6641] = "LAGNY P. (1984).- Milieu récifal et minéralisations plombo-zincifères.- Géologie et paléoécologie des récifs [J. Geister & R. Herb (eds)]: 32.1-32.16.- FC&P 13-1, p. 12, ID=6345^Topic(s): reefs mineralization Pb-Zn; reefs, Pb-Zn minerals; Systematics: ; Stratigraphy: ; Geography: ^Un certain nombre de gisements Pb-Zn sont localisés dans des formations récifales d'âge et de nature différents. Parmi les plus importants, citons: * dans le Cambrien de la plate-forme stable des USA, le district du Missouri Sud-Est (biohermes à stromatolithes); * dans le Dévonien du Canada, le district de Pine Point (barrière récifale à stromatoporoides et polypiers); * dans le Carbonifère d'Irlande, les gisements de Tynagh et Silvermines ("mud mounds" à stromatactis); * dans le Trias des Alpes orientales, les gisements de Salafossa, Raibl, Bleiberg, Mezica (plate-forme carbonatée ladino-carnienne interprétée par de nombreux auteurs comme un vaste complexe récifal); * dans le Crétacé du Nord de l'Espagne, le district de Reocin (complexe urgonien à rudistes et polypiers). * Ces exemples démontrent, en première analyse, l'importance des formations récifales en tant que roches encaissantes de concentrations plombo-zincifères. Ils indiquent aussi une certaine variété des organismes constructeurs et de la morphologie des appareils récifaux. * Cependant, sans vouloir simplifier à l'extrême, on peut dire qu'il n'existe pas de relations étroites entre la sédimentation récifale et la présence de minéralisations … [introductory fragments]^1";
- 6645 s[6642] = "ROSEN B.R. (1983).- Reef island staging posts and Noah's Arks.- Reef Encounter 1, 1: 5-6.- FC&P 13-1, p. 16, ID=6346^Topic(s): reef islands; reef islands; Systematics: ; Stratigraphy: ; Geography: ^1";
- 6646 s[6643] = "WEYER D. (1984).- Wolfgang Haller (1909-1982).- FC&P 13, 2:

- 7.- FC&P 13-2, p. 7, ID=6356Topic(s): biographical; obituary note; Systematics: ; Stratigraphy: ; Geography: ^In 1982 Wolfgang Haller died (30.5.1909 - 28.9.1982). * He was a student of Rudolf Wedekind and one of his papers dealt with Paleozoic corals: Einige biostratigraphische Untersuchungen in der Rohrer Mulde (Eifel) unter besonderer Berucksichtigung der Ketophyllen; Jb. preuss. geol. Landesanst. 56: 590-632. [brief obituary note]^1";
- 6647 s[6644] = "WOOD R. (2010).- Taphonomy of reefs through time.- Topics in geobiology 32 [P.A. Allison et D.J. Bottjer (eds): Taphonomy: bias and process through time; 2nd Edition; Springer]: 375-409.- FC&P 36, p. 122, ID=6568Topic(s): reefs, taphonomy; reefs, taphonomy; Systematics: ; Stratigraphy: ; Geography: ^Reefs are susceptible to multiple physical, chemical and biological taphonomic processes. Bioerosion, in particular has escalated through time and might be expected to have influenced the taphonomy of reefs. The following biases can be predicted: (1) In the absence of grain-reducing activities by reef biota (fish, echinoids, and clionid sponges) abrasion on Paleozoic reefs would have been dominated by physical processes and sediment grains may have been more coarse. (2) Increased bioerosion since the Jurassic is such that modern reefs are quickly reduced to rubble and sand leaving only the resilient branching corals and thick coralline algae. By contrast, many pre-Jurassic reefs commonly preserve intact, in situ frameworks that include massive or laminar, often soft-sediment-dwelling, growth forms. (3) After the appearance of reef fish in the Eocene, sediment production and distribution within reef complexes is likely to have increased markedly but this has not yet been fully elucidated. (4) Escalation in rates of bioerosion from the Miocene onwards are such that it can be expected that substantial aprons of reef-slope sediment may not have been present on pre-Miocene reefs. [first part of extensive abstract]^1";
- 6648 s[6645] = "FAGERSTROM J.A., WEST R.R. (2010).- Roles of clone-clone interactions in building reef frameworks: principles and examples.- Facies [on-line first].- FC&P 36, p. 125, ID=6575Topic(s): reef frameworks, clonal organisms; reef frameworks; Systematics: ; Stratigraphy: ; Geography: ^In living and fossil reefs, rapid upward clone growth provides positive topographic relief; the skeletal framework provides rigidity. Clonal organisms have been the chief frame-builders during most of the Phanerozoic; large clone size, growth habit, growth form, and arrangement of these clones in the framework result from rapid growth rates. Dense skeletal packing enhances rigidity and results in live-live interactions between juxtaposed clones. These interactions are both heterospecific and conspecific; the former mostly involve spatial competition whereas the latter involve clone fusion, self-overgrowth and fission. We describe three types of fusion: a) inter-clone fusion of two or more clones, each from a separate propagule; b) intra-clone fusion of parts of the same clone having its origin from a single propagule; it includes recovery from partial clone degradation and self-overgrowth; c) quasi-fusion between a live bud/polyp/zoid and a dead part (stem; branch) of the same or a different clone, i.e. a live-dead association. [original abstract]^1";
- 6649 s[6646] = "SORAUF J.E., FEDOROWSKI J. (2010).- William A. Oliver, Jr. (1926-2005).- Palaeoworld 19, 3-4: 340-347.- FC&P 36, p. 137, ID=6601Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[an extensive and detailed memory of W.A. Oliver (1926-2005), student of fossil corals; contains chapters on his personal life, research and publications]^1";
- 6650 s[6647] = "KATO M. (1985).- Masao Minato (1915-1984) - memorial.- FC&P 14, 1: 4-14.- FC&P 14-1, p. 4, ID=6602Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Minato worked [in] diverse fields of geological

sciences. His scientific achievements cover Quaternary geology and Neogene tectonism. Also, he engaged in petroleum exploration, ground water prospecting, land subsidence prevention and other aspects of applied geology. But his main field of research was Palaeozoic stratigraphy, palaeontology and geotectonics. He became interested in corals while he was mapping the Paleozoic strata in the Kitakami mountains in late 1930's. The Visean Onimuru limestone Formation there is particularly rich in coralline fossils. * He loved corals. Nearly one third of all his scientific writings are somehow connected with his coral studies, and include a monograph on the Japanese Carboniferous and Permian corals, a monograph on the family Waagenophyllidae, and his meticulous ontogenetical study on Gotlandian corals. [excerpts from the memorial; attached is a list of Minato's papers related to Paleozoic corals with 105 records, starting in 1941, ending in 1983]^1";

6651 s[6648] = "WHITE D.E. (1985).- Yang Shengwu (1940-1984) - obituary.- FC&P 14, 1: 14-16.- FC&P 14-1, p. 14, ID=6603^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^On the 22nd September, 1984 Mr Yang Shengwu, recently appointed Head of the Stratigraphy, Palaeontology and Palaeogeography Section of the Regional Geological Surveying Team, Guizhou Province, tragically met his death in Alaska, United States of America, while representing his country in a Chinese-American programme of scientific and technological cooperation. [first part of an obituary; another victim of the same accident was Mr John Webster of the U.S. Geological Survey]^1";

6652 s[6649] = "IVEN C. (1985).- Book review: System und Phylogenie der Lebewesen. Vol. 1; by E. Mohn (1984).- FC&P 14, 1: 71. [book review] - FC&P 14-1, p. 71, ID=6627^Topic(s): phylogeny, tree of life; systematics, phylogeny; Systematics: ; Stratigraphy: ; Geography: ^This is the first of three volumes. The book describes the phylogenetic system of modern organisms. Fossil organisms, as far as possible, are also included. The system of organisms is quite new and certainly much more adequate to the natural system than the old-fashioned one including two kingdoms of plants and animals. All orders including most families are thoroughly described and excellently illustrated by drawings. Latest scientific results are included. The morphology, anatomy, cytology, embryology, ontogeny, reproduction, life habitat, nutrition and behaviour, phylogeny and many other things are reported. * About 100 pages are dealing with sponges and about 200 with coelenterates. This important book represents a treasure of information. It can be recommended to every biologist and palaeontologist and should be available in every scientific library. [original review]^1";

6653 s[6650] = "PESIC L. (1985).- Dr Valerija Kostic-Podgorska, Scientific Counselor - in memoriam.- FC&P 14, 2: 3-6.- FC&P 14-2, p. 3, ID=6692^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Besides more than 40 published works in scientific journals in Yugoslavia and abroad, dr. Valerija Kostic-Podgorska was distinguished also by her outstanding pedagogic activities which were characterized by her diligence not often found in our circles. She always had time and understanding for problems of students, doctoral candidates and younger co-workers to whom she unselfishly transmitted her vast scientific experience. [fragment of an obituary; attached is a list of 30 coral papers of Kostic-Podgorska, supplied by Luka Pesic and Dragica Turnsek]^1";

6654 s[6651] = "HUSSNER H. (1986).- Forschungsprogramm "Evolution von Riffen".- FC&P 15, 1.2: 10-13.- FC&P 15-1.2, p. 10, ID=6723^Topic(s): research project; reefs; Systematics: ; Stratigraphy: ; Geography: ^Seit Juli 1984 läuft am Institut für Paläontologie der Universität Erlangen unter der Leitung von Erik Flügel ein von der Deutschen Forschungsgemeinschaft (DFG) gefördertes Forschungsprojekt "Evolution von Riffen". Dieses

Projekt soll zunächst bis 1988 fortgesetzt werden. Im Rahmen dieser Untersuchungen wurden bisher bereits devonische, permische, triassische, jurassische sowie pleistozäne und holozäne Riffe und riffähnliche Strukturen (Mud Mounds, Reef Mounds) bearbeitet. Letztere werden im Folgenden jeweils unter den Begriff "Riff" subsummiert. Diese Arbeiten sind zum Teil abgeschlossen, ein anderer Teil wird fortgesetzt. Neu hinzu kommen kretazische und tertiäre Riffe. Arbeitsgebiete waren bzw. sind: Süddeutschland, Rheinisches Schiefergebirge, Ardennen, Dänemark, Alpen, Karpaten, Dinariden, Helleniden, Tunesien, Antiatlas, Montagne Noire, Rotes Meer, Kenia, Karibik, Florida, Texas, Mexiko. [introduction to description of the project]^1";

- 6655 s[6652] = "KALJO D., NESTOR H. (1986).- In memoriam Einar Klaamann, 1933-1986.- FC&P 15, 2: 4-5.- FC&P 15-2, p. 4, ID=6730^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^With great regret we report on the death of our friend and colleague Einar Klaamann, head of the Biostratigraphy Section of the Institute of Geology, Academy of Sciences of the Estonian SSR who passed away on July 11, 1986 after a long period of serious illness. […] he had published more than 80 different papers on tabulate corals, silurian stratigraphy and paleoecology, most of them well known to coral specialists. Below we list only the most important of them. During the last period of his life he studied tabulates from Gotland but the work was left unfinished. [fragments of an obituary; attached is a list of 16 selected "most important" papers of Klaamann concerning the tabulate corals]^1";
- 6656 s[6653] = "KALJO D., KLAAMANN E. (eds) (1986).- Theory and Practice of Ecostratigraphy. [29 papers: in Russian, with English summaries].- FC&P 15-2, p. 60, ID=6751^Topic(s): biostratigraphy, ecostratigraphy; Systematics: ecostratigraphy; Stratigraphy: ; Geography: ^Das Werk beinhaltet die Forschungsergebnisse der am Projekt ökostratigraphie des Internationalen Geologischen Kooperationsprogrammes mitwirkenden sowjetischen wissenschaftler. Als gemeinsames Ziel stellt sich die vervollkommnung biostratigraphischer Methoden, auf der Basis des Vergleichs faziell unterschiedlicher Ablagerungen. Am Beispiel verschiedener Silur- und Devonbecken auf dem Territorium der SSSR werden alle paläobiologischen und lithologischen Daten geprüft sowie die biofazielle Bedeutung von Faunenassoziationen in allen Fazies- und bathymetrischen Profilen der Paläobecken aufgedeckt.^1";
- 6657 s[6654] = "SORAUF J.E. (1988).- Book review: The evolution of reef communities (by J. A. Fagerstrom, 1987).- FC&P 17, 2: 45-46.- FC&P 17-2, p. 45, ID=6773^Topic(s): book review; reefs; Systematics: ; Stratigraphy: ; Geography: ^The greatest attraction of this book on reef communities is the synthesis of data and opinions from numerous disciplines into a very readable volume on virtually all aspects of the reef phenomenon. The very long list of bibliographic references includes nearly 400 published during the 1980's, with several published as recently as 1986. [writes sorauf]^1";
- 6658 s[6655] = "BRICE D. (1990).- Mademoiselle Dorothee le Maitre, son oeuvre; 1896-1990.- FC&P 19, 2.1: 4-8.- FC&P 19-2.1, p. 4, ID=6788^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Le 26 Janvier 1990, Mademoiselle D. Le Maître, Directeur scientifique au C.N.R.S. et Professeur honoraire à la Faculté Libre des Sciences de Lille est décédée à la maison de retraite de l'hôpital de Loudéac (Côtes-du-Nord). Avec elle disparaît une grande figure de la Paléontologie française, une vie entièrement consacrée à l'étude du Dévonien et de ses faunes, à la Géologie de l'Afrique du Nord et à l'enseignement. [first fragment of an obituary; attached is a list of 70 papers by Dorothee le Maitre, published from 1929 to 1966]^1";

- 6659 s[6656] = "GILL G. (1990).- Jean Gabriel Lafuste (1930-1990).- FC&P 19, 2.1: 8a-8b.- FC&P 19-2.1, p. 8a, ID=6789^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^On the 1st of December 1990. Jean Gabriel Lafuste passed away in La Rochelle (France) [#8230;] Jean Gabriel was a man of principles - very many principles to which he arrived by his own original thinking. From the very beginning he rejected the idea to present a doctoral thesis. For him a person early in his career cannot suggest a valuable thesis. It should then be postponed towards the end of the career but by then most of the data is already published and discussed. Consequently a thesis is rather a waste of time. Poor Lafuste, he ran into considerable trouble because of this! On the other hand he insisted on perfectly documented and illustrated short clear notes which brought substantial new data. [#8230;] Jean Gabriel has revolutionized not only the study of tabulate corals by recognizing in great detail a hierarchy of basic microstructural elements (microlamellae, lamellae, fibres) with a typical disposition and a transition in time characteristic of each genus, but also that of rugose corals where he discovered microstructural analogy. He contributed to microstructural comprehension in other groups of fossil and Recent organisms such as Archaeocyatha, Sponges Stromatopora, Bryozoans, Tentaculites and investigated also higher groups - cephalopods, fish scales and others. [excerpts from an obituary]^1";
- 6660 s[6657] = "GILL G. (1991).- Jean Gabriel Lafuste, 1930-1990: bibliographie (1953-1991).- FC&P 20, 1.1: 25-30.- FC&P 20-1.1, p. 25, ID=6793^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^ [compiled with help of S. Barta-Calmus and F. Tourneur; lists 95 publications; attached is a photograph of J. Lafuste]^1";
- 6661 s[6658] = "ELKINA E.A., KANYGINA A.B., FINASHINOV G.H., NILOVOY L.Ya. (1986).- Boris Sergeevich Sokolov.- Materialy k bibliografii Uchenykh SSSR, ser. Geol. Nauk 32: 128 pp., 1 fig.; Nauka, Moskva.- FC&P 20-1.1, p. 31, ID=6794^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^ [bibliography and (?) biography]^1";
- 6662 s[6659] = "VASCONCELLOS A.C.de (1993).- Numerical and Evolutionary Biogeography in Paleontology.- FC&P 22, 1: 27-28. [short note] - FC&P 22-1, p. 27, ID=6823^Topic(s):biogeography; biogeography; Systematics:; Stratigraphy:; Geography:^The basic task of historical biogeography is to formulate hypotheses about the pattern of distribution of animals and plants (Wiley 1981, Mayden 1987). However, such work is not so easy to be done, especially when extincted groups are involved. [initial part of a short note]^1";
- 6663 s[6660] = "GERDES G., CLAES M., DUNAJTSCHIK-PIEWAK K., RIEGE H., KRUMBEIN W.E., REINECK H.-E. (1993).- Contribution of Microbial Mats to Sedimentary Surface Structures.- Facies 29, 1-2: 61-74.- FC&P 23-1.1, p. 87, ID=6843^Topic(s):carbonates microbial; microbial mats; Systematics:; Stratigraphy:; Geography:^^1";
- 6664 s[6661] = "HEFTER J., THIEL V., JENISCH A., GALLING U., KEMPE S., MICHAELIS W. (1993).- Biomarker Indications for Microbial Contribution to Recent and Late Jurassic Carbonate Deposits.- Facies 29, 1-2: 93-106.- FC&P 23-1.1, p. 87, ID=6844^Topic(s):carbonates microbial; microbial carbonates; Systematics:; Stratigraphy:; Geography:^^1";
- 6665 s[6662] = "SEYFRIED H., LEINFELDER R. (1992).- Meeresspiegelschwankungen - Ursachen, Folgen, Wechselwirkungen.- Jb. Univ. Stuttgart 1992 (Wechselwirkungen): 16 pp., 14 figs.- FC&P 23-1.1, p. 92, ID=6848^Topic(s):sea level changes; sea level changes; Systematics:; Stratigraphy:; Geography:^^1";
- 6666 s[6663] = "OLIVER W.A.jr, CAIRNS S.D. (1994).- John west wells

1907-1994.- FC&P 23, 1.2: 1-12.- FC&P 23-1.2, p. 1, ID=6851Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^John's first publications (in 1930/32) were on scleractinian corals and these continued to be the main focus of his research; over half of his 175+ publications over the next 58 years addressed some aspect of scleractinian biology. He published regularly on Cenozoic and Mesozoic Scleractinia throughout his career, but not until 1950, coincident with his fieldwork at Arno Atoll, did he seriously begin to publish on Recent Scleractinia. His collaboration with T.W. Vaughan, on the "The revision of the suborders, families, and genera of the Scleractinia" (1943a), is perhaps his greatest contribution to coral biology. This monograph was the first modern synthesis of the higher-level classification of the Scleractinia (the next proceeding being that of Duncan in 1885) and is the basic reference for most coral workers. The monograph includes not only diagnoses and keys to all the scleractinian higher taxa, but a summary of coral anatomy and morphology, reproduction, ecology, distribution, and evolution, and an extensive bibliography. This seminal work set the stage for Wells' later account of the Scleractinia in the "Treatise on Invertebrate Paleontology" (1956d) and finally an updated list of all scleractinian generic and subgeneric names and their type species (1986b, 1987b). [excerpt from an obituary; attached is Wells' portrait and a list of his publications (1930-1988)]^1";

6667 s[6664] = "MORSCH S.M. (1994).- À la mémoire de Louise Beauvais (1930-1994).- FC&P 23, 2.1: 5-15.- FC&P 23-2.1, p. 5, ID=6852Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^La disparition de Louise Beauvais-Bertrand emportée en quelques semaines par une maladie implacable, à été pour la communauté scientifique à laquelle elle appartenait, une douloureuse surprise. * Spécialiste des Scléactiniaires mésozoïques, notamment du Jurassique et du Crétacé inférieur, elle a consacré une partie de sa carrière aux études morphologiques et systématiques, afin de suivre leur évolution et d'en établir une échelle biostratigraphique. Elle avait également pour but leur interprétation paléobiogéographique, de même qu'elle s'était attachée aux études sédimentologiques et paléocéologiques des formations récifales. [introductory part of an obituary; attached is a portrait of L. Beauvais and a list of her 114 publications for the years 1953-1994, with one more paper in press and another one submitted]^1";

6668 s[6665] = "HOFLING R. (1995).- Eine erweiterte Riff-Typologie und ihre Anwendung auf Biokonstruktionen.- FC&P 24, 1: 24-25.- FC&P 24-1, p. 24, ID=6858Topic(s): reefs typology; reefs, typology; Systematics: ; Stratigraphy: ; Geography: ^Ausgehend von einem kritischen Rückblick auf die bisher im Schrifttum unterschiedlich verwendeten Termini zur Beschreibung bzw. Klassifizierung von Riffen wird eine erweiterte, auf dem jeweils dominierenden Internegefüge basierende, für alle fossilen Biokonstruktionen anwendbare Rifftypologie aufgestellt und anhand von Beispielen aus der Erdgeschichte veranschaulicht. Hierbei werden die sechs Biokonstruktionsgruppen skeletale wie non-skeletale Bioherme und Biostrome, Reef Mounds und Mud Mounds, zumeist mit mehreren Untergruppen, festgelegt und von non-rezifalen Bildungen abgetrennt. [introductory part of a short note; taken from the "Habilitationsschrift" of Ludwig-Maximilians-Universität in Munich; 1992]^1";

6669 s[6666] = "VASCONCELLOS A.C.de (1995).- Natural History book dealers.- FC&P 24, 1: 99-102.- FC&P 24-1, p. 99, ID=6863Topic(s): book dealers directory; paleontology; Systematics: ; Stratigraphy: ; Geography: ^[a note with wealth of data on international sources for books on "natural history" sciences, especially taxonomic monographs and the out-of-print

- publications]^1";
- 6670 s[6667] = "REN JISHUN (1995).- In memory of Huang Jiqing (1904-1995).- FC&P 24, 2: 22-32.- FC&P 24-2, p. 22, ID=6865^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^Huang [Jiqing] specialized in structural geology, geotectonics, petroleum geology, paleontology and stratigraphy. In the seventy years of his geologist's career, he published over 150 academic theses and 20 monographs. In his book "On Major Tectonic Forms of China"; he first put forward the method of historical analysis to describe the subdivision of geotectonic elements, their characteristics and evolution, and established the polycyclic theory of tectonic movements, thus laid the foundation of historical geotectonic teaching in China. He established the theory of continental source beds of petroleum together with the theory of polystage reservoir rocks and insisted on the search for oil in East China when the famous Daqing Oil Field and others were discovered. [fragment of an obituary of Huang Jiqing (Huang T.K.); attached is a portrait of Huang Jiqing and a list of his 90 publications]^1";
- 6671 s[6668] = "OLIVER W.A.jr (1996).- William H. Easton (1916-1996).- FC&P 25, 2: 3.- FC&P 25-2, p. 3, ID=6868^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^Dr. William H. Easton, 80, an authority on fossil corals and author of a widely used textbook, Invertebrate Paleontology, authored more than 100 papers, many of them on corals. His special interests were Carboniferous corals and the radioisotopic dating of coral reefs. Bill received his PhD degree at the University of Chicago in 1940 and was on the Illinois Geological Survey from 1940-44. He served on the faculty of the University of Southern California from 1944 until his retirement. He was a past president of the Paleontological Society and a fellow of the Geological Society of America. [full text of a short obituary]^1";
- 6672 s[6669] = "WEBB G.E. (1996).- William Jasper Sando (1927-1996).- FC&P 25, 2: 3-11.- FC&P 25-2, p. 3, ID=6869^Topic(s):biographical; Systematics:; Stratigraphy:; Geography:^William J. Sando, Geologist Emeritus of the United States Geological Survey and Research Associate of the Smithsonian Institution died at his home on October 9th, 1996 after a prolonged illness. [8230;] william J. Sando's career represents one of long service to his nation and to the science of Lower Carboniferous corals and geology. He will be sorely missed by his colleagues at the U.S. Geological Survey and by his many friends and colleagues in the international fossil coral and geological communities. [excerpts from an obituary; attached is a list of 142 papers by W.J. Sando; let us note also Sando was for many years an indefatigable correspondent of the FC&P newsletter]^1";
- 6673 s[6670] = "FOOTE M. (1996).- On the probability of [finding] ancestors in the fossil record.- Paleobiology 22, 2: 141-151.- FC&P 25-2, p. 35, ID=6871^Topic(s):phylogeny, evolutionary theory; phylogeny; Systematics:; Stratigraphy:; Geography:^Three homogeneous models of species origination and extinction are used to assess the probability that ancestor-descendant pairs are preserved in the fossil record. In the model of cladogenetic budding, a species can persist after it branches and can therefore have multiple direct descendants. In the bifurcation model, a species branches to give rise to two distinct direct descendants, itself terminating in the process. In the model of phyletic transformation, a species gives rise to a single direct descendant without branching, itself terminating in the process. Assuming homogeneous preservation, even under pessimistic assumptions regarding the completeness of the fossil record, the probability of finding fossil ancestor-descendant pairs is not negligible. [initial part of an abstract; for full text see <http://www.jstor.org/pss/2401114>]^1";
- 6674 s[6671] = "FOOTE M., RAUP D.M. (1996).- Fossil preservation and the

stratigraphic ranges of taxa.- Paleobiology 22, 2: 121-140.-
 FC&P 25-2, p. 35, ID=6872^Topic(s): phylogeny,
 evolution rate; Systematics: ; Stratigraphy: ;
 Geography: ^The incompleteness of the fossil record hinders the
 inference of evolutionary rates and patterns. Here, we derive
 relationships among true taxonomic durations, preservation probability,
 and observed taxonomic ranges. We use these relationships to estimate
 original distributions of taxonomic durations, preservation
 probability, and completeness (proportion of taxa preserved), given
 only the observed ranges. No data on occurrences within the ranges of
 taxa are required. When preservation is random and the original
 distribution of durations is exponential, the inference of durations,
 preservabihty, and completeness is exact. However, reasonable
 approximations are possible given non-exponential duration
 distributions and temporal and taxonomic variation in preservabihty.
 Thus, the approaches we describe have great potential in studies of
 taphonomy, evolutionary rates and patterns, and genealogy. [first part
 of an extensive abstract; for full text see <http://www.jstor.org/pss/2401113>]^1";

6675 s[6672] = "anonymous (1997).- Wu Wangshi. [1931-1997].- FC&P 26, 1:
 2-4.- FC&P 26-1, p. 2, ID=6873^Topic(s):
 biographical; Systematics: ; Stratigraphy: ;
 Geography: ^On January 15th morning, Prof. Wu Wang Shi died at
 the hospital after a prolonged illness. * Wu Wang Shi was born in wuxi,
 Jiangsu Province on July, 1931. She completed the university course at
 the University of Nanjing in 1954 and served in the Institute of
 Palaeontology, Academia Sinica, now the Nanjing Institute of Geology
 and Palaeontology, Academia Sinica (NIGPAC) till her death. In 1956,
 She took the graduate study on the Carboniferous and Permian corals in
 the Institute. Since then she had devoted herself in this field and in
 the Carboniferous and Permian biostratigraphy of South China till the
 end of her life. In 1984-1991, she had been committed to be the
 Director of the NIGPAC. She had been elected as the Chairwoman of the
 International Subcommision on Permian Stratigraphy and the Council
 Member of the International Association for study on Fossil Cnidaria
 and Porifera. * We lost not only an active and keen researcher on
 Paleozoic corals and biostratigraphy but also a friend. [obituary note;
 attached is a list of publications of prof. Wu Wangshi]^1";

6676 s[6673] = "OLIVER W.A.jr (1997).- American Women and the Ph.D.- FC&P
 26, 1: 16. [short note] - FC&P 26-1, p. 16,
 ID=6875^Topic(s): biographical; Systematics: ;
 Stratigraphy: ; Geography: ^My interest and memory were
 recently stirred by reading that Florence Bascom was the first woman to
 earn a Ph.D. in geology from an American institution; this in 1893
 (Geotimes, November 1996, p. 12). Not so: Cnidarologists should know
 that the first was earned some five years earlier by a woman studying
 Paleozoic (mostly Devonian) corals. Mary Emilee Holmes earned a Ph.D.
 in paleontology from the University of Michigan in 1887 (Geotimes,
 November 1986, p. 11) or 1888 (Arnold 1977, Geology v.5, p.493).
 Holmes' thesis, The Morphology of the Carinae upon the Septa of
 Rugose Corals, was accepted by her Committee (Alexander Winchell and
 others) on June 20, 1887, and published that same year in Boston by
 Bradlee Whidden. According to Arnold, Holmes was the first woman Fellow
 of the Geological Society of America, elected in May 1889 (Bascom
 became the second woman Fellow in 1894). [full text of a short note]^1";

6677 s[6674] = "LATHUILLIERE B., BARTA-CALMUS S. (1999).- In memoriam Gabriel
 A. Gill 1932-1998.- FC&P 28, 1: 2-8.- FC&P 28-1, p. 2,
 ID=6921^Topic(s): biographical; Systematics: ;
 Stratigraphy: ; Geography: ^A côté de cet axe central de
 sa recherche [coraux fossils] G. Gill a contribué par ses récoltes
 d'ammonites à préciser la stratigraphie du Jurassique du Neguev.
 Il a également secondé son épouse dans diverses publications concernant
 les bois fossiles. Il est enfin à l'initiative d'un travail

dans lequel il s'est beaucoup investi concernant l'utilisation des coraux puis d'autres squelettes d'invertébrés dans la substitution des racines dentaires. * Gabriel Gill nous lègue un corpus d'écrits publiés qui ne représente qu'une partie modeste de son travail, mais ce qu'il a écrit est une solidité qui lui fait grand honneur. C'est certainement un des tout premiers corallistes de ce siècle qui nous a quitté. [excerpts from an obituary; attached is a portrait of G.A. Gill and a list of his 54 publications]^1";

- 6678 s[6675] = "DOUGHERTY B.J., MCCrackEN A.D., NOWLAN G.S., McLEAN R.A. (1999).- Thomas Bolton.- FC&P 28, 1: 12-13.- FC&P 28-1, p. 12, ID=6922^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Thomas Elwood Bolton, eminent palaeontologist, biostratigrapher, and geologist passed away in Ottawa on November 21st, 1997 at the age of 73. [8230;] His research covered a remarkable diversity of organisms including trilobites, eurypterids, corals, brachiopods, crinoids, cystoids, bryozoans, sponges, nautiloids, gastropods and pelecypods He published over 80 papers in his career and was working on at least 5 additional papers at the time of his death. [excerpts from an obituary; reported as modified from Journal of Paleontology 72, 4: 795]^1";
- 6679 s[6676] = "KOLOBOVA I.M., KHOACHY L.I. (1990).- Prezident Vsesoyuznogo Paleontologicheskogo Obshchestva, Boris Sergeevich Sokolov (k 75-letiyu so dnya rozhdeniya).- Ezhegodnik Vsesoyuznogo Paleontologicheskogo Obshchestva 33: 274-277; Nauka, Leningrad.- FC&P 28-1, p. 19, ID=6923^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6680 s[6677] = "LELESHUS V.L. (1999).- Alexander I. Lavrusevich (1930-1998).- FC&P 28, 2: 6.- FC&P 28-2, p. 6, ID=6928^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^On the 22 of October 1998, in the city Orel (Russia), during the lecture talking in the Orel Pedagogic Institute, suddenly died famous palaeontologist, prominent investigator of Rugose Corals from Middle Asia, Doctor of Geological-Mineralogical Sciences, Professor Alexander Lavrusevich. * Alexander was born at 18 January 1930 in Byelorussia. In 1941, on the beginning of the war between Germany and USSR together with his parents he was removed from Byelorussia to Tadjikistan. In 1948 he was entering and in 1953 was graduating the Department of Geology of Tadjik State University. After graduating from the University he worked in Tadjik Geological Government Department. On 1957 he began studying of Rugose Corals from Palaeozoic of Middle Asia. A.I. Lavrusevich reveal very big diversity of Rugose Corals from South Tian Shan. He collected, determined and described about 20000 patterns belonging to 250 species and 100 generas of Upper Ordovician, Silurian and Lower Devonian Rugose Corals from Central Tadjikistan. Alexander discovered and described 22 new genera of Rugose Corals: Amandaraia Lavrusevich, 1968; Chavsakia Lavr., 1959; Cruciphyllum Lavr., 1976, Cystipaliphyllum Lavr., 1964; Farabophyllum Lavr., 1971; Gissarophyllum Lavr., 1964; Heterophrentoides Lavr., 1991; Isfaraia Lavr., 1991; Ketophylloides Lavr., 1971; Maikotia Lavr., 1967 a.o. During 1966-1991 he worked in the Department of Geology of Tadjik State University. At 1991 he was leaving from Dushanbe to Orel and began to teach in the Orel Pedagogic Institute. Alexander Lavrusevich authored 60 scientific papers, many of them on corals. [original text]^1";
- 6681 s[6678] = "KAWAMURA M., OKA T., KONDO T. (eds) (1997).- Commemorative volume for Professor Makoto Kato.- Nakanishi Insatsu, Sapporo; 612 pp. [commemorative volume] - FC&P 29-1, p. 31, ID=7012^Topic(s): commemorative volume; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6682 s[6679] = "FEIST R., TALENT J.A., DAURER A. (eds) (1999).- North Gondwana: Mid-Paleozoic Terranes, Stratigraphy and Biota.- Abhandlungen der Geologischen Bundesanstalt 54; 463 pp. ISBN 3-85316-02-6. [book] -

- FC&P 29-1, p. 38, ID=7013^Topic(s): geology, biostratigraphy; Systematics: ; Stratigraphy: ; Geography: Gondwana N^among numerous other papers the volume contains 3 papers on Devonian corals: Bruhl & Pohler - on tabulatae from Australia; Pedder on Rugosa from Morocco and Plusquellec & Jahnke on tabulatae from southern Rhenish Mts]^1";
- 6683 s[6680] = "NOWLAN G.S., SMITH C.H. (2001).- Memorial to Thomas E. Bolton, 1924-1997.- FC&P 30, 1: 13-17.- FC&P 30-1, p. 13, ID=7057^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Just a few short weeks after being awarded the Billings Medal of the Geological Association of Canada, Thomas Elwood Bolton passed away in Ottawa on November 21st, 1997. [##8230;] ##8230;Tom, as usual, was modest about his own efforts and quick to acknowledge the efforts of his colleagues and the support of his wife Beverley. This humble man, who was the very essence of co-operation and collaboration, serves as an example to us all. [excerpts from an obituary; full text has been published in first in 1998 in Geological Society of America Memorials, vol. 29; the present obituary is accompanied by selected bibliography of Bolton's papers]^1";
- 6684 s[6681] = "SUGIYAMA T., EZAKI Y. (2001).- Memorial to Toshihiko Sato.- FC&P 30, 1: 17-18.- FC&P 30-1, p. 17, ID=7058^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Dr. Toshihiko Sato, 72, former professor of Shinshu University, passed away on October 11, 2000 after fighting against his cancer for one and a half year. He was a pioneer using SEM for observation of coral skeletons in Japan. [brief obituary note; listed are 7 papers of T. Sato, pertaining to corals]^1";
- 6685 s[6682] = "anonymous (2001).- Dr Manfred Grasshoff.- FC&P 30, 1: 47-49.- FC&P 30-1, p. 47, ID=7082^Topic(s): biographical; biography, bibliography; Systematics: ; Stratigraphy: ; Geography: ^On January, 13th 2001 Dr. Manfred Grasshoff became 65 years old. Dr. Grasshoff worked at the Forschungsinstitut und Naturmuseum Senckenberg in Frankfurt/Germany. Two main fields of scientific work are his scope: Coelenterates and African spiders - both connected by research on evolutionary trends in these groups. Concerning corals, he is interested especially on recent gorgonarians - mainly of the Atlantic, the Red Sea and the Mediterranean but also of New Caledonia/Pacific. Moreover, of main interest are his studies of biological structures under the point of view of mechanical and hydraulic functions of the animal body. He became well known by the signpost-like results. [short biographical note, accompanied by abbreviated list of Grasshoff's publications]^1";
- 6686 s[6683] = "LELESHUS V.L. (2001).- Eighth Biodiversity Maxima of Invertebrates in the Phanerozoic of Middle Asia.- Geologija 33: 50-55; Vilnius.- FC&P 31-1, p. 11, ID=7086^Topic(s): biodiversity change; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6687 s[6684] = "OEKENTORP K., BAUMEISTER R., LUTTE B.-P., SCHRODER S. (2002).- Dr. Alfons Glinski.- FC&P 31, 1: 22-25.- FC&P 31-1, p. 22, ID=7095^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[obituary of A. Glinski (1923-2002), with his portrait, list of his publications, and a list of taxa named in his honour]^1";
- 6688 s[6685] = "OEKENTORP K., TROSTHEIDE F. (2002).- 65th Birthday [of] Dieter Weyer.- FC&P 31, 1: 26-49.- FC&P 31-1, p. 26, ID=7096^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[biography of D. Weyer, accompanied by his portrait, list of his publications, "Begrüßungansprache" (by Hans Pellmann), "Laudatio" (by Klemens Oekentorp), list of taxa named in honour of D. Weyer, and a list of 174 publications authored or

- co-authored by the Jubilate; presented is also contents of the "Festschrift" commemorating Weyer's 65th birthday, which is Coral Research Bulletin 7: 240 pp., 34 pls (S. Schröder, H. Löser & K. Oekentorp 2002)]^1";
- 6689 s[6686] = "OEKENTORP K., LOSER H. (2002).- Laudatio and Bibliography. [of Dieter Weyer].- Coral Research Bulletin 7: 005-020. [Dieter Weyer's 65th birthday commemorative volume; S. Schröder, H. Löser & K. Oekentorp (eds)].- FC&P 31-1, p. 33, ID=7097^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^[introductory part to Dieter Weyer's 65th birthday commemorative volume (S. Schröder, H. Löser & K. Oekentorp 2002; eds); with Weyer's biography and a list of his papers]^1";
- 6690 s[6687] = "anonymous (2002).- Dr Bernd Hergarten passed away.- FC&P 31, 2: 22.- FC&P 31-2, p. 22, ID=7124^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^Caused by a tragical accident (crash of his airplane) Dr. Bernd Hergarten died on March, 24th 2001, aged 56 years. Colleague Hergarten was a long standing member of our Association. * Teacher for chemistry at the Hermann-Josef-Kolleg / High-School at the Monastery Steinfeld near Sötenich [in the well-known Sötenich-Syncline / Eifel], Hergarten was interested in natural sciences in every respect, and was committed to nature protection; for example, special fields of knowledge were orchids and fungi. In Palaeontology he was specialized on Conulariids and he became well recognized by international specialists of that group. * Open-minded, objective and tranquil Hergarten was liked by the pupils, estimated by his colleagues and well accepted by specialists. [obituary note; listed are three papers authored by Hergarten (1985, 1988 and 1994) on Devonian Conulariids from Germany]^1";
- 6691 s[6688] = "OEKENTORP K. (2003).- Dr. Pierre Semenoff-Tian-Chansky.- FC&P 32, 2: 18.- FC&P 32-2, p. 18, ID=7153^Topic(s): biographical; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6692 s[6689] = "MOSER B., FRITZ I. (2003).- Some remarks about the Collections of Mineralogy and Geology & Palaeontology at the Landesmuseum Joanneum in Graz, Austria.- FC&P 32, 2: 29-30.- FC&P 32-2, p. 29, ID=7154^Topic(s): collections of fossils; Systematics: ; Stratigraphy: ; Geography: ^In the year 1811 Archduke Johann, the brother of Emperor Franz I, decided to open his combination of a teaching institution for natural-technical sciences and a museum in Graz. He brought his various collections from their former place of presentation, the castle of Schönbrunn in Vienna, as a very great and valuable start to the heart of Styria. And he wanted only specialists for teaching and for the work in his collections. * So Friederich Mohs came to be the first teacher in mineralogy and the first curator of the mineralogical collection, at that time containing about 2500 objects, including minerals, rocks and fossils. The collection grew and Mohs invented the world-famous hardness-scale during his time in Graz. [introductory part of a short note]^1";
- 6693 s[6690] = "WEYER D. (2003).- Ospanova, Narima (Nonna) Kazhenovna.- FC&P 32, 2: 32-36.- FC&P 32-2, p. 32, ID=7155^Topic(s): biographical; Heliolitida; Systematics: ; Stratigraphy: ; Geography: ^[bibliography, with 49 papers authored or co-authored by N.K. Ospanova, published from 1979 to 2003]^1";
- 6694 s[6691] = "DEBRENNE F. (2013).- Boris Sergueievitch Sokolov, 1914-2013.- FC&P 37: 8-9.- FC&P 37, 008, ID=7263^Topic(s): obituary note, with portrait; Systematics: ; Stratigraphy: ; Geography: ^[...] Directeur du département de paléontologie et stratigraphie de l´Institut de géologie de géophysique de l´Académie des sciences (branche sibérienne) il fait de

- ce d'épartement un des centres les plus reconnus pour ses recherches en paléontologie et en stratigraphie du Riféen au quaternaire. [...] Il a publié plus de 400 travaux scientifiques dont 10 livres dédiés a différents aspects de la géologie, la paléontologie, la stratigraphie et l´évolution générale de la biosphére. [abridged]^1";
- 6695 s[6692] = "ADACHI N., LIU J. & EZAKI Y. (2012).- Early Ordovician stromatoporoid *Pulchrilamina spinosa* from South China: geobiological significance and implications for the Early development of skeletal-dominated reefs.- *Paleontological Research* 16, 1: 59-69.- FC&P 37, 013, ID=7264^Topic(s): skeletal reefs; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Ordovician L, Tremadocian-Floian; Geography: China S, Hubei & Guizhou^The thin, laminar to low domical, encrusting stromatoporoid *Pulchrilamina spinosa* is reported from the Tremadocian-Floian in Hubei and Guizhou provinces, South China. The Chinese *Pulchrilamina* appeared earlier (late Tremadocian-early Floian) than North American equivalents (early Floian), which possess large domical forms and are the main framework-builders. *Pulchrilamina* appeared much earlier than the observed diversification of other stromatoporoids. These skeletal reef-builders thus provide excellent clues for understanding the initial evolution of the stromatoporoids and the subsequent development of the skeletal-dominated (especially stromatoporoid - dominated) reefs that reached their first acme in the late Middle-Late Ordovician.^1";
- 6696 s[6693] = "ALLISON N., TUDHOPE A.W. & EIMF (2012).- The skeletal geochemistry of the sclerosponge *Astrosclera willeyana*: Implications for biomineralisation processes and palaeoenvironmental reconstruction.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 313-314: 70-77.- FC&P 37, 013, ID=7265^Topic(s): sclerosponge skeleton, chemistry; Systematics: Porifera, Astrosclera; Stratigraphy: Recent; Geography: ^To investigate the controls on the geochemistry of aragonitic sclerosponge skeletons, we used secondary ion mass spectrometry (SIMS) to analyse an *Astrosclera willeyana* specimen. The high spatial resolution of SIMS allows the independent analysis of the two key crystal structures in the skeleton i.e. the fused spherulites (formed intracellularly and fused together at the surface of the skeleton) and the epitaxial backfill (deposited extracellularly at the base of the sponge tissue). We analysed Sr/Ca, Mg/Ca and Ba/Ca across a short (~5mm) transect of fused spherulites which represented several years growth. We observe cyclical variations (with a length of 0.1 to 0.6 mm in both Sr/Ca and Mg/Ca in some (but not all) sections of the transect. The observed ranges of Sr/Ca and Mg/Ca over the presumed seasonal cycles are ~9.5 to 11.5 mmol mol⁻¹ and 0.6 to 1.0 mmol mol⁻¹ respectively. The annual seawater temperature range at the study site is ~4.3°C, so the inferred temperature sensitivity of skeletal Sr/Ca and Mg/Ca is ~0.5 mmol mol⁻¹°C (or 5°C⁻¹) and ~0.1 mmol mol⁻¹°C (or 13°C⁻¹) respectively. This is higher than observed in most previous sclerosponge studies or anticipated from studies of synthetic aragonite. This indicates that the chemistry of the *A. willeyana* skeleton is affected by one or more additional influences, besides temperature, which are currently unresolved. The pH of the precipitating fluid, estimated from skeletal δ11B, is ~8.1-8.2 for both fused spherulites and epitaxial backfill. Epitaxial backfill contains significantly higher Sr/Ca, Mg/Ca and B/Ca and significantly lower Ba/Ca than the fused spherulites but Sr/Ca and Mg/Ca are positively correlated by the same relationship in both skeletal features. This suggests that the geochemistry of each feature is predominantly controlled by a common process. This is unlikely to be Rayleigh fractionation, which is indicated by negative correlations between Sr and Mg in aragonite.^1";
- 6697 s[6694] = "ANTCLIFFE J.B. (2013).- Questioning the evidence of organic

compounds called sponge biomarkers.- Palaeontology 56, 5: 917-925.-
 FC&P 37, 014, ID=7266^Topic(s): organic compounds,
 presumed sponge biomarkers; Systematics: Porifera;
 Stratigraphy: Proterozoic, Cryogenian, Huqf Supergroup;
 Geography: Oman^Elevated concentrations of an organic compound,
 24-isopropylcholestane, found in the Precambrian Huqf Supergroup of
 Oman may provide the oldest known sponge 'fossil'. This
 evidence is of critical importance for a properly balanced
 understanding of the origin of animals. Several different pelagophyte
 (class Pelagophyceae part of the Stramenopiles within the
 Chromaveolata) algae are also capable of producing these exact
 compounds, and may similarly have done so in deep time. Modern marine
 algae are also reported to produce structural isomers that are
 compositionally identical to the sponge marker; they do this in copious
 quantities. Further, 24-isopropylcholestane can be produced by
 diagenetic alteration of compounds produced in large quantities by
 algae. It is also possible that contamination by petroleum derived
 lubricating oil used when coring while extracting these compounds from
 subsurface layers, has affected the data. All extinct organisms that
 may have produced this compounds are unavailable for analysis by the
 modern organic chemist and cannot be eliminated from the list of
 possible producers of the sponge marker. There are also significant
 uncertainties regarding the dating of the strata from which these
 ancient compounds are found. Although the compounds are widely reported
 as c. 751 Ma, they are younger than 645 Ma. It seems more likely that
 these compounds represent algal biochemical evolution at a time when
 algal burial occurred in great quantity with well known coeval algal
 fossils but no sponge fossils. The macroalgal biomass may have declined
 during the agronomic revolution at the base of the Cambrian Period
 owing to processing by metazoans, accounting for the comparative
 scarcity of these sponge markers in Phanerozoic sediments, after which
 time sponge spicules and body fossils become evident.^1";

6698 s[6695] = "BOGOYAVLENSKAYA O.V. & ELKIN Yu.A. (2011).-
 Klassifikatsiya paleozoyskikh i mezozyskikh gidroidnykh polipov i centry
 ikh vozniknoveniya [Classification of Paleozoic and Mesozoic hydroid
 polyps and their centers of origin; in Russian].- Litosfera 2011, 2:
 13-30.- FC&P 37, 015, ID=7267^Topic(s):
 stromatoporoids (as hydrozoans); Systematics:
 Stromatoporata; Stratigraphy: Paleozoic, Mesozoic;
 Geography: ^In the paper are traced the development of some
 morphological features of Paleozoic and Mesozoic Stromatoporata
 (hydroid polyps). On the basis of evolution of astrorhizal elements is
 confirmed the status of this group in system of Hydrozoa . Paleozoic
 Stromatoporata and Mesozoic Sphaeractinoidea are equivalent
 representatives of class Hydrozoa, phylum Cnidaria. It is offered the
 new revised system of this group: 3 subclasses, 19 orders and 43
 families are singled out. The 100 genera of Stromatoporata and
 Sphaeractinoidea are analyzed. Connections between Paleozoic
 Stromatoporata and Mesozoic Sphaeractinoidea hydroid polyps are
 considered. Morphology of a skeleton and progress of astrorhiza are
 analyzed. Relations of evolution of fossil hydroid polyps with maxima
 of tectonic-magmatic cycles are recognized. The centers of origin of
 fossil hydroids at the end of Baikal and the beginning Caledonian
 cycles have been connected with the Ural-Mongolian belt. Mesozoic
 Stromatoporata have been connected with the seas of Tethys ocean. For
 the determining of centers of origin and distribution is used the
 method of geohistorical biogeography.^1";

6699 s[6696] = "BOTTING J.P. & MUIR L.A. (2013).- Spicule structure and
 affinities of the Late Ordovician hexactinellid-like sponge
 Cyathophycus loydelli from the Llanfawr Mudstones Lagerstätte,
 Wales.- Lethaia 46, 4: 454-469.- FC&P 37, 016,
 ID=7268^Topic(s): early sponges; Systematics: Porifera,
 ?Hexactinellida; Stratigraphy: Ordovician L, Sandbian;

Geography: UK, Wales Exceptionally well-preserved specimens of the reticulosan sponge *Cyathophycus loydelli* from the Sandbian (Late Ordovician) Llanfawr Mudstones Formation of Llandrindod, Wales, UK, have been examined using scanning electron microscopy (SEM). The specimens include exquisitely detailed pyritized spicules, and granular pyritization of surrounding soft tissues. Spicules frequently show axial canals of diameter similar to those of modern siliceous sponges, with hexagonal symmetry typical of modern demosponges rather than hexactinellids. In one case, the axial filament is also preserved. The largest spicules (ray diameter >20µm) show a complex structure, with a laminar external region similar to that of the extant hexactinellid *Monorhaphis*. Some spicules preserve sub-micron detail of the spicule surface, resembling the reticulate collagenous sheath of *Monorhaphis*. The hexagonal symmetry of the canal confirms that at least some Reticulosa are not crown-group hexactinellids, but stem-group Hexactinellida or Demospongea, or stem-group Silicea. This suggests that a square canal is a sufficient diagnostic feature of total-group Hexactinellida, but that hexagonal canals were more widely distributed among Early Silicea and were probably not restricted to demosponges. Alternatively, comparison with the structure of modern verongioid fibres suggests that these may be homologous with the outer layers of *Cyathophycus* spicules, and *Cyathophycus* may instead be a stem-group demosponge. The preserved detail of the surface layer shows that pyritization can preserve certain material with extraordinarily fine resolution.¹¹;

6700 s[6697] = "BOTTING J.P., MUIR L.A., LI Xiang-Feng & LIN Jih-Pai (2012).- An enigmatic, possibly chemosymbiotic, hexactinellid sponge from the early Cambrian of South China.- *Acta Palaeontologica Polonica* 58, 3: 641-649.- **FC&P** 37, 017, ID=7269^Topic(s):chemosymbiotic (?) sponges, taxonomy; Systematics:Porifera, Hexactinellida; Stratigraphy:Cambrian L, Tommotian-Atdabanian; Geography:China S^Six specimens of a strongly curved, cylindrical hexactinellid sponge have been recovered from the Tommotian-Atdabanian Hetang Biota of South China, and are described as *Decumbispongia yuani* gen. et sp. nov. The robust, thick-walled sponge shows no evidence of an osculum or basal structures, and the body form is inconsistent with an upright, filter-feeding life position. Interpretations as a detritivore feeding by amoeboid extensions, or as a facultative chemosynthetic symbiosis of sponge and bacteria are considered. The latter interpretation is preferred due to the highly constrained body shape, and the body form is interpreted from this perspective. The species indicates that Cambrian sponges occupied at least some autecological niches that appear to have been vacant since that time.¹¹;

6701 s[6698] = "BOTTING J.P., MUIR L.A., XIAO S., LI X. & LIN J.-P. (2012).- Evidence for spicule homology in calcareous and siliceous sponges: biminerallic spicules in *Lenica* sp. from the Early Cambrian of South China.- *Lethaia* 45, 4: 463-475.- **FC&P** 37, 017, ID=7270^Topic(s):biminerallic sponge spicules, phylogeny; Systematics:Porifera; Stratigraphy:Cambrian L, Hetang biota; Geography:China S^The relationships of the extant sponge classes, and the nature of the last common ancestor of all sponges, are currently unclear. Early sponges preserved in the fossil record differ greatly from extant taxa, and therefore information from the fossil record is critical for testing hypotheses of sponge phylogenetic relationships that are based on modern taxa. New specimens of the enigmatic sponge *Lenica* sp., from the Early Cambrian Hetang Biota of South China, exhibit an unusual spicule structure. Each spicule consists of a siliceous core with an axial canal, an organic outer layer and a middle layer interpreted to have been originally calcium carbonate. This finding confirms previous work suggesting the existence of biminerallic spicules in early sponges. Combined with data from other early sponges, the new findings imply that the two fundamental

spicule structures of modern sponges were derived from a compound, biminerallitic precursor. Spicules are therefore homologous structures in Calcarea and Silicea, and if sponges are paraphyletic with respect to Eumetazoa, then spicules may also have been a primitive feature of Metazoa.¹";

6702 s[6699] = "DA SILVA A.-C., KERSHAW S. & BOULVAIN F. (2011).- Stromatoporoid palaeoecology in the Frasnian (Upper Devonian) Belgian platform, and its applications in interpretation of carbonate platform environments.- *Palaeontology* 54, 4: 883-905.- FC&P 37, 018, ID=7271^Topic(s): stromatoporoids, ecology; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian L, Frasnian; Geography: Belgium, Ardennes^Stromatoporoid faunas in the Frasnian of southern Belgium are abundant in the carbonate platform environments present in this area. Stromatoporoids dominate the large skeletal organisms and occur principally in biostromes. The stromatoporoid assemblage is represented by a small number of taxa. Stromatoporoid genera include Actinostroma, Amphipora, Atelodictyon, Clathrocoelona, Salairella, Stachyodes, Stictostroma, Stromatopora and Trupetostroma which are present in environments ranging from the outer, outer intermediate, inner intermediate and inner zones and associated biostromes. Most large skeletal stromatoporoids are low profile, which reinforces the conclusions of previous studies that low-profile growth forms were the most successful stromatoporoid forms. These low-profile forms are likely to have been important sediment stabilisers that may have led to expansion of the carbonate factory. Growth forms vary between facies, indicating some degree of environmental control on form, for example, laminar in the intermediate zone, bulbous and domical in the inner and outer zones. Stromatoporoid taxa vary in occurrence across the environmental gradient from shallow to deep. There is some taxonomic control on growth forms, with some taxa showing more variability than others in different environments.¹";

6703 s[6700] = "DA SILVA A.-C., KERSHAW S. & BOULVAIN F. (2011).- Sedimentology and stromatoporoid palaeoecology of Frasnian (Upper Devonian) carbonate mounds in southern Belgium.- *Lethaia* 44: 255-274.- FC&P 37, 018, ID=7272^Topic(s): carbonate mounds, stromatoporoids, sedimentology, ecology; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian L, Frasnian; Geography: Belgium, Ardennes^Stromatoporoids are the most abundant large skeletal organisms in middle Frasnian carbonate mound environments of southern Belgium. They occur in environments ranging from flank and off-mound, mound core, shallow mound and restricted mound. A detailed log and comprehensive sampling of stromatoporoids in a single section cutting through all middle Frasnian mound levels in La Boverie-Rochefort Quarry, near Rochefort and Dinant reveals a stromatoporoid assemblage comprising 10 genera, 472 samples, containing an overall total of 3079 stromatoporoids (including complete and fragmented specimens) have been studied. The following list gives abundance using numbers of specimens and areas of total stromatoporoid area on outcrop surfaces (% number, % area in cm²): Actinostroma (0.4, 9.2), Amphipora (15.5, 1.7), Atelodictyon (0.2, 4.4), Clathrocoelona(0.3, 0.5), Euryamphipora (13.7, 0.7), Idiostroma (2, 1.9), Salairella (1.2, 9.6), branching Stachyodes (43.2, 59.1), laminar Stachyodes australe (1.9, 1.3), Stictostroma (4.8, 13.1) and Trupetostroma (0.2, 0.8), showing that Stachyodes is approximately half of the total assemblage. Deeper environments contain more abundant low profile forms, shallow water facies contain more domical and bulbous forms, branching forms are ubiquitous. Low profile stromatoporoids are likely to have been important sediment stabilizers that may have led to expansion of the carbonate factory, and they may have therefore contributed to the structural building of the mounds. Stromatoporoid-coral intergrowths are observed in only Stictostroma suggesting that there is a close biological relationship between them, however, stromatoporoid skeletons in almost all cases appear to be

unaffected by the presence of intergrown corals, suggesting they were commensals.¹";

6704 s[6701] = "DA SILVA A.-C., KERSHAW S., BOULVAIN F. & REITNER J. (2011).- Long-expected! - First record of demosponge-type spicules in a Devonian stromatoporoid (Frasnian, Belgium).- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts. Kölner Forum für Geologie und Paläontologie 19: 32-33.- FC&P 37, 019, ID=7273Topic(s): stromatoporoid spicules; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian L, Frasnian; Geography: Belgium, ArdennesThe stromatoporoids are hypercalcified sponges which were major reef-builders during the Palaeozoic... Here, for the first time, are presented some evidence of demosponge-type spicules in a Devonian stromatoporoid... The stromatoporoid skeleton is cassiculate with locally dominant coenosteles or coenostomes and with a melanospheric microstructure. The spicules are of two size ranges, the large ones are ranging between 500 to 2000 μm long and the small ones are 50 to 100 μm long... [abridged]¹";

6705 s[6702] = "FERNANDEZ-MARTINEZ E., FERNANDEZ L.P., MENDEZ-BEDIA I., SOTO F. & MISTIAEN B. (2010).- Earliest Pragian (Early Devonian) corals and stromatoporoids from reefal settings in the Cantabrian Zone (N Spain).- Geologica Acta 8, 3: 301-323; Barcelona.- FC&P 37, 111, ID=7274Topic(s): corals, stromatoporoids, taxonomy, reefs; Systematics: Cnidaria, Anthozoa, Porifera, Stromatoporoidea; Stratigraphy: Devonian L, Pragian L; Geography: Spain N, Cantabrian ZoneThe oldest reefal episode in the Cantabrian Zone (earliest Pragian) consists of small biostromal patch reefs, mainly built by corals and stromatoporoids, and developed on a storm-dominated ramp. Four outcrops provide the stratigraphic framework in which these reef facies developed, and these permitted an interpretation of their depositional setting in terms of a relatively distal or protected shelf. We systematically describe three species of rugose corals, five species of tabulate corals, and six species of stromatoporoids. This fauna is allocated to three Pragian fossil associations. Association 1 is mainly composed of massive tabulate corals and stromatoporoids. Association 2 contains dominant branching rugose and tabulate corals. Finally, association 3 is represented by tiny massive tabulate corals. Each association occurs at a specific location within a framework of high-frequency deepening upward cycles, being related to a specific depositional setting. This mode of occurrence suggests that their development was tuned by relative base-level oscillations, forming during rises that took the sea-bottom to relatively deep or sheltered conditions, with rare reworking by storm-related currents. Finally, a comparison of this reefal fauna with examples of similar age from elsewhere is presented in order to explore their affinities.¹";

6706 s[6703] = "FINKS R.M. (2010).- The Sponge Family Guadalupiidae in the Texas Permian.- Journal of Paleontology 84, 5: 821-847.- FC&P 37, 020, ID=7275Topic(s): taxonomy, new taxa; Systematics: Porifera, Guadalupiidae; Stratigraphy: Permian; Geography: USA, Texas WNew and old species and genera of the family Guadalupiidae (spherulitic hypercalcified demosponges of the order Agelasida) are described or redescribed from the West Texas Permian. The entire family is reviewed and observations are made on the epibionts, growth patterns, functional morphology, ecological relationships, morphologic variability, modular structure, and evolutionary history of these largely reef-dwelling sponges. The stratigraphic distribution of species is also noted; many are limited and can define zones. The new genera Exovasa and Incisimura and the new species Guadalupia auricula, G. cupulosa, G. ramescens, G. microcamera, G. vasa, Cystothalamia megacysta, Lemonea simplex, Incisimura bella, and Exovasa cystauletoides are described. Almost all previously published taxa are redescribed and in some cases redefined. The

- Guadalupiidae are unique among hypercalcified sponges in having a modular thalamid layer (thalamidium) covered on the exhalant surface by a non-modular stromatoporoid-like layer (trabecularium).¹;
- 6707 s[6704] = "GERMAN T.N. & PODKOYROV V.N. (2012).- Records of a new sponge-like group in the Riphean biota.- Paleontologicheskii Zhurnal 46, 3: 3-10.- FC&P 37, 021, ID=7276^Topic(s):microfossils, sponge-like; Systematics: Porifera, Hexactinellida; Stratigraphy: Meso/Neoproterozoic, Lakhanda Fm; Geography: Russia, Siberia SE, Maya River^New microfossils of presumably sponge organization grade have been recorded in the Meso-Neoproterozoic boundary beds of the Riphean Lakhanda Formation (Maya River, Uchur-Maya Region, southeastern Siberia). Because of the microscopic size, they remained invisible for a long time among abundant green algae on the surface of individual acritarchs in associations with nematode-like organisms and zygotes and suspensors of fungal microfossils. The specimens were found during a reexamination of the type material of *Annulusia annulata* Timofeev et Hermann, 1979, fixed on biofilms. The biofilms have shown the presence of very small, abundant, colonial organisms represented by aggregations of cells tightly connected in a soft tissue structure. In morphological characters, mode of life, occurrence of spicule-like structures, symmetry of their body, with a central canal positioned at the apex and interpreted here as an osculum, they are considered to be similar to the sponges Demospongiae and Hexactinellida. The microfossils with a syncytium and collagen-fibrous network (amorphous body) resemble the sponge class Hexactinellida.¹;
- 6708 s[6705] = "KERNER A., VIGNES LEBBE R. & DEBRENNE F. (2011).- Computer-aided identification of the Archaeocyatha genera now available online.- Carnets de Géologie / Notebooks on Geology, Brest, Letter 2011/02 (CG2011_L02), pp 99-102. [http://paleopolis.rediris.es/cg/CG2011_L02]- FC&P 37, 021, ID=7277^Topic(s):archaeocyatha, genera database, identification key; Systematics: Porifera, Archaeocyatha; Stratigraphy: Cambrian L; Geography: ^The Archaeocyatha are a key group in several of the many discrete disciplines that together make feasible a valid history of the Earth: they are the oldest of the calcified sponges, the first metazoans to build reefs (in association with calcimicrobes), are characteristic fossils used for the biozonation of the first, pre-trilobitic Cambrian stage (Tommotian). To date, a valid key to their identification has not been available, so a tool for that purpose has been devised: it was created using the software XPER2, and is now available free, online. Published in English, the knowledge base includes the 307 valid described genera identified by 120 descriptors (85 morphological and ontogenetic, 8 stratigraphic and geographic and 27 taxonomic). A key to identification is supplemented by detailed descriptive cards with images of type specimens of each genus and details of their morphology that aid identification. [identification key is available at <http://www.infosyslab.fr/archaeocyatha>]¹;
- 6709 s[6706] = "KHROMYKH V.G. (2010).- Evolution of Stromatoporoidea in the Ordovician-Silurian epicontinental basin of the Siberian Platform and Taimyr.- Russian Geology and Geophysics 51: 684-693.- FC&P 37, 22, ID=7278^Topic(s):stromatoporoids, phylogeny; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Ordovician, Silurian; Geography: Russia, Siberian Platform, Taimyr^The paper discusses the evolution of Stromatoporoidea in the epicontinental sedimentary basin of the Siberian Platform and Taimyr during the Ordovician and Silurian. Specimens of the oldest genus, *Priscastroma*, were found in the middle of Middle Ordovician sediments. This genus is represented by the species *P. gemina* Khrom., which has two forms, A and B. Tracing the emergence of new genera over time, we identified two distinct branches in stromatoporoid evolution. The ancestor of the first branch is *P. gemina* f. A, which gave rise to the genus *Cystostroma*. The latter is the ancestor of two subbranches with

predominant horizontal skeletal elements. The subbranches differ only in tissue microstructure. The genera *Stromatocerium*, *Dermatostroma*, and *Aulacera* display dense fibrous microstructure, whereas the genus *Rosenella* and its descendants display dense microstructure. The genus *Lophiostroma*, with a lamellar-fibrous tissue, may be a dead branch of evolution. The ancestor of the second branch is *P. gemina* f. B, which gave rise to the genus *Labechia* and its descendants. This branch has a dense tissue, with predominant vertical skeletal elements. Ordovician stromatoporoids from Siberia were compared with those from other basins of the world. Comparison shows that all the Ordovician genera from the epicontinental basin of the Siberian Platform and Taimyr originated here. Thus, this basin was one of the centers of stromatoporoid origin.¹¹;

- 6710 s[6707] = "MAY A. & RODRIGUEZ S. (2012).- Pragian (Lower Devonian) stromatoporoids and rugose corals from Zujar (Sierra Morena, southern Spain).- *Geologica Belgica* 15, 4: 226-235.- FC&P 37, 022, ID=7279Topic(s): taxonomy, new taxa, reef biota, biogeography; Systematics: Porifera, Stromatoporoidea, Cnidaria, Rugosa; Stratigraphy: Devonian L, Pragian; Geography: Spain, Obejo-Valsequillo-Puebla de la Reina DomainThe locality Zujar at the boundary between the Badajoz and Cordoba provinces belongs to the Obejo-Valsequillo-Puebla de la Reina Domain. Within the fossiliferous reefal carbonates of Pragian age cropping out in Zujar, 10 stromatoporoid species and 7 rugose coral species are identified. The new rugose coral species *Martinophyllum miriamae* n. sp. is described. *Hexagonaria soraufi* Rodriguez Garcia, 1978 is a subspecies of *Martinophyllum ornatum* Jell & Pedder, 1969. The Pragian fauna of Zujar is a typical fauna of the Old World Realm with remarkably close relationships to Arctic Canada and Australia. Most species have been recorded for the first time from Spain. No significant relationships to the Eastern Americas Realm are visible. Remarkable is, that none of the stromatoporoid species of Zujar is known from the famous Pragian reef complex of Koneprusy in Bohemia, meanwhile the rugose coral fauna (e.g. *Joachimastrea barrandei* Galle, Hladil & May, 1999) shows some relations. Some of the species found are ancestors of important constructors of the Middle Devonian reef complexes, demonstrating that the roots of the Givetian-Frasnian reef complexes reach down to the Pragian.11";
- 6711 s[6708] = "OLSZEWSKA-NEJBERT D. & SWIERCZEWSKA-GLADYSZ E. (2012).- Redescriptions of Cenomanian hexactinellid sponges from Podillia (South-west Ukraine) and designation of neotypes.- *Palaeontology* 55, 6: 1265-1278.- FC&P 37, 023, ID=7280Topic(s): fossil sponges, new collection, taxonomic revision; Systematics: Porifera, Hexactinellida; Stratigraphy: Cretaceous U, Cenomanian; Geography: Ukraine W, PodilliaNewly collected phosphatised hexactinellid sponges are recorded from upper Cenomanian strata in the villages of Nezvys'ko and Rakovets' of Podillia, south-west Ukraine. Sponges from Nezvys'ko were first described in the late 19th century by Emil H. Dunikowski, but the original specimens appear to have been lost. Five neotypes of the hexactinellids *Laocoetis maxima*, *Callodictyonella regularis*, *Plocoscyphia podolica*, *Toulminia polonica* and *Leiostracosia crassa* are here designated. In addition, diagnoses of all species are provided and descriptions emended and supplemented.11";
- 6712 s[6709] = "RIGBY J.K., CHURCH S.B. & ANDERSON N.K. (2010).- Middle Cambrian Sponges from the Drum Mountains and House Range in western Utah.- *Journal of Paleontology* 84, 1: 66-78.- FC&P 37, 024, ID=7281Topic(s): fossil sponges, taxonomy; Systematics: Porifera; Stratigraphy: Cambrian M; Geography: USA, UtahA diverse assemblage of Middle Cambrian sponges, recently collected from the Wheeler and Marjum Formations of western Millard County, Utah, includes a variety of demosponges and hexactinellids. This collection includes the verongioid *Vauxia bellula* Walcott, 1920,

and the protomonaxonids *Choia carteri* and *Choia ridleyi* Walcott, 1920, *Hamptonia bowerbanki* Walcott, 1920, and *Hamptonia parva* n. sp. Hexactinellids in the collection include the reticuloid protospongioids *Diagoniella hindei* Walcott, 1920, and *Diagoniella magna* n. sp.; the dierespongioid hydnoctyid *Valospongia? gigantus* Rigby, 1973; and the hintzespongioid *Hintzespongia bilamina* Rigby and Gutschick, 1976. A specimen of the problematic *Sentinella? draco* Walcott, 1920, is also documented as part of the collection.¹¹;

- 6713 s[6710] = "SENOWBARI-DARYAN B. & LINK M. (2011).- Hypercalcified segmented sponges (&sphinctozoans&) from the Upper Triassic (Norian) reef boulders of Taurus Mountains (southern Turkey).- *Facies* 57, 4: 663-693.- FC&P 37, 024, ID=7282Topic(s): sphinctozoans, taxonomy; Systematics: Porifera, Sphinctozoa sensu lato; Stratigraphy: Triassic U, Norian; Geography: Turkey S, Taurus Mts[^]Norian reef boulders, exposed in a locality near the fountain &Tavuk Cesme& (&Chicken Fountain&) in Taurus Mountains, southern Turkey yielded a large number of hypercalcified sponges, including &sphinctozoans&, &inozoans&, &spongiomorphids&, and &chaetetids&. The sphinctozoans from this locality are described in this paper. Geologically, this locality belongs to the Anamas-Akseki autochthonous. The reef boulders of this locality are exposed near the &Tavuk Cesme& fountain, located at the road, leading from the town of Aksu to Yenisarbademli. The following taxa are described: *Amblysiphonella taurica* nov. sp., *Anthalythalamia riedeli* Senowbari-Daryan, *Calabrisiphonella sphaerica* nov. sp., *Calabrisiphonella cuifi* nov. sp., *Cinnabaria minima* Senowbari-Daryan, *Colospongia recta* nov. sp., *Colospongia* sp. 1, *Colospongia* sp. 2, *Colospongia* sp. 3, *Cryptocoelia compacta* nov. sp., *Cryptocoelia?* sp., *Deningeria crassireticulata* Senowbari-Daryan, Zuhlke, Bechstadt and Flugel, *Discosiphonella minima* Senowbari-Daryan and Link, *Gigantothalamia ovoidalis* Senowbari-Daryan, *Hajarispongia dipoyrazensis* nov. sp., *Hajarispongia cortexifera* nov. sp., *Kashanella irregularis* Senowbari-Daryan, *Kashanella cylindrica* nov. sp., *Parauvanella ferdowsensis* Senowbari-Daryan, *Parastylotalamia cylindrica* nov. gen., nov. sp., *Asiphotalamia polyosculata* nov. gen, nov. sp., *Sollasia norica* nov. sp., and *Thaumastocoelia sphaeroida* Senowbari-Daryan. The most abundant sponge is *Amblysiphonella taurica* nov. sp. followed by *Hajarispongia dipoyrazensis* nov. sp., *Colospongia* and *Discosiphonella minima* Senowbari-Daryan and Link are also relatively abundant. The stylothalamid sponge *Parastylotalamia* nov. gen. is an abundant sponge genus in other Norian reefs of the Taurus Mountains, but is rare at the &Tavuk Cesme& locality.¹¹;
- 6714 s[6711] = "SKORLOTOVA N.A. (2013).- Novye arkeocyathy iz otlozheniy atdabanskogo yarusa Sibirskoy platformy [new Atdabanian Archaeocyatha from Siberian Platform].- *Paleontologicheskii Zhurnal* 47, 6: 3-9.- FC&P 37, 025, ID=7283Topic(s): taxonomy, new taxa; Systematics: Porifera, Archaeocyatha; Stratigraphy: Cambrian L; Geography: Russia, Siberian Platform¹¹;
- 6715 s[6712] = "TSYGANKO V.S. (2013).- A new hydroid coral from the Famennian stage of the Chernyshev Uplift, Polar Urals.- *Paleontologicheskii Zhurnal* 47, 3: 14-15.- FC&P 37, 025, ID=7284Topic(s): stromatoporooids as hydrocorals, new taxa; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian L, Famennian M; Geography: Russia, Urals N, Chernyshev Uplift[^]A new stromatoporate species of the unusual genus *Pararosenella* Vassiljuk et Bogoyavlenskaya, 1990, *P. olimpiadae* sp. nov., is described; it is found for the first time in the Middle Famennian Substage of the Devonian in the Chernyshev Uplift, Polar Urals.¹¹;
- 6716 s[6713] = "VODRAZKA R. & CRAME J.A. (2011).- First Fossil Sponge from Antarctica and its Paleobiogeographical Significance.- *Journal of Paleontology* 85, 1: 48-57.- FC&P 37, 025,

ID=7285^Topic(s): taxonomy, new taxa, biogeography; Systematics: Porifera, Hexactinellida; Stratigraphy: Cretaceous, Albian-Cenomanian; Geography: Antarctica, James Ross Island^Laocoetis piserai n. sp. (Hexactinellida, Porifera) from the mid-Cretaceous (i.e., Albian-Cenomanian) of James Ross Island is the first record of a fossil sponge from Antarctica. This new occurrence of a formerly widespread genus was restricted to relatively deep waters on the margins of an active volcanic arc. Its occurrence in Antarctica is further evidence that the genus Laocoetis underwent a dramatic reduction in its geographic range through the Cenozoic. The only living species of the genus at the present day is Laocoetis perion from Madagascar.^1";

- 6717 s[6714] = "WOLNIEWICZ P. (2012).- Stromatoporoid diversity in the Devonian of the Ardennes: a reinterpretation.- *Geologica Belgica* 15, 1-2: 3-7.- FC&P 37, 026, ID=7286^Topic(s): biodiversity, temporal trends, rarefaction method; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian; Geography: Belgium, Ardennes^Previous studies of the stromatoporoid palaeobiodiversity in the Devonian of the Ardennes are revised. The data set used in this study consists of 3416 specimens of 180 species. The rarefaction method was employed in order to reduce sampling bias in the diversity curves. The estimated stromatoporoid diversity reached its plateau in the Eifelian (Couvin Formation) and in the Givetian, and decreased during the Late Devonian.^1";
- 6718 s[6715] = "WOLNIEWICZ P. (2012).- Same taxonomic name, different species: a threat to stromatoporoid biodiversity research.- *Geologica Belgica* 15, 4: 236-244.- FC&P 37, 026, ID=7287^Topic(s): taxonomy, biodiversity; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian; Geography: Belgium, Ardennes, Poland, Holy Cross Mts^Taxonomic inconsistencies between two published collections of Devonian stromatoporoids were examined. The studied collections contain stromatoporoids sampled from the Middle and Upper Devonian from the Ardennes (collection by Lecompte) and the Holy Cross Mountains (collection by Kazmierczak). The study was limited to stromatoporoid species that were assigned to the order Stromatoporellida. At least eight species which were described from the Devonian of both the Ardennes and the Holy Cross Mountains should be revised: *F. ruedemanni*, *H. crassum*, *H. porosum*, *H. perseptatum*, *S. lensiforme*, *S. socialis*, *T. laceratum*, *T. pingue*. Specimens that were assigned to *C. damnoniensis*, *C. spissa*, *H. episcopale*, *H. schlueteri*, *P. cellulorum* and *S. huronense* do not need to be revised. The inconsistencies may severely influence the outcome of palaeogeographic and biodiversity studies, since the error is not distributed randomly among stratigraphic intervals and it affects classification at the genus-level.^1";
- 6719 s[6716] = "WOLNIEWICZ P. (2013).- The limited value of traditional morphometric features in stromatoporoid taxonomy.- *Palaeontology* 56, 5: 947-959.- FC&P 37, 027, ID=7288^Topic(s): taxonomy, diagnostic features; Systematics: Porifera, Stromatoporoidea; Stratigraphy: Devonian; Geography: ^The morphological variation of stromatoporoids, which are solitary organisms, is partitioned into its presumably genetic and environmental components. Potentially heritable, environmentally mediated and residual components of morphological variability were estimated in a test set containing Devonian stromatoporoids of the genus *Gerronostromaria* from southern Poland using analysis of variance. The taxonomic importance of traditional morphometric features is limited, because they are dominated by the intra-skeletal component of variance. Conventional metrics were therefore replaced by stereological and textural quantities. Both stereological and textural features are dominated by the inter-skeletal and inter-locality components of variation and thus may be valuable in taxonomic and environmental studies of stromatoporoids. Statistical analyses of these characters (principal

- component analysis and cluster analysis) were performed. Of 13 characters considered most useful in taxonomic studies, only five have been used previously in conventional species definitions.¹¹;
- 6720 s[6717] = "YANG Ai-Hua & YUAN Ke-Xing (2012).- Overview of research on the Archaeocyaths.- Acta Palaeontologica Sinica 51, 2: 222-237.- FC&P 37, 027, ID=7289^Topic(s): research review; Systematics: Porifera, Archaeocyatha; Stratigraphy: Cambrian L; Geography: China^Archaeocyatha (Porifera) were an important group of marine sessile organisms during the Cambrian, they evolved rapidly and were globally distributed during the Early Cambrian. They are therefore important for biostratigraphic correlation over large areas, nationally and internationally. In this paper we review and discuss developments in classification and ideas of relationships in the Class Archaeocyatha, particularly the work of Debrenne et al. (2002). We highlight the need for a cladistic approach in attempting to further clarify changing ideas about phylogenetic relationships. In terms of biostratigraphy and palaeogeography, the archaeocyaths of the Atdabanian, Botoman, and Toyonian Stages are particularly useful for Early Cambrian stratigraphic correlation and palaeobiogeographic analysis. We summarize the history and current status of research on archeocyathan systematic, biostratigraphic, and palaeogeographic distribution within China, as well as internationally, and identify important foci of interest for further work - most notably that they formed an important component of the Lower Cambrian carbonate fauna of the Yangtze Platform.¹¹;
- 6721 s[6718] = "YANG Xing-Lian, ZHAO Yuan-Long, ZHU Mao-Yan, CUI Tao & YANG Kai-Di (2010).- Sponges from the Early Cambrian Niutitang Formation at Danzhai, Guizhou and their environmental background.- Acta Palaeontologica Sinica 49, 3: 348-359.- FC&P 37, 028, ID=7290^Topic(s): taxonomy, ecology; Systematics: Porifera calcarea; Stratigraphy: Cambrian L, Niutitang Fm; Geography: China, Guizhou^^1";
- 6722 s[6719] = "ZAPALSKI M.K. & HUBERT B. (2011).- First fossil record of parasitism in Devonian calcareous sponges (stromatoporoids).- Parasitology 138, 1: 132-138.- FC&P 37, 028, ID=7291^Topic(s): endobionts, parasitism; Systematics: Porifera, Stromatoporoidea, Torquaysalpinx; Stratigraphy: Devonian M, Givetian; Geography: France, Ardennes, Mont d'Haurs section^* Introduction. Palaeozoic calcareous sponges (stromatoporoids) are common bio-constructing fossils, they are sometimes found in association with helicoidal structures of unknown biological affinities. The interaction between the tube-forming organisms has usually been classified as commensalism. ** Methods. About 260 stromatoporoid skeletons from the Middle Devonian (Givetian) of the Mont d'Haurs section near Givet (Champagne-Ardenne, France) were thin-sectioned and analysed under transmitted light. *** Results. Approximately 10% of the examined stromatoporoids (mainly belonging to the genera Actinostroma, Stromatopora and Stromatoporella) contain tubes classified as Torquaysalpinx sp. The Torquaysalpinx organisms penetrated the skeletons of stromatoporoids in vivo (as evidenced by skeletal overgrowths), around the infesting organisms, growth bands are bent down. **** Conclusion. Diminished growth rates around the infesting organism demonstrate a negative influence on the host, similar to that seen in the modern demosponge-polychaete association of Verongia-Haplosyllis. This is demonstrated by changes in growth bands. As in the above-mentioned association, the endosymbiont might have been feeding directly upon the tissues of the host. The Torquaysalpinx organisms were gaining habitat and possibly also food resources - for them this interaction was clearly positive. This long-term association can therefore be classified as parasitism. This is the first evidence for parasitism in Palaeozoic sponges.¹¹;
- 6723 s[6720] = "ARETZ M. (2010).- Habitats of colonial rugose corals: the Mississippian of western Europe as example for a general

classification.- Lethaia 43: 558-572.- FC&P 37, 029, ID=7292^Topic(s): colonial corals, habitat classification; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L; Geography: Europe w^Colonial rugose corals are a major constituent of shallow-water marine benthic communities in Mississippian times. The study of western European rugose coral habitats from the base of the Tournaisian stage to the Serpukhovian stage allows the recognition of four basic habitat types, which can be divided into a total of 11 subtypes. The classification is mainly based on field data, and thus rapidly applicable. Level-bottom communities in which large colony distances are characteristic (type A) represent the most basic community type, polyspecific (subtype A1) and monospecific (subtype A2) subtypes occur. Reduced colony distances result in the formation of coral meadows (type B), which either show homogenous coral distribution (subtype B1) or the development of patches (subtype B2). Coral biostromes (type C) represent a spectrum between hydrodynamically controlled biostromes (nothing in place, subtype C1) and biologically constructed and controlled biostromes (subtype C2). The bulk of the biostromes represent mixtures of those two subtypes (subtype C3). Colonial rugose corals are widely encountered in Mississippian bioherms where they are dwellers (subtype D1), form capping beds (subtype D2), support framework building along with other organisms (subtype D3) and form coral framework (subtype D4). The latter is probably the most uncommon of all subtypes in Mississippian times. The classification is widely applicable to other groups.^1";

6724 s[6721] = "ASHOURI A.R., ABBASI M.A. & KHAKSAR K. (2010).- Alborziphyllinae, a new Late Devonian Rugose corals subfamily.- Journal of Sciences, Islamic Republic of Iran 21, 2: 131-136; Tehran.- FC&P 37, 030, ID=7293^Topic(s): taxonomy, new taxa; Systematics: Cnidaria, Rugosa, Laccophyllidae, Alborziphyllinae; Stratigraphy: Devonian L, Famennian, Khoshyeilagh Fm; Geography: Iran, Alborz E^Members of the family Laccophyllidae are small, solitary rugose corals with stratigraphic ranges from Silurian to Permian. Among the laccophyllids, axial ends of major septa are united in an aulos and dissepiments may be absent or present. Minor septa can be contratingent and sometimes are small or in some genera are absent. Septa and aulos may be thick or thin. In this study, Famennian rugose corals of the Khoshyeilagh Formation in the north of Meyghan village (35 km NE Shahrood, Eastern Alborz) have been investigated for the first time. All the studied corals share their common characteristics with family Laccophyllidae. Convincingly, based on comparison of the presence of some key features among the collected samples with characteristics of existed subfamilies of laccophyllids, establishing a new subfamily can be essential. The Alborziphyllinae (new subfamily) encompasses a Late Devonian laccophyllid lineage. The new subfamily described here includes a new genus, Alborziphyllum and two new species, Alborziphyllum ferdowsiense and Alborziphyllum lonsdaleiforme.^1";

6725 s[6722] = "BERKOWSKI B. (2012).- Life strategies and function of dissepiments in rugose coral Catactotoechus instabilis from the Lower Devonian of Morocco.- Acta Palaeontologica Polonica 57, 2: 391-400.- FC&P 37, 030, ID=7294^Topic(s): coral skeletons, dissepiments, function; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian L, Emsian; Geography: Morocco, Anti-Atlas, Hamar Laghdad^This study focuses on the life strategies of small, dissepimented rugose coral Catactotoechus instabilis (representative of Cyathaxonia fauna) from the Emsian argillaceous deposits of mud mounds of Hamar Laghdad (Anti-Atlas, Morocco). Numerous constrictions and rejuvenescence phenomena as well as frequent deflections of growth directions among the studied specimens suggest unfavourable bottom conditions resulted from sliding down of the soft sediment on the mound slopes. Dissepimental structures observed on well-preserved calices and thin sections played an important role in

the life of the coral, supporting their successful recovery after temporary burial within unstable soft sediment. The development of lonsdaleoid dissepiments, apart from being biologically controlled, was also strongly influenced by environmental factors. Such modifications in lonsdaleoid dissepiments growth were observed in phases of constrictions, rejuvenescence and deflections of growth, when their development was significantly increased in comparison to phases of their stable growth. Dissepiment morphology suggests that the process of formation of lonsdaleoid dissepiments in *Catactotoechus instabilis* is consistent with the hydraulic model.¹;

6726 s[6723] = "BERKOWSKI B. & KLUG C. (2012).- Lucky rugose corals on crinoid stems: unusual examples of subepidermal epizoans from the Devonian of Morocco.- *Lethaia* 45, 1: 24-33.- FC&P 37, 136, ID=7295^Topic(s): epibionts, subepidermal epizoans; Systematics: Cnidaria, Rugosa, Echinodermata, Crinoidea; Stratigraphy: Devonian L, Emsian; Geography: Morocco, Anti-Atlas, Hamar Laghdad^In the fossil record, evidence for true epizoans, i.e. living animals inhabiting other living host-animals, is rather rare. A host reaction is usually needed to proof the syn vivo-settling of the epizoan. Herein, we provide a first report of such an epizoan biocoenosis from various strata of the Early Devonian of Hamar Laghdad, the world-renowned Moroccan mud-mound locality. In this case, solitary rugose corals settled as larvae on crinoid stems, perhaps at a spot where the epidermis was missing for some reason (injury, disease). Both the crinoid and the coral began to grow around each other. By doing so, the affected crinoid columnals formed a swelling, where ultimately only an opening slightly larger than the coral orifice remained. We discuss both macroecological and small-scale synecological aspects of this biocoenosis. The coral profited from its elevated home because it reached into more rapid currents providing the polyp with more food than at the densely populated seafloor, which was probably covered by a coral-meadow around the mounds and hydrothermal vents.¹;

6727 s[6724] = "BERKOWSKI B. & WEYER D. (2012).- Hamaraxonia, a new pseudocolumellate genus of Middle Devonian deep-water Rugosa (Anthozoa) from Morocco.- *Geologica Belgica* 15, 4: 245-253.- FC&P 37, 031, ID=7296^Topic(s): taxonomy, new taxa, phylogenetic lineage; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian M, Eifelian M; Geography: Morocco, Anti-Atlas, Hamar Laghdad^The monotypic genus *Hamaraxonia* gen. nov., with type species *Hamaraxonia africana* sp. nov., is described, based on only four specimens, from the middle Eifelian (top *Costapolygnathus costatus* Zone to basal *Tortodus australis* Zone) of the Hamar Laghdad, Anti-Atlas, SE-Morocco. In its prominent axial boss and dissepiments in maturity, the new genus is unique among pre-Carboniferous ahermatypic Rugosa. It is classified within the still polyphyletic subfamily Columnaxoniinae weyer, 1980 of the family Cyathaxoniidae Milne-Edwards & Haime, 1850 (suborder Cyathaxoniina Spasskiy, 1977). Possible ancestors will probably be found among the neighbouring subfamily Laccophyllinae Grabau, 1928. For the moment, a phylogenetic line: *Laccophyllum* Simpson, 1900 > *Hamarophyllum* Berkowski, 2004 > gen. nov. pro *Cyathaxonia hercynica* Roemer, 1855 (Weyer & Zagora, 1990) > *Hamaraxonia* gen. nov. may be proposed, pending further records from other regions and additional intermediate taxa. The commonly used term columella (aseptal origin) and the nearly forgotten term pseudocolumella (septal origin) are redefined in the already morphogenetic sense of their authors (Milne-Edwards & Haime 1850; Haime 1850) by selecting morpho-terminological types: *Cyathaxonia cornu Michelin*, 1847 (late Tournaisian), and *Clisiophyllum keyserlingi* M&Coy, 1849 (middle/late Viséan).¹;

6728 s[6725] = "BLAKE P.R. (2010).- Devonian Corals of the Yarrol Province, eastern-central Queensland.- *Memoir of the Association of Australasian Palaeontologists* 38: 1-191.- FC&P 37, 032, ID=7297^Topic(s): taxonomy, new taxa, biogeography,

biostratigraphy; Systematics: Cnidaria, Rugosa, Tabulata; Stratigraphy: Devonian; Geography: Australia, Queensland, Yarrol Province^The Yarrol Province in eastern-central Queensland contains rocks ranging from latest Silurian to Permian. Devonian corals are locally abundant within the Yarrol Province, but their preservation is typically poor compared to the well known Carboniferous coral faunas of this Province and except for the Mount Etna coral fauna, the Devonian corals have not been systematically described. Early and Middle Devonian corals have been known from the Yarrol Province for a long time, even though they have never been properly described. As a result of this study it is now known that a fairly diverse Late Devonian coral fauna is also present, and this is the first Late Devonian coral fauna identified in Queensland. Overall, this study has identified seventy-seven species of coral referable to forty-five genera. Seventeen of the species are new: Tryplasma? careoseptum, T? abyssum, Aphyllum simplexum, Cystiphyllodes immanum, Breviphyllum mirourum, Smithiphyllum petercollsi, S. finseni, Papiliophyllum jelli, Disphyllum castellum, D. stupendum, Temnophyllum kroombitense, T. stainesi, Squameofavosites craigileei, Alveolites murrayi, Heliolites amplusa, H. comminus and Multithecopora tubus. Eighteen species have been left in open nomenclature due to insufficient material or poor preservation, and the remainder have been placed into forty-two previously described species. The corals have been divided into six faunas, with three faunas in the Early Devonian, two in the Middle Devonian, and one in the Late Devonian. These are the Taragoola, Holly, Armagh, Hopeful, Beschs and Kroombit faunas respectively. The Early Devonian faunas share some of the common corals, such as Heliolites daintreei, but do not show any strong affinities with other Early Devonian coral faunas around Australia. The Middle Devonian Hopeful Fauna contains only a small number of species. The Givetian Beschs Fauna was diverse and many of the species are well known from eastern Australia, though it has few colonial rugose corals compared to most other Givetian faunas in Australia. The Kroombit Fauna is less diverse than other described Late Devonian faunas in the Canning Basin of Western Australia and Mostyn Vale Formation in New South Wales, and it shares only a few species with them. The distribution of corals such as Alveolites murrayi were very useful in mapping the Late Devonian rocks of the Yarrol Province.^1";

6729 s[6726] = "COEN-AUBERT M. (2011).- Reassignment to the Middle Devonian of some rugose corals investigated by le Maitre (1934) in the Chalonnnes Formation from the Southeastern Armorican Massif (France).- Bulletin de l'Institut royal des Sciences naturelles de Belgique, Sciences de la Terre 81: 27-53.- FC&P 37, 033, ID=7298^Topic(s): taxonomy, biostratigraphy; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian M, Chalonnnes Fm; Geography: France, Armorican Massif SE^Nine taxa of rugose corals collected by le Maitre (1934) and coming from the Chalonnnes Formation of the Southeastern Armorican Massif in France have been revised. They belong to the genera Stringophyllum wedekind, 1922, Sociophyllum Birenheide, 1962, Acanthophyllum Dybowski, 1873, Beugniesastraea Coen-Aubert, 1989 and Fasciphyllum Schlüter, 1885. Among this material, Stringophyllum acanthicum (Frech, 1885), Sociophyllum elongatum (Schlüter, 1881), Acanthophyllum vermiculare (Goldfuss, 1826) and A. tortum (Tsien, 1969) occur close to the Eifelian-Givetian boundary, on the south side of the Dinant Synclinorium in Belgium. Moreover, the first three species have been defined in the Middle Devonian of the Eifel Hills in Germany and they are observed in the Late Eifelian and the Early Givetian of this area. For comparison, A. heterophyllum (Milne-Edwards & Haime, 1851) and Sociophyllum cf. elongatum sampled by le Maitre (1934) in the Late Emsian Valet Formation from the Southeastern Armorican Massif have also been investigated. The Belgian material of Stringophyllum acanthicum is included in the systematic description of this taxon.^1";

- 6730 s[6727] = "COEN-AUBERT M. (2011).- Stratigraphic distribution of massive rugose corals at the base of the Late Frasnian in Belgium.- In: Aretz, M., Delcolee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts; Kölner Forum für Geologie und Paläontologie 19: 28-29.- FC&P 37, 033, ID=7299^Topic(s): taxonomy, biostratigraphy; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian U, Frasnian U; Geography: Belgium, Ardennes^Among the massive rugose corals, the genus Frechastraea Scrutton 1968 succeeds to the genus Hexagonaria Gürich 1896 at the base of the Late Frasnian in Belgium... [abridged]^1";
- 6731 s[6728] = "COEN-AUBERT M. (2012).- New species of Frechastraea Scrutton, 1968 at the base of the Late Frasnian in Belgium.- Belgica 15, 4: 265-272.- FC&P 37, 034, ID=7300^Topic(s): taxonomy, new taxa; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian U, Frasnian U; Geography: Belgium, Ardennes^Frechastraea coeni n. sp. is widely distributed at the base of the Late Frasnian from the Philippeville Massif, the north side of the Dinant Synclinorium, the south side of the Namur Synclinorium and the Vesdre Massif. It occurs within the Early Palmatolepis rhenana conodont Zone and is locally associated with F. glabra n. sp. and F. phillipsastraeiformis (Moenke, 1954). However, F. phillipsastraeiformis, which is also described in this paper, may be already present at the top of the Middle Frasnian from the Philippeville Massif and the south side of the Dinant Synclinorium.^1";
- 6732 s[6729] = "DENAYER J. (2011).- Dorlodotia and related genera (Rugosa) from the Visean (Mississippian; Carboniferous) of Zonguldak and Bartin (North-western Turkey).- Palaeontology 54, 6: 1435-1454. - FC&P 37, 034, ID=7301^Topic(s): taxonomy, new taxa, phylogenetic lineage; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L, Visean, Livian; Geography: Turkey, Pontides^A rich and diverse coral fauna collected from the Livian (Visean, Mississippian) of Zonguldak and Bartin (North-western Turkey) contains numerous specimens of Dorlodotia and related forms. The most common species, D. delepinei Charles, 1933, is redetermined as Dorlodotia briarti, an European species. A new species of Dorlodotia is described for very large, phaceloid forms: D. euxinensis. The genus Ceriodotia is created for species close to Dorlodotia with a cerioid habit. It comprises two species: C. bartinensis and C. petalaxoides, both common in the Visean of Zonguldak and Bartin. Based on comparison of morphological characters and features of the astogeny, a phylogenetic lineage is proposed for Dorlodotia and the new taxa. The evolution of D. euxinensis from D. briarti is peramorphic. Subsequent paedomorphosis resulted in the lineage D. euxinensis - C. bartinensis - C. petalaxoides. Ceriodotia probably includes Visean taxa from Asia previously described as 'Acrocyathus'.^1";
- 6733 s[6730] = "DENAYER J. (2012).- Corals of the Upper Visean microbial-sponge-bryozoan-coral bioherm and related strata of Kongul Yayla (Taurides, South Turkey).- Geologica Belgica 15, 4: 317-328.- FC&P 37, 035, ID=7302^Topic(s): taxonomy, new taxa, biostratigraphy, biogeography; Systematics: Cnidaria, Rugosa, Tabulata; Stratigraphy: Carboniferous L, Visean, Asbian; Geography: Turkey S, Taurides^The microbial-sponge-bryozoan-coral bioherm of Kongul Yayla in the Central Taurides (South Turkey) contains a rich and diversified fauna. Sponges and rugose corals are of particular interest. The most common taxa are Siphonodendron irregulare, S. pauciradiale, S. cf. intermedium, Lithostrotion araneum, L. decipiens, L. maccoyanum, Axophyllum aff. pseudokirsopianum, Palaeosmilia multiseptata, P. murchisoni, Clisiophyllum aff. keyserlingi, Amygdalophyllum sp., Rotiphyllum cf. densum, Amplexocarinia aff. cravenensis, Soshkineophyllum? sp. and Espielia tauridensis sp. nov. newly described here. The tabulate corals are mostly micheliniids, syringoporids, cladochonids and auloporids.

- Heterocorals and chaetetids are also present. Siphonodendron pauciradiale and Lithostrotion maccoyanum are the guide taxa for the RC7ß biozone and indicate an late Asbian age for the bioherm. Facies and coral assemblage argue for a South-European affinity of the Kongul Yayla reef and probably for the whole Anatolian terrane.^1";
- 6734 s[6731] = "DENAYER J., POTY E., MARION J.-M. & MOTTEQUIN B. (2012).- Lower and Middle Famennian (Upper Devonian) rugose corals from southern Belgium and northern France.- Geologica Belgica 15, 4: 273-283.- FC&P 37, 035, ID=7303^Topic(s): mass extinctions, recovery faunas; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian U, Famennian L M; Geography: Belgium S, France N^After the late Frasnian extinctions, the rugose corals slowly recovered during the Lower and Middle Famennian (crepida to marginifera conodont zones) in southern Belgium and northern France (Avesnois) (Namur-Dinant Basin). Six genera represented by seven species are recognized and described here, one species (Breviphrentis superstes) is new. The rugose coral fauna described herein includes small solitary forms belonging to the so-called Cyathaxonia fauna and is similar or very close to those previously described within the same stratigraphic interval in Australia, China and Germany. It also contains a large species belonging to the genus Breviphrentis which was considered as extinct since the end of the Givetian (Middle Devonian) ("Lazarus taxon"). The tabulate corals from the Lower and Middle Famennian of this area, mainly represented by auloporids, are also briefly discussed. Rugosa only constituted a minor part of the fauna after the end-Frasnian crisis in the Namur-Dinant Basin contrary to the brachiopods, which were abundant and relatively diversified, and no rugose corals have been recovered from the early Lower Famennian (triangularis Zone). The first important Famennian coral radiation only took place during the Latest Famennian (Strunian).^1";
- 6735 s[6732] = "FEDOROWSKI J., BAMBER W.E. & BARANOVA D.V. (2012).- An Unusual Occurrence of Bashkirian (Pennsylvanian) Rugose Corals from the Sverdrup Basin, Arctic Canada.- Journal of Paleontology 86, 6: 979-995.- FC&P 37, 036, ID=7304^Topic(s): taxonomy, biogeography, biostratigraphy; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous U, Bashkirian; Geography: Arctic Canada, Sverdrup Basin^The oldest known Carboniferous rugose coral fauna in the Canadian Arctic Islands was collected in the Yelverton Inlet area of northern Ellesmere Island, from Bashkirian carbonates of the lower Nansen and Otto Fiord formations. It includes the genera Dibunophyllum Thomson and Nicholson, Lonsdaleia McCoy, Palaeosmia Milne-Edwards and Haime and Tizraia? Said and Rodriguez. Such a generic assemblage is unknown elsewhere above the Serpukhovian. An upper? Bashkirian specimen of Paraheritschioides Sando, collected above the main fauna, is the oldest known representative of that genus. Faunal comparisons suggest Novaya Zemlya or northern Timan as the most likely source areas for the Yelverton Inlet fauna.^1";
- 6736 s[6733] = "HE Xin-Yi & TANG Lan (2011).- Restudy of Middle-Late Ordovician and Llandovery Rugosa source area of the Yangtze Region with a discussion of some rugose coral genera.- Acta Palaeontologica Sinica 50, 1: 013-031.- FC&P 37, 037, ID=7305^Topic(s): taxonomy; Systematics: Cnidaria, Rugosa; Stratigraphy: Ordovician M-U, Silurian, Llandovery; Geography: China, Yangtze Region.^1";
- 6737 s[6734] = "HE Xin-Yi & TANG Lan (2013).- Classification and evolutionary trends of Middle Ordovician to Silurian Rugosa from the Yangtze Region.- Acta Palaeontologica Sinica 52, 1: 035-050.- FC&P 37, 037, ID=7305^Topic(s): taxonomy, phylogeny; Systematics: Cnidaria, Rugosa; Stratigraphy: Ordovician M-U, Silurian; Geography: China, Yangtze Region.^1";
- 6738 s[6735] = "KAWAMURA T. & STEVENS C.H. (2012).- Middle Pennsylvanian Rugose Corals from the Baird Formation, Klamath Mountains, Northwestern California.- Journal of Paleontology 86, 3:

513-520.- FC&P 37, 037, ID=7307^Topic(s): taxonomy, new taxa, biostratigraphy, biogeography; Systematics: Cnidaria, Rugosa, Foraminifera; Stratigraphy: Carboniferous U, Bashkirian, Baird Fm; Geography: USA, California, Klamath Mts^Four new species of colonial corals, one previously described coral, and two other unidentified species of coral have been recovered from the Baird Formation in the Klamath Mountains of northwestern California. The newly erected species are *Heritschioides armstrongi* n. sp., *Pararachnastraea klamathensis* n. sp., *P. watkinsi* n. sp., and *P. kabyaiensis* n. sp. These corals are associated with the fusulinids *Millerella marblensis* Thompson, 1944, *Paramillerella* Thompson, 1951, and *Pseudostaffella* Thompson, 1942, emend Groves, 1984, suggesting an early Atokan (Bashkirian) age. Both the coral and foraminiferal faunas bear a resemblance to those of similar age in the Brooks Range, Alaska, which could suggest geographic proximity between the two terranes at that time. These corals also represent the earliest known occurrence of the Family Durhamididae.^1";

6739 s[6736] = "KIDO E. & SUGIYAMA T. (2011).- Silurian rugose corals from the Kurosegawa Terrane, Southwest Japan, and their paleobiogeographic implications.- Bulletin of Geosciences 86, 1: 49-61.- FC&P 37, 037, ID=7308^Topic(s): taxonomy, biostratigraphy, biogeography; Systematics: Cnidaria, Rugosa; Stratigraphy: Silurian, Gionyama Fm, Llandovery - Ludlow L; Geography: Japan, Kurosegawa Terrane^The Silurian to Devonian Gionyama Formation is assigned to the Kurosegawa Terrane in Southwest Japan. Abundant rugose corals in the Middle Member (late Llandovery to early Ludlow) of this formation represent 18 species belonging to 13 genera. These species are: *Tryplasma* sp. aff. *T. ozakii*, *Tryplasma* sp. A, *Tryplasma* sp. B, *Cystiphyllum* sp., *Holmophyllum* sp., *Holmophyllum?* sp., *Labechiellata regularis*, *Rhizophyllum* sp. A, *Rhizophyllum* sp. B, *Neobrachyelasma japonica*, *Pseudamplexus* sp., *Amsdenoides* sp., *Amploxoides* sp. aff. *A. chaoi*, *Strombodes* sp., *Nanshanophyllum hamadai*, *N. gokasense*, *Shensiphyllum* sp., and *Ptychophyllum* sp. The rugose corals from the Gionyama Formation include cosmopolitan genera that commonly occur in China, Kazakhstan, Siberia, Gotland, eastern Australia, and North America. Endemic genera, such as *Nanshanophyllum* and *Shensiphyllum*, which only occur in South China and Qaidam, are also present. Their stratigraphic ranges are restricted to the late Llandovery. The occurrences of these endemic genera may indicate a strong paleobiogeographic relation between the South China Block and "Proto-Japan" during the Silurian.^1";

6740 s[6737] = "KOSSOVAYA O.L. & KROPACHEVA G.S. (2013).- Extinction of Guadalupian rugose corals: an example of biotic response to the Kamura event (southern Primorye, Russia).- In: Gasiewicz A. & Slowakiewicz M. (eds) Palaeozoic Climate Cycles: Their Evolutionary and Sedimentological Impact. Geological Society, London, Special Publication 376. First published online August 6, 2013, <http://dx.doi.org/10.1144/SP376.13>- FC&P 37, 038, ID=7309^Topic(s): extinctions, ecology; Systematics: Cnidaria, Rugosa; Stratigraphy: Permian M; Geography: Russia, Russian Far East, Primorye S^Permian Rugosa of southern Primorye (Russian Far East) occur in a series of terranes of different tectonic origin. The taxonomical composition of Guadalupian (Wordian-Capitanian) rugose corals distributed in southern Primorye changed progressively in an ecological succession, starting with primitive persistent cosmopolitan taxa (assemblage I). This was replaced by assemblage II with a marked invasion of Peri-Gondwanian genera such as *Timorphyllum* and *Verbeekiella*, and, in the Late Capitanian, by typical Cathasian colonial waagenophyllids (assemblage III). Subsequent communities have nearly no transitional forms. The latter assemblage was abruptly replaced by small fasciculate and solitary primitive forms (assemblage IV). Species peculiarities of assemblages of the *Parafusulina stricta* Zone and the specific

Lithological features of coral-bearing deposits indicate a palaeogeographical differentiation of terrane positions. The terranes are of various origins: oceanic arcs, passive margin and guyot. The extinction of massive colonial Rugosa in southern Primorye (western Palaeo-Pacific) is identified as a biotic event that is recognizable in Japan, and probably in Inner Mongolia. It also coincides with a general reduction in coral diversity at the end of the Capitanian in China. The present study of the taxonomical distribution of corals has enabled the level of massive waagenophyllid extinction to be defined precisely and to correlate it to a similar pattern in adjacent territories of the Palaeo-Pacific below the Lopingian boundary. The diversity decrease coincides with the last phase of the Kamura event, and the effects of the Emeishan volcanism is correlated with a second positive shift in $\delta^{13}\text{C}$ (South China). The assumed cooling impacted on the fauna in the western Palaeo-Pacific. The stepwise elimination of massive colonial waagenophyllids and large fusulinids documented in the southern Primorye at the end of the Capitanian is considered to be the first step in the Permian-Triassic extinction, about 8 Myr prior to the final Permian-Triassic (P-T) global event.¹;

6741 s[6738] = "LIAO Weihua & MA Xueping (2011).- On the Givetian transgression in South China and the Endophyllum-bearing beds - with a comparison of Endophyllum from S-China and "Endophyllum" from N-Xinjiang.- Acta Palaeontologica Sinica 50, 1: 064-076.- FC&P 37, 039, ID=7310^Topic(s): taxonomy; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian M, Givetian; Geography: China^^1";

6742 s[6739] = "LIAO Weihua & MA Xueping (2011).- On the coral genera Endophyllum Milne-Edwards & Haime and Parendophyllum Liao & Ma.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts; Kölner Forum für Geologie und Paläontologie 19: 94-95.- FC&P 37, 039, ID=7310^Topic(s): taxonomy, new taxa; Systematics: Cnidaria, Rugosa; Stratigraphy: Devonian M, Givetian; Geography: China^Endophyllum are subfasciculate, cerioid or aphroid corals. Corallites large, with septal stereozone broken up by large irregular lonsdaleid dissepiments. Major septa long, attenuate, and commonly convolute in the tabularium. Endophyllum is a cosmopolitan genus in the Middle Devonian (Givetian) of Europe, Australia and Asia including South China. Specimens referred to so-called "Endophyllum" were reported from northern Xinjiang, NW China (Cai 1983, Liao & Cai 1987). However, they differ obviously from the Endophyllum of Europe and South China in the morphology of their epitheca, septa, dissepiments, tabulae and even in their minute skeletal structures. The major septa of "Endophyllum" from northern Xinjiang are not convolute in the tabularium. Its tabularium is rather simple and the minute skeletal structures of the septum are probably composed of composite rhabdacanth. We transfer the Xinjiang materials to a new genus, Parendophyllum. Parendophyllum Liao & Ma 2011 (type species: Parendophyllum stereoplasma Liao & Ma 2011) Diagnosis: corallum is cerioid, corallites are large, with a thick septal stereozone and a large irregular lonsdaleoid dissepiments, Septa of two orders, major septa are long but not convolute in tabularium, Tabularium is rather simple and tabulae are convex or horizontal. The minute skeletal structures of septum are composed of composite rhabdacanth... [abridged]¹";

6743 s[6740] = "NESTELL M.K. & STEVENS C.H. (2013).- Mixed Tethyan and McCloud Belt Rugose Corals and Fusulinids in an Upper Triassic Conglomerate, Central Oregon.- Journal of Paleontology 87, 5: 909-921.- FC&P 37, 040, ID=7312^Topic(s): taxonomy, biostratigraphy, biogeography, redeposition; Systematics: Cnidaria, Rugosa, Foraminifera; Stratigraphy: Carboniferous - Permian ? Triassic; Geography: USA, Oregon, McCloud

Belt^Colonial rugose corals ranging in age from Carboniferous to Late Triassic and Early Permian (Cisuralian) fusulinids have been recovered from cobbles in a conglomerate in the Upper Triassic Brisbois Member of the Vester Formation in the Izee terrane in central Oregon. Early Permian (late Sakmarian or early Artinskian) fusulinids typical of those present in the Coyote Butte Limestone in the nearby Grindstone terrane (part of the allochthonous McCloud Belt) include *Eoparafusulina*, *Pseudofusulinella*, *Chalaroschwagerina*, and *Schwagerina*. The presence of these fusulinid genera and the Pennsylvanian coral *Heritschioides?*, which is mostly restricted to the McCloud Belt, suggest these particular cobbles were derived from limestone in that belt. The Early Permian fusulinids *Changmeia bostwicki* new species and *Changmeia bigflatensis* new species, and the Early Permian corals *Yokoyamaella? oregonensis* new species and *Yokoyamaella? sp. 1*, all of which have Tethyan affinities, occur rarely in other cobbles. The presence of definitive fossils from the two different realms in a conglomerate associated with beds containing Late Triassic ammonoids indicates that by Late Triassic time a fragment of a Tethyan terrane was close to or had been amalgamated with a terrane belonging to the McCloud Belt.^1";

- 6744 s[6741] = "NUDDS J. (2013).- New records of *Solenodendron* (Rugosa) in Ireland and their stratigraphic and phylogenetic significance.- *Irish Journal of Earth Sciences* 31: 1-5.- FC&P 37, 041, ID=7313^Topic(s): taxonomy, biostratigraphy, phylogeny; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L, Visean, Chadian; Geography: Ireland, Clare & Donegal Counties^New records of *Solenodendron hibernicum* are described from the Chadian of Counties Clare and Donegal, the oldest records of this genus in Ireland. (The term 'Chadian' is used herein rather than the 'Lower Visean' preferred by some authors for this part of the Irish Visean succession.) *Solenodendron* is referred to the family Aulinidae Hill, 1981, which is elevated herein from subfamilial level. A continuous phylogeny of *Solenodendron* is proposed from the Courceyan to the Brigantian Substage.^1";
- 6745 s[6742] = "PLUSQUELLEC Y., GOURVENNEC R. & JAOUEN P.-A. (2012).- New data on *Angustiphyllum Altevogt*, 1965, an automobile free-living rugose coral from the Eifelian of the Western Armorican Massif (France).- *Geologica Belgica* 15, 4: 254-264.- FC&P 37, 041, ID=7314^Topic(s): new taxa, morphology, biostratigraphy; Systematics: Cnidaria, Rugosa, Hadrophyllidae; Stratigraphy: Devonian M, Eifelian U; Geography: France, Armorican Massif^The genus *Angustiphyllum* is recorded for the first time in the Armorican Massif (Rade de Brest) and two new species are erected: *A. styloporum* and *A. vidalae*. The well preserved material shows the indisputable presence of costae on the exterior side of the corallum, which, besides the wedge-like morphology of the corallum, constitutes the main diagnostic feature of the genus. *Angustiphyllum* seems to be a good index for the Upper Eifelian of the Ibero-Armorican Domain.^1";
- 6746 s[6743] = "RODRIGUEZ S. & BAMBER E.W. (2012).- Gregarious growth versus colonial habit in the rugose coral family Geyerophyllidae Minato, 1955.- *Geologica Belgica* 15, 4: 355-360.- FC&P 37, 040, ID=7315^Topic(s): growth habit, solitary, gregarious, colonial; Systematics: Cnidaria, Rugosa, Geyerophyllidae; Stratigraphy: Carboniferous; Geography: ^The family Geyerophyllidae Minato, 1955 includes corals having clinotabulae, lonsdaleoid dissepiments and a variable complex axial structure formed as an extension of the cardinal septum. Included in the family are four genera originally considered to have a colonial (fasciculate) growth habit - *Carniaphyllum* Heritsch, *Carinthiaphyllum* Heritsch, *Lonsdaleoides* Heritsch, and *Darwasophyllum* Pyzhyanov. More recent studies and a review of the type specimens of *Carniaphyllum*, *Carinthiaphyllum* and *Lonsdaleoides* have shown them to be solitary corals with a gregarious growth habit. In its original description and

in all subsequent works, *Darwasophyllum* has consistently been referred to as a fasciculate coral, but the presence of offsets has not been illustrated in the genus and a colonial growth habit has not been clearly demonstrated. Early Serpukhovian specimens of *Darwasophyllum* from the Etherington Formation (Mississippian) in Canada were initially regarded as fasciculate colonies with long, sub-parallel, closely spaced corallites. When they were studied in detail by means of serial sections, however, these corals were found to be solitary individuals grouped into gregaria, without shared structures or offsets. Thus, true colonies are unknown in the Geyerophyllidae and all genera described as colonial in that family consist of gregarious, solitary corals.¹¹;

6747 s[6744] = "RODRIGUEZ S., SOMERVILLE I.D., SAID I. & COZAR P. (2013).- An upper Visean (Asbian-Brigantian) and Serpukhovian coral succession at Djebel Ouarkziz (Northern Tindouf Basin, Southern Morocco).- *Rivista Italiana di Paleontologia e Stratigrafia* 119, 1: 3-17.- FC&P 37, 042, ID=7316^Topic(s): corals, stratigraphic succession; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L, Visean, Serpukhovian; Geography: Morocco, Tindouf Basin^The Djebel Ouarkziz Formation, located in the northern part of the Tindouf Basin, in western Algeria and southern Morocco, is composed mainly of shales with interbedded limestones, dolostones and sandstones. The limestone beds are relatively thin, but are laterally persistent, and can be followed along strike for tens of kilometres. We have identified 19 limestone beds in three main sections; one logged along the road from Assa to Zag, a second in the Tinguiz-Remz Valley, 15 km to the east, and a third section 10 km west of the Assa-Zag road section. Rugose coral assemblages are recorded in most limestone beds, but the stratigraphically higher beds become more diverse. However, many rugose genera and species are persistent throughout much of the succession. The oldest coral assemblages are Asbian in age and the youngest coral assemblages indicate a Serpukhovian age, as confirmed by foraminiferal biostratigraphy. The first appearance of rugose corals shows a different pattern than that in northern Moroccan basins; some common genera that first appear in the Asbian and lower Brigantian in northern Morocco and Europe, appear much later, in the upper Brigantian or Serpukhovian in the Djebel Ouarkziz. The genus *Kizilia*, which is rare in the Upper Visean in northern Moroccan basins, is, however, abundant in the Tindouf Basin. Interestingly, the occurrence of the genus *Lonsdaleia* in the Serpukhovian from Djebel Ouarkziz poses a palaeogeographic problem because of its absence in northern Moroccan basins (except as transported elements in Serpukhovian conglomerates). Similarly, *Actinocyathus* in the Serpukhovian in the Tindouf Basin is not present north of the Anti-Atlas Mountains. A possible coral migration route to the Tindouf Basin may be from the northeast via the Bechar Basin in Algeria, similar to that already inferred for foraminifers and calcareous algae.¹¹;

6748 s[6745] = "RODRIGUEZ S., SOMERVILLE I.D., SAID I. & COZAR P. (2013).- Rugose corals from a Carboniferous biostrome in the Tindouf Basin, S. Morocco.- *Spanish Journal of Palaeontology* 28, 2: 255-284.- FC&P 37, 043, ID=7317^Topic(s): corals, biostrome, biostratigraphy, biogeography; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L/U; Geography: Morocco, Tindouf Basin^A rich rugose coral assemblage has been recorded from a biostrome at the top of the Djebel Ouarkziz Fm in the Tindouf Basin, S. Morocco. It is composed of 10 genera and 14 species, of which 5 are new. It represents essentially a Mississippian-type coral fauna but with some evolved species. However, its age, as determined by foraminifers and conodonts, is lower Bashkirian (Lower Pennsylvanian). The presence of Mississippian-like corals in the Bashkirian indicates that the epicontinental basins in northern Gondwana (Saharan basins) were a refuge for coral faunas during the late Serpukhovian extinction event. The persistence of the Mississippian assemblages in the

Bashkirian from northern Gondwana was probably due to a combination of warm waters and tectonic stability. The coral assemblage from the Tindouf biostrome is similar to those corals recorded from Ellesmere Island, Arctic Canada and Novaya Zemlya, Arctic Russia where similar tropical warm water conditions have been identified during the Bashkirian in the northern hemisphere. ^1";

6749 s[6746] = "SAID I., SOMERVILLE I.D., RODRIGUEZ S. & COZAR P. (2013).- Mississippian coral assemblages from the Khenifra area, Central Morocco: biostratigraphy, biofacies, palaeoecology and palaeobiogeography.- Gondwana Research 13, 1: 367-379.- FC&P 37, 044, ID=7318^Topic(s): corals, biostratigraphy, environments, biogeography; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L; Geography: Morocco, Khenifra Basin^Analysis of Mississippian coral assemblages from the Khenifra region of Central Morocco together with data from foraminiferal / algal microfossils has established new age dating of 5 localities within the Azrou-Khenifra Basin: Souk El Had and Sidi Lamine, where corals occur mainly in biostromes protected by oolitic shoals, Tabainout, where corals have been recorded in different environments related to microbial mounds, Alhajra Almatkouba, where corals occur in biostromal reworked beds and Tiouinine, where corals occur in a well-structured, fringing reef. This study demonstrates the presence of richer more diverse coral assemblages than previously recorded, in a variety of environmental settings. These coral assemblages strengthen correlations with the Adarouch area in the NE part of the Azrou-Khenifra Basin. It is emphasized that in the upper Visean there are close similarities with rugose coral assemblages in other parts of the Western Palaeotethys including North Africa, SW Spain and NW Europe, and that all belong to the same biogeographic province. ^1";

6750 s[6747] = "SOMERVILLE I.D., RODRIGUEZ S., SAID I. & COZAR P. (2012).- Mississippian coral assemblages from Tabainout mud-mound complex, Khenifra area, Central Morocco.- Geologica Belgica 15, 4: 308-316.- FC&P 37, 044, ID=7319^Topic(s): corals, mud-mounds, ecology, biogeography; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous L, Visean U; Geography: Morocco, Azrou-Khenifra Basin^Analysis of Mississippian coral assemblages from the Khenifra region of Central Morocco has demonstrated the presence of a rich and diverse coral fauna. Rugose coral assemblages from the Tabainout mud-mound complex comprise abundant colonial and solitary taxa, particularly in the basal bedded limestones, as well as the upper bedded flank and coquina capping beds. The massive core facies with stromatolite cavities in contrast has rare solitary corals. The overlying shales, marls and limestone bands which buried the mud-mound are dominated by small non-disseminated solitary rugosans. The age of the Tabainout mound based on foraminifers is established as upper Visean (late Asbian-late Brigantian). The coral assemblage strengthens correlations with the Adarouch area in the northern part of the Azrou-Khenifra Basin where similar mud mounds occur. These assemblages also show similarity with coeval coral faunas from the Jerada mud-mounds (buildups) of NE Morocco and together represent part of the same palaeobiogeographic province (Western European Coral Province). ^1";

6751 s[6748] = "SORAUF J.E. & KISSLING D.L. (2012).- Rugosans immured in Silurian Paleofavosites, Brassfield Formation (Llandoverly) of Ohio.- Geologica Belgica 15, 4: 220-225.- FC&P 37, 045, ID=7320^Topic(s): corals, bioimmuration; Systematics: Cnidaria, Rugosa, Tabulata; Stratigraphy: Silurian, Llandoverly, Brassfield Fm; Geography: USA, Ohio^The occurrence of a solitary rugose coral, Streptelasma sp., anchored within colonial skeleton of the tabulate coral Paleofavosites prolificus is here reported. Numerous specimens of Streptelasma were found within three coralla of this tabulate species among 55 collected from the uppermost

30 cm of the Lower Silurian (Llandovery) Brassfield Formation at Fairborn, Ohio. These rugosans are largely immured in the favositid coralla, and, as bioclaustrations, reveal important information on the paleobiology of both species. However, the immuring of some *Streptelasma* within *Paleofavosites* coralla was not complete during the life of the rugosan, as calice openings of these are present at the corallum surface. Complete immuration (or total overgrowth) indicates that the rugosan no longer competed successfully for space, whether entombment occurred after the death of the rugosan or was the cause of its death is unknown. *Streptelasma*, in assuming an epibiotic lifestyle probably benefited from the secure attachment to the larger, stable colonial form of *Paleofavosites prolificus* and were able to exist within this particular Brassfield facies interpreted to have been a vigorous, current-swept environment. These high energy environments would have been inimical to the small, light-weight rugosans living as isolated corallites. The successful settling and growth of the rugosans on the tabulate colonies reflects their higher status in an aggression hierarchy. This interspecies interaction indicates an early Paleozoic development of an aggression hierarchy of corals belonging to the Rugosa and Tabulata (Phylum Cnidaria).¹¹;

- 6752 s[6749] = "STEVENS C.H., FEDOROWSKI J. & KAWAMURA T. (2012).- New unusual skeletal structure in an Upper Carboniferous rugose coral, Klamath Mountains, Northern California.- *Journal of Paleontology* 86, 1: 120-125.- FC&P 37, 046, ID=7321^Topic(s): corals, skeletal structures, septal cysts; Systematics: Cnidaria, Rugosa; Stratigraphy: Carboniferous U; Geography: Usa, California, Klamath Mts^Unique among the Rugosa are specialized cyst-like structures in corals from an upper Carboniferous limestone within the Baird Formation in the Klamath Mountains, northern California. These structures, here referred to as septal cysts, occur mostly along the distal margins of the dark line extending along the axes of the major septa as seen in transverse section. However, they also commonly extend beyond the distal extent of those lines and may interrupt the fibrous coating in the more proximal parts of some septa. Their function is uncertain. Also present are small dissepiments which form a ring around the distal margins of the minor septa. These structures, however, do not appear to be related to the development of those septa. Some other taxa, including corals from the Bashkirian of Spain and the Kasimovian of Kansas, possess some specialized structures similar to those in the California specimens suggesting at least a remote relationship.¹¹;
- 6753 s[6750] = "WRIGHT A. & PRESCHER H. (2011).- Comments on subspecies of *Calceola sandalina*.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts. KöIner Forum für Geologie und Paläontologie 19: 190.- FC&P 37, 046, ID=7322^Topic(s): taxonomy, subspecies, type material; Systematics: Cnidaria, Rugosa, Calceola; Stratigraphy: Devonian; Geography: Germany^The neotype of the type species of *Calceola*, *C. sandalina* Linne, 1771, was selected and illustrated by Richter (1928)... But what are the diagnostic features of *Calceola sandalina sandalina*? Goldfuss (1840) erected *C. s. var. dilatata* and *C. s. exaltata*, both of which were regarded by Richter (1928) as junior synonyms of the type subspecies. Other German subspecies of *C. sandalina*... Focussing on German subspecies, it is well known that these were largely based on the apical angle of the corallite, the curvature of the counter face, and the related length/width ratio of the corallite. No attention has been paid to other morphological features such as shape of the operculum, numbers of septa or patterns of septal insertion... [abridged]¹¹;
- 6754 s[6751] = "WRZOLEK T. (2011).- Soft taxonomy - case of Devonian phillipsastroid rugose corals.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and

- Porifera, Liege, August 19-29, 2011, Abstracts. Kölner Forum für Geologie und Paläontologie 19: 191-193.- FC&P 37, 047, ID=7323Topic(s): taxonomy, morphometry; Systematics: Cnidaria, Rugosa, Phillipsastreidae; Stratigraphy: Devonian; Geography: ^Analysis of nine genera or species groups of Devonian massive phillipsastroid rugose corals indicates difficulties in obtaining sharply distinguished taxa at genus level. This may indicate either close genetic affinity within the group studied, or/and its high phenetic plasticity. The other factor responsible may be small size of variability space analyzed... In attempt to overcome the limitations of such a "statistical" analysis, the next step was comparison of genera, pair by pair and character by character. The following 11 characters were established as of primary importance, i.e. permitting in some cases sharp distinction between genera: MU - wall type, SC - septal continuity, IN1 - internal wall, IN2 - length of septal expansion, PP - horseshoe dissepiments, DIC - corallite size, #S1 - septal number, TM - tabularium diameter, L1 - length of major septa, D1 - septal thickness, TT - spacing of tabulae / tabellae. The other characters were found less significant... [data analysis indicates that] Medusaephyllum Roemer 1855... should be included wholly or in part into Phillipsastrea d'Orbigny 1849... Sudetiphyllia Fedorowski 1991 [is] well defined and distinct genus [abridged]^1";
- 6755 s[6752] = "WRZOLEK T. (2011).- New data on Devonian phillipsastroid rugosan Rozkowskaella.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts. Kölner Forum für Geologie und Paläontologie 19: 194-195.- FC&P 37, 047, ID=7324Topic(s): taxonomy; Systematics: Cnidaria, Rugosa, Phillipsastreidae; Stratigraphy: Devonian U, Frasnian U; Geography: Poland, Holy Cross Mts^Over 30 specimens of solitary or weakly dendroid phillipsastroid Upper Frasnian rugosans, from the Holy Cross Mts, Poland, with anomalous, oval to triangular shapes, are identified here as Rozkowskaella sandaliformis (Rozkowska 1980). New morphological characters observed in this species are regular budding, and overflowing of skeletal tissue over old calicinal margins. [abridged]^1";
- 6756 s[6753] = "YU Changmin (2010).- Further study on Devonian rugose coral Heterophaulactis Yu, 1974 from Lower Emsian Yujiang Formation in Guangxi, China. .- Acta Palaeontologica Sinica 49, 1: 29-43.- FC&P 37, 048, ID=7325Topic(s): taxonomy; Systematics: Cnidaria, Rugosa, Heterophaulactis; Stratigraphy: Devonian L, Emsian, Yujiang Fm; Geography: China, Guangxi^^1";
- 6757 s[6754] = "BAE B.-Y., ELIAS R.J. & LEE D.-J. (2013).- Growth characteristics in co-occurring Upper Ordovician species of the tabulate Catenipora from southern Manitoba, Canada.- Lethaia 46, 1: 98-113.- FC&P 37, 048, ID=7326Topic(s): colonial corals, growth parameters; Systematics: Cnidaria, Tabulata, Catenipora; Stratigraphy: Ordovician U, Red River Fm; Geography: Canada, Manitoba^Four species of the tabulate coral Catenipora are present in the Selkirk Member of the Red River Formation at Garson, Manitoba. They provide an opportunity to compare the growth characteristics of multiple, co-occurring species that produced cateniform coralla. Corallite increase, cyclomorphism and other growth features show high variability within and/or among the species. A total of five types of lateral increase and two types of axial increase are recognized. Lateral increase accounts for over 80% of all occurrences of corallite increase in each species, with the four species differing significantly in the relative frequency of the various types of lateral increase. The type of axial increase, megacorallites and agglutinated patches of corallites that developed from normal, undamaged corallites in C. foerstei are species specific. In all species, cyclic

fluctuations in the tabularial area of corallites are considered to be annual, and the variable growth rates within colonies and species are attributed to differences in astogenetic stages or environmental conditions. Average annual vertical growth was positively correlated with average tabularial area in *C. foerstei*, *C. cf. robusta* and *C. rubra*. *Catenipora cf. agglomeratiformis*, however, which had the lowest average tabularial area and greatest sensitivity to sediment influx, had a high average growth rate comparable to that of *C. rubra*, which had the largest average tabularial area. The formation of ranks or lacunae by certain types of lateral increase seems to have been the most effective strategy for maintaining and/or expanding the colony growth surface in all four species, and was most common in *C. cf. agglomeratiformis*. A reptant growth pattern, characterized by creeping ranks, permitted effective recovery of damaged parts as well as quick formation of new ranks or lacunae. The growth surface of these species was situated near the sediment-water interface.¹¹;

6758 s[6755] = "BERKOWSKI B. & ZAPALSKI M.K. (2013).- Unusual tabulate-crinoid biocoenosis from the Lower Devonian of Morocco.- *Lethaia*, doi: 10.1111/let.12048.- FC&P 37, 049, ID=7327Topic(s): crinoid-coral biocoenosis; Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian L, Pragian; Geography: Morocco, Hamar LaghdadThe Early Devonian (Pragian: sulcatus to pireneae conodont zones) crinoid-coral biocoenosis from Hamar Laghdad, Morocco contains fragments of crinoid stalks of various taxa encrusted by spherical and ellipsoidal coralla of the tabulate coral *Hamarilopora minima*. These corals were encrusting host crinoids syn vivo, and this is evidenced by pluricolumnals exceeding 30 elements overgrown from all sides. Most known to date crinoid-epibiont associations display various types of reaction to the epibiont, such as swellings and deformations. In the case discussed here, no clear interaction is visible; therefore, this association can be classified as paroecia. It can be inferred, however, that due to a change in mechanical properties of the crinoid stalk (losing flexibility), the epizoan influence on the host was negative, while the coral was profiting from the elevated position over the seafloor and nutrient-bearing water currents. It can be supposed that this interaction was close to parasitism. No strict species-specific relationship between the epizoan and the host was observed.11";

6759 s[6756] = "CORONADO I., PEREZ-HUERTA A. & RODRIGUEZ S. (2013).- Primary biogenic skeletal structures in *Multithecopora* (Tabulata, Pennsylvanian).- *Palaeogeography, Palaeoclimatology, Palaeoecology* 386: 286-299.- FC&P 37, 050, ID=7328Topic(s): corals, skeletal microstructure; Systematics: Cnidaria, Tabulata, *Multithecopora*; Stratigraphy: Carboniferous U; Geography: SpainCorals are significant components of fossil marine communities and important for paleoenvironmental reconstructions throughout the Phanerozoic. Despite their abundance and diversity in Paleozoic rocks, the presence, and criteria for the recognition of primary, biogenic skeletal structures is highly controversial. The aim of this study is a multilevel analysis of the diverse morphological elements that form well-preserved specimens of the Carboniferous *Multithecopora* tabulate coral skeleton. Results indicate that samples are minimally altered by diagenesis, but most importantly that skeletal structures are biogenic in nature, and similar to those of modern and fossil carbonate-producing organisms. Nano- and microcrystals form a complex framework of different domains of crystal morphologies that comprise the bulk of the skeleton in *Multithecopora*. These domains are thought to be the possible phenotypic response of the genotype of these corals, and had a structural importance during the life of the organism. Overall, this study sheds light for a better understanding on the controversy that exists about the biogenic or abiogenic origin of the Paleozoic coral microstructures.11";

6760 s[6757] = "DE BAETS K., KLUG C. & PLUSQUELLEC Y. (2010).-

Zlichovian faunas with early ammonoids from Morocco and their use for the correlation of the eastern Anti-Atlas and the western Dra Valley.- Bulletin of Geosciences 85, 2: 317-352.- FC&P 37, 050, ID=7329^Topic(s): corals, ammonoids, biostratigraphy; Systematics: Cnidaria, Tabulata, Michelinidae; Stratigraphy: Devonian L, Emsian L; Geography: Morocco, Anti-Atlas^Two sections were sampled and measured at Mdaour-El-Kbir (Dra Valley, western Anti-Atlas) and at eastern Ouidane Chebbi (Tafilalt, eastern Anti-Atlas). In situ elements of two partially limonitized and one carbonatic fauna were found in both sections. We report this fauna from the upper Merza-Akhsai Formation and the lower Mdaour-el-Kbir Formation at Mdaour-el-Kbir for the first time. Based on these faunas, we recorded a correlation of the early Emsian (Zlichovian) strata in the Tafilalt and the Dra Valley regions, which are about 350 km apart. Additionally, new ammonoid finds (Teicherticeras cf. senior, Lenzites gesinae, Weyeroceras angustus) are figured and described including the stratigraphic context. The diagnoses of Lenzites gesinae and Weyeroceras angustus are emended. Tabulate corals (Michelinia mdaourensis sp. nov., Petridictyum sp.) found in both the Tafilalt and Dra Valley are figured and described for the first time.^1";

6761 s[6758] = "DIXON O.A. & JELL J.S. (2012).- Heliolitine tabulate corals from Late Ordovician and possibly early silurian allochthonous limestones in the Broken River Province, Queensland, Australia.- Alcheringa 36, 1: 1-30.- FC&P 37, 051, ID=7330^Topic(s): taxonomy, biostratigraphy; Systematics: Cnidaria, Tabulata, Heliolitida; Stratigraphy: Ordovician U, Ashgillian, Silurian L?; Geography: Australia, Queensland, Broken River Province^Coral faunas of Late Ordovician (Ashgill) and possibly early Silurian age are present in allochthonous limestone blocks incorporated in debris flow deposits in the Broken River Province of north Queensland. The limestones occur in the Carriers Well Formation and Crooked Creek Conglomerate, which now lie within structurally deformed fault slices, and are evidence of the existence of a former carbonate platform of this age situated to the west. The fauna from the Carriers Well Formation includes 15 taxa belonging to the heliolitine coral families Heliolitidae, Pseudoplasmoporidae, Plasmoporidae, Plasmoporellidae and Sibiriolitidae. New taxa present are Wairunalites greeni gen. et sp. nov. and Plasmoporella marginata sp. nov. The fauna includes other species belonging to Heliolites, Plasmoporella and Sibiriolites in common with Late Ordovician faunas of New South Wales, central Asia and northern China. A limestone block in the Crooked Creek Conglomerate contains a few non-diagnostic heliolitine corals, together with rugosan, favositine and halysitine corals similar to those in the blocks of the Carriers Well Formation, but it also contains several alveolitine tabulates suggesting a possible early silurian age.^1";

6762 s[6759] = "DYACHENKO N.K. (2010).- Nekotorye pozdneemsskiye korally Tabulata i Heliolitida Dayanskoy svity yugo-vostoka Gornogo Altaya [in Russian: Some Upper Emsian tabulate corals and heliolitids of Daya suite of SE Gornyi Altay].- Trudy Tomskogo gosudarstvennogo Universiteta 277: 293-295.- FC&P 37, 052, ID=7331^Topic(s): taxonomy; Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian L, Emsian; Geography: Russia, Gornyi Altay^Pachyfavosites vilvaensis Sokolov, Alveolites levis Tchernychev, Thamnopora pulchra Tchernychev and Pachycanalicula aff. schandiensis Dubatolov are figured and shortly described. [abridged]^1";

6763 s[6760] = "HUBMANN B. & MESSNER F. (2011).- Pseudopercula in Thamnopora orthostachys, Plabutsch Formation (Eifelian), Graz Palaeozoic.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts. Kölner Forum für Geologie und Paläontologie 19: 55-56.- FC&P 37, 052, ID=7332^Topic(s): corals, skeletal structures, pseudopercula;

Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian M, Eifelian, Plabutsch Fm; Geography: Austria, Graz Paleozoic^The Graz Palaeozoic, part of the Upper Austroalpine Variscan sequence, represents a diversity hot spot of corals belonging to the "Austroalpine Coral Fauna"; (Hubmann 2002)... Among them, very common are branches of thamnoporids which were named Pachypora orthostachys by Penecke (1894: 607). Actually this tabulate belongs to Thamnopora, but we do not comply with Kropfisch & Schoupe (1953) that the species "orthostachys" is a younger synonym of Th. reticulata (Blainville). However, detailed studies of surfaces of Thamnopora orthostachys from two separate outcrops (Marmorbruch and Fuchsloch) yielded in several specimens concentrically wrinkled structures at the bottom of some corallites... [named] ..."pseudopercula". Pseudopercula ... are calcareous membranes closing the apertures of certain corallites. Pseudopercula occur preferentially at the basal parts of branches... The formation of pseudopercula is therefore obviously a reaction of the thamnoporid colonies to protect their tissue in stressed zones. The sealing of portions of the colonies represents a strategy to preserve as much of the soft body as possible under stress conditions. Logically, polyps trapped under a close cover could not scavenge for food, but were able to communicate over the pore system.^1";

6764 s[6761] = "IBARAKI Y., SHUJI Niko, HOSAKA R. & TAZAWA J. (2009).- Devonian tabulate corals from limestone float in the Kotakigawa River, Omiarea, Niigata Prefecture, central Japan.- Journal of the Geological Society of Japan 115, 8: 423-426.- FC&P 37, 053, ID=7333^Topic(s): redeposited corals, taxonomy; Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian; Geography: Japan, Omi Area^Devonian tabulate corals, Mesofavosites cf. igoi (Kamei, 1955), Pachyhelioplasma sp., Auloporoidea fam., gen. and sp. indet., are newly found from limestone float in the lower reaches of Kotakigawa River, Omi area.^1";

6765 s[6762] = "LIANG Kun, LEE Dong-Jin, ELIAS R.J., PARNASTE H. & MOTUS M.-A. (2013).- Growth characteristics of Protoheliolites norvegicus (Tabulata; Upper Ordovician; Estonia).- Palaeontology 56, 4: 867-891.- FC&P 37, 053, ID=7334^Topic(s): colonial corals, growth characteristics, phylogeny; Systematics: Cnidaria, Tabulata, Heliolitida; Stratigraphy: Ordovician U, Katian; Geography: Estonia NW^Protoheliolites is an early heliolitine coral characterized by closely spaced corallites separated in places by sparse coenenchyme. Growth characteristics in the type species, P. norvegicus, are revealed by detailed analysis based on serial peels and thin sections of coralla from the uppermost Katian of north-western Estonia. Colonies of this species had a strong ability to recover from damage and partial mortality, resulting in various forms of rejuvenation, regeneration, fusion and reorganization of corallites; in some cases, this involved relatively large areas of undifferentiated soft parts. The shells of commensal cornulitids became enclosed in host coralla during colony growth. Coralla of P. norvegicus exhibit distinctive growth cycles due to responses to seasonal changes. The production of new corallites by coenenchymal increase usually occurred in low-density bands, in which corallites generally display round to subrounded transverse outlines. In high-density bands, the corallites became crenulated, their wall thickness increased, septal development was more pronounced, and the amount of coenenchyme increased. In addition to these cyclomorphic changes, there were significant astogenetic changes during growth. Compared with the early stage of colony development, distinctive characteristics in the late astogenetic stage include a decrease in the growth rate of the colony, better coordination among corallites, maximum development of corallite crenulations and septa in high-density bands, more numerous coenenchymal tubules and a greater proportion of corallum area occupied by coenenchyme. In general, the role of polyps in determining

morphological characteristics of individual corallites, such as tabularium area, corallite crenulations and wall thickness, was subordinate to the astogeny of the colony. Growth characteristics including colony-wide coordination of polyp behaviour and subjugation of individuals to restore the colony following damage suggest a strong astogenetic control and high level of colony integration.

Protoheliolites probably arose from a heliolitine genus rather than from a nonheliolitine group as some authors have proposed.¹;

- 6766 s[6763] = "MOTUS M.-A. & ZAYKA Y. (2012).- The oldest heliolitids from the early Katian of the East Baltic region.- Geologiska Foreningens Forhandlingar (GFF) 134, 3: 225-234.- FC&P 37, 054, ID=7335^Topic(s): corals, taxonomy, early phylogeny; Systematics: Cnidaria, Tabulata, Heliolitida; Stratigraphy: Ordovician U, Katian; Geography: Estonia N, Russia NW^The earliest heliolitids appeared more or less simultaneously in the Late Ordovician shallow seas of different palaeocontinents. In this paper the early Katian heliolitids, represented by the genus Protaraea, are described from the East Baltic region (North Estonia and north-west Russia) and discussed in detail for the first time. A new species Protaraea procella n. sp. Motus is established and a neotype for Protaraea diffluens (Eichwald) is designated. The new species shows a wide intraspecific variability including variably oriented septal trabeculae, which results in corallites commonly being poorly defined or not apparent in transverse sections of coralla. P. procella has much larger coralla than P. diffluens, with predominantly laminar growth forms, whereas the latter species is usually encrusting, suggesting that the two species were adapted to different palaeoenvironmental conditions. The new data indicate that these heliolitids, together with other tabulate corals, were already geographically dispersed in the early Katian and thereby contribute to a better understanding of coral diversification patterns in Baltica.¹;
- 6767 s[6764] = "NIKO Shuji (2008).- Stratigraphy of the Upper Silurian Hitoegane Formation and Auloporid Tabulate Corals from a New Outcrop of the Formation in the Shinhirayuonsen Area, Gifu Prefecture.- Bulletin of the National Science Museum, Series C, Geology & Paleontology 34: 43-50; Tokyo.- FC&P 37, 055, ID=7336^Topic(s): fossil corals, taxonomy, biostratigraphy; Systematics: Cnidaria, Tabulata, Auloporida; Stratigraphy: Silurian U, Ludlowian, Hitoegane Fm; Geography: Japan, Gifu Prefecture^A new outcrop of the Hitoegane Formation in the Shinhirayuonsen area, Takayama-shi, Gifu Prefecture is discovered, resulting in a stratigraphic redefinition of the formation as the Late Silurian (mainly Ludlow) shallow marine succession. Fossiliferous limestone (biolithite and bioclastic wackestone), tuffaceous sandstone and shale are principal constituents of the formation, whose thickness ranges 40-50 m, but its original thickness was in excess of those amounts. The auloporid tabulate corals in the present new locality are described. They are Aulopora? sp. indet., Syringoporella yamakoshii Niko, 2001 and Aulostegites? sp. indet. Among them, S. yamakoshii is a common species with the type locality of the formation.¹;
- 6768 s[6765] = "NIKO Shuji (2009).- Middle Permian tabulate corals from the Akasaka Limestone, Gifu Prefecture.- Bulletin of the National Museum of Nature and Science, Series C, Geology & Paleontology 35: 39-51; Tokyo.- FC&P 37, 055, ID=7337^Topic(s): fossil corals, taxonomy, new taxa; Systematics: Cnidaria, Tabulata; Stratigraphy: Permian M, Capitanian, Akasaka Limestone; Geography: Japan, Gifu Prefecture^[original keywords]: Capitanian, late Middle Permian, tabulate corals, Akasakapora gen. nov., Pseudoromingeria, Sinopora, Akasaka Limestone, Gifu ^1";
- 6769 s[6766] = "NIKO Shuji (2010).- Two new early Carboniferous species of pachyporid tabulate corals from the Akiyoshi Limestone Group, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 45: 11-16.- FC&P 37, 055, ID=7338^Topic(s): fossil

- corals, taxonomy, new taxa; Systematics: Cnidaria, Tabulata, Pachyporidae; Stratigraphy: Carboniferous L, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";
- 6770 s[6767] = "NIKO Shuji (2011).- Acaciapora kanmerai, a new Early Carboniferous species of pachyporid tabulate corals from the Akiyoshi Limestone Group, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 46: 9-15.- FC&P 37, 055, ID=7339^Topic(s): fossil corals, taxonomy, new taxa; Systematics: Cnidaria, Tabulata, Pachyporidae; Stratigraphy: Carboniferous L, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";
- 6771 s[6768] = "NIKO Shuji (2011).- Sinkiangopora kanumai, a New Tabulate Coral Species from the Permian Mizuyagadani Formation, Gifu Prefecture, Japan.- Bulletin of the National Museum of Nature and Science, Series C, Geology & Paleontology 37: 43-46; Tokyo.- FC&P 37, 056, ID=7340^Topic(s): fossil corals, taxonomy, new taxa; Systematics: Cnidaria, Tabulata, Pachyporidae; Stratigraphy: Permian L, Mizuyagadani Fm; Geography: Japan, Gifu Prefecture^[original keywords:] Early Permian, tabulate coral, Pachyporidae, Sinkiangopora kanumai sp. nov., Mizuyagadani Formation, Gifu, Central Japan^1";
- 6772 s[6769] = "NIKO Shuji (2012).- Trachypsammia konbo, a new species of Early Carboniferous tabulate corals from the Akiyoshi Limestone Group, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 47: 1-4.- FC&P 37, 056, ID=7341^Topic(s): fossil corals, taxonomy, new species; Systematics: Cnidaria, Tabulata, Trachypsammia; Stratigraphy: Carboniferous L, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";
- 6773 s[6770] = "NIKO Shuji (2012).- Additional Material of Favositid and Auloporid Tabulate Corals from the Devonian Fukuji Formation, Gifu Prefecture, Japan.- Bulletin of the National Museum of Nature and Science, Series C, Geology & Paleontology 38: 47-62; Tokyo.- FC&P 37, 056, ID=7342^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Tabulata, Trachypsammia; Stratigraphy: Devonian, Fukuji Fm, Lochkovian-?Eifelian; Geography: Japan, Gifu Prefecture^[original keywords:] Lochkovian to Eifelian? (Early to Middle? Devonian), tabulate corals, Crenulipora kuwanoi sp. nov., Hida Gaien Belt, Fukuji Formation^1";
- 6774 s[6771] = "NIKO Shuji & ADACHI Tomio (2008).- Aulostegites nodai, a New Species of Early Silurian Tabulate Coral from the Gionyama Formation, Miyazaki Prefecture.- Bulletin of the National Museum of Nature and Science, Series C, Geology & Paleontology 34: 39-42; Tokyo.- FC&P 37, 056, ID=7343^Topic(s): fossil corals, new species; Systematics: Cnidaria, Tabulata, Aulostegites; Stratigraphy: Silurian L, wenlockian U, Gionyama Fm; Geography: Japan, Miyazaki Prefecture^A new auloporid tabulate coral species, Aulostegites nodai, is described from the upper Wenlock (Lower Silurian) G2 Member of the Gionyama Formation in the Kuraoka area, Miyazaki Prefecture. The Early Silurian species differs from a comparable species, A. longlinensis Chow in Xian et al., 1980 from the Lower to Middle Devonian of South China, in its smaller corallite diameters and shorter spine-like projections. Aulostegites sp. indet. (Senzai and Niko, 2003) from the Fukata Formation, Yokokurayama Group, Kochi Prefecture is conspecific with A. nodai.^1";
- 6775 s[6772] = "NIKO Shuji & HAIKAWA Takehiko (2008).- Sinkiangopora shuhoensis, a new species of pachyporid tabulate coral from the Millerella yowarensis zone (Serpukhovian, Early Carboniferous) of the Akiyoshi Limestone Group in the Minami-dai area, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 43: 7-10.- FC&P 37, 056, ID=7344^Topic(s): fossil corals, new species; Systematics: Cnidaria, Tabulata, Pachyporidae; Stratigraphy: Carboniferous L, Serpukhovian, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";

- 6776 s[6773] = "NIKO Shuji & HAIKAWA Takehiko (2009).- Pseudofavositid and micheliniid tabulate corals from the Millerella yowarensis zone (Serpukhovian, Early Carboniferous) of the Akiyoshi Limestone Group in the Minami-dai area, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 44: 1-4.- FC&P 37, 057, ID=7345^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Tabulata; Stratigraphy: Carboniferous L, Serpukhovian, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";
- 6777 s[6774] = "NIKO Shuji & HAIKAWA Takehiko (2010).- Cleistoporid tabulate corals from Millerella yowarensis zone (Serpukhovian, Early Carboniferous) of the Akiyoshi Limestone Group in the Minami-dai area, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 45: 17-20.- FC&P 37, 057, ID=7346^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Tabulata; Stratigraphy: Carboniferous L, Serpukhovian, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";
- 6778 s[6775] = "NIKO Shuji & HAIKAWA Takehiko (2011).- Favositid tabulate corals from the Fusulinella biconica zone (Moscovian, Late Carboniferous) of the Akiyoshi Limestone Group in the Isa-Maruyama area, Yamaguchi Prefecture.- Bulletin of the Akiyoshi-dai Museum of Natural History 46: 17-35.- FC&P 37, 057, ID=7347^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Tabulata, Favositida; Stratigraphy: Carboniferous L, Serpukhovian, Akiyoshi Limestone Group; Geography: Japan, Yamaguchi Prefecture^^1";
- 6779 s[6776] = "NIKO Shuji & SENZAI Y. (2010).- Stratigraphy of the Devonian Kamianama Formation in the Kuzuryu Lake-Ise River area, Fukui Prefecture and its favositid coral fauna.- Bulletin of the National Museum of Nature and Science, Series C, Geology & Paleontology 36: 31-59; Tokyo.- FC&P 37, 057, ID=7348^Topic(s): biostratigraphy, fossil corals; Systematics: Cnidaria, Tabulata, Favositida; Stratigraphy: Devonian L-M, Kamianama Fm; Geography: Japan, Fukui Prefecture^[original keywords:] Early to Middle Devonian, tabulate corals, Favositida, Kamianama Formation, Oisedani Member, Hakubado Member, Fukui^1";
- 6780 s[6777] = "NIKO Shuji & SENZAI Y. (2011).- Additional Material of Favositid Tabulate Corals from the Devonian Kamianama Formation, Fukui Prefecture, Japan.- Bulletin of the National Museum of Nature and Science, Series C, Geology & Paleontology 37: 29-41; Tokyo.- FC&P 37, 057, ID=7349^Topic(s): biostratigraphy, fossil corals; Systematics: Cnidaria, Tabulata, Favositida; Stratigraphy: Devonian L-M, Kamianama Fm; Geography: Japan, Fukui Prefecture^[original keywords:] Early to Middle Devonian, tabulate corals, Favositida, Kamianama Formation, Oisedani Member, Hakubado Member, Fukui^1";
- 6781 s[6778] = "OSPAHOVA N.K. (2012).- Taxonomical problems of the Heliolitida.- Geologica Belgica 15, 4: 215-219.- FC&P 37, 058, ID=6778^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Tabulata, Heliolitida; Stratigraphy: Paleozoic; Geography: Middle Asia^Systematic position of group is accepted by the beginning scientist after the teacher or after the leader in the field of studying of this group of corals. But the lowest categories (species and genera) are established by him, first of all, on a regional material. Long-term study of heliolitids of Central Tajikistan and their comparison with heliolitids from other regions shows faunistical peculiarity of each region. Ambiguity of treatment of the same morphological features as a result takes place. The situation becomes complicated by parallelism of development between some taxa of the Heliolitida and wide variability of features of many species. Standardization of arrangement of coenenchyme because of parallelism of development results in occurrence of forms with a similar structure, but with a different genetic basis. So we can tell now that the main

- problem in definition of taxa of the Heliolitida is the heterogeneous genus *Heliolites*.¹";
- 6782 s[6779] = "PLUSQUELLEC Y. & FRANKE C. (2010).- Presence precoce du genre *Kerforneidictyum* represente par *K. oeslingensis* n. sp. (Cnidaria, Tabulata) dans l'Emsien inferieur du Grand-Duche de Luxembourg.- *Ferrantia* 58: 72-80; Luxembourg.- FC&P 37, 058, ID=7351Topic(s): fossil corals, morphology, taxonomy; Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian L, Emsian L; Geography: Luxembourg^A new species of *Kerforneidictyum*, *K. oeslingensis* n. sp., is described. It is mainly characterized by the following features: apical angle reaching up to 160°;, deep calices with numerous small spines roughly of the same size, setted in two rows or scattered on septal ridges which are wider than the interseptal furrows, no obvious cardinal ridge, tabulae scarce or missing. The species has been collected in the lowermost Emsian of the Givonne-Eislek Anticlinorium in Luxembourg. It is 1) the first record of the genus in the Devonian of Luxembourg and 2) in the autochthonous part (S.E. Laurussia) of the Ardenno-Rhenish Mountains and 3) very likely the first - or one of the two first - representative of the genus taking into account Gondwana and Laurussia.¹";
- 6783 s[6780] = "SEILACHER A. & THOMAS R.D.K. (2012).- Self-organization and emergent individuality of favositid corals adapted to live on soft substrates.- *Lethaia* 45, 1: 2-13.- FC&P 37, 059, ID=7352Topic(s): colonial corals, soft substrates; Systematics: Cnidaria, Tabulata, Favositida; Stratigraphy: Devonian; Geography: ^Secondary soft-bottom dwellers share the problem that their ancestors, attached to hard substrates, had lost their mobility. On soft substrates, only a limited number of alternative tricks are available to maintain sessile organisms in life position or to right them following disturbance. Consequently, convergent adaptations have emerged in unrelated members of this ecological guild. Those of favositid corals are of particular interest because, on account of their small polyps, they were always colonial. A comparative analysis of forms adopted by favositids on soft substrates shows that key elements of their adaptive paradigms could have been achieved by self-organization. This arose without centralized control by means of inherited reaction norms of individual polyps to local environmental conditions. The unique spiral growth habit of *Favosites turbinatus* Billings and its emergent individuality at the colony-level of organization are explained in these terms. "Suicidal" lids entombed altruistic marginal polyps, forming a secondary epitheca as the growing colony settled into the sediment. These lids also record the size and spacing of soft tentacles in this species.¹";
- 6784 s[6781] = "WANG Guang-Xu & DENG Zhan-Qiu (2010).- Application of cluster analysis to classification of cateniporids.- *Acta Palaeontologica Sinica* 49, 4: 478-486.- FC&P 37, 059, ID=7353Topic(s): fossil corals, numerical data, cluster analysis; Systematics: Cnidaria, Tabulata, Halysitida; Stratigraphy: ; Geography: ^^1";
- 6785 s[6782] = "ZAPALSKI M.K. (2012).- Tabulate corals from the Givetian and Frasnian of the southern region of the Holy Cross Mountains (Poland).- *Special Papers in Palaeontology* 87: 3-100.- FC&P 37, 060, ID=7354Topic(s): taxonomy, variability, new taxa; Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian, Givetian, Frasnian; Geography: Poland, Holy Cross Mts^Givetian and Frasnian tabulate corals from the southern region of the Holy Cross Mountains, Poland, are described. Both Givetian and Frasnian tabulate faunas from the study region are dominated by alveolitids and comprise 52 species (Favositida: 40 species, Syringoporida: 6 species, Auloporida: 6 species). A new genus belonging to Syringoporida is proposed - *Sapounofouskilites* gen. nov. - and five new species are erected (Favositida: *Striatopora sciuricauda* sp. nov., *Alveolites? obtortiformis* sp. nov., *Crassialveolites oliveri* sp. nov., *Roseoporella*

heuvelmansi sp. nov.; and Auloporida: Aulopora slosarskii sp. nov.). Study of the intracolony variation in tabulates shows that minimal and maximal corallite lumen diameters and pore diameters are the best taxonomical discriminators for Alveolitidae and Coenitidae, while the double wall thickness and tabulae spacing are less useful characters. Moreover, alveolitids and coenitids show overall greater intracolony variation than, for example, heliolitids. The tabulate endobiont *Chaetosalpinx? plusquelleci* isp. nov. is newly described. Study of tabulate endobionts - that is, *Chaetosalpinx? plusquelleci*, *Helicosalpinx* cf. *asturiana* Oekentorp and *H.* isp. - show that these were parasites of tabulate corals. Givetian and Frasnian tabulate faunas from the Kielce (southern) Region of the Holy Cross Mountains are dominated by Alveolitidae.¹¹;

6786 s[6783] = "ZAPALSKI M.K. & BERKOWSKI B. (2012).- The oldest species of *Yavorskia* (Tabulata) from the Upper Famennian of the Holy Cross Mountains (Poland).- *Acta Geologica Polonica* 62, 2: 197-204.- FC&P 37, 060, ID=7355Topic(s): taxonomy, biogeography; Systematics: Cnidaria, Tabulata; Stratigraphy: Devonian U, Famennian; Geography: Poland, Holy Cross Mts^A single perfectly preserved colony of a tabulate coral assigned tentatively to the genus *Yavorskia* Fomitchev, 1931, collected from Upper Famennian beds (*Palmatolepis expansa* conodont Zone) in a trench located north of the Kowala Quarry (Holy Cross Mts., central Poland) is here described as a new species, *Y. paszkowskii* sp. nov. It differs from other representatives of the genus in the lack of dissepimental structures and in smaller corallite diameters, and may therefore represent the ancestral taxon of this typically early Carboniferous genus. *Yavorskia* tabulates were apparently migrating eastwards along the southern margin of Laurussia and farther east and north towards Siberia, as they appear in the Famennian in Europe and in the early Carboniferous in the Altai. Such a conclusion is consistent with previous observations on Early-Middle Devonian Pleurodictyform tabulate distribution.¹¹;

6787 s[6784] = "ZAPALSKI M.K. & DOHNALIK M. (2012).- Blastogeny in tabulate corals: case studies using X-ray microtomography.- *Lethaia* 46, 2: 223-231.- FC&P 37, 061, ID=7356Topic(s): X-ray microtomography, fossil corals; Systematics: Cnidaria, Tabulata; Stratigraphy: Silurian, Devonian; Geography: X-ray microtomography (XMT) is a non-invasive and non-destructive method that has often been used to study fossils. It allows serial sections to be made as little as few micrometers apart, such a resolution is unachievable for classical serial sectioning, moreover, in contrast to the latter, the specimen is not destroyed. Microtomography can, however, be applied only in cases where differences in X-ray absorption between the skeleton and its infilling are great. We show that this method may be also applied to tabulate corals. Case studies of blastogeny are based on Silurian (*Aulopora*, *Favosites*) and Devonian (*Thamnopora*) specimens from Poland. We show that the sequence of events in the blastogeny of *Aulopora* sp. is different from that of "*Aulopora serpens minor*" from the Devonian of the Holy Cross Mountains and similar to auloporids from the Devonian of England. Blastogeny in *Favosites* is very similar to that known from the related genera *Squameofavosites* and *Thamnopora*. This suggests that members of the genus *Aulopora* may be more diversified within the genus (as presently understood) than genera within the *Favositidae*.¹¹;

6788 s[6785] = "ZAPALSKI M.K. & NOWINSKI A. (2011).- A new Silurian *Avicenia* (Tabulata): taxonomy, growth pattern, and colony integration.- *Geodiversitas* 33, 4: 541-551; Paris.- FC&P 37, 061, ID=7357Topic(s): fossil corals, new species, blastogeny; Systematics: Cnidaria, Tabulata, Heliolitida; Stratigraphy: Silurian; Geography: Poland (glacial Baltic erratics)^A new heliolitid tabulate coral *Avicenia kocyani* n. sp. is described from Silurian erratic boulders from Pomerania (Poland). The new species has

higher intracolony variation than other heliolitids. The growth pattern in corallites of the new species is not correlated with the growth pattern in coenenchymal tubes. This phenomenon is probably caused by different gene expressions in corallites and common tissue. Coenenchymal corals with a common skeleton, developed as polygonal tubes may have two levels of colonial integration: lower, with uncoordinated growth of corallites and common tissue (as for example in *Avicenia kocyani* n. sp.) and higher, with a unified growth pattern throughout the colony (as for example in *Heliolites diligensis* Bondarenko, 1966). Heliolitids are known to show strong provincialism during the Silurian. The discovery of *Avicenia Leleshus*, 1974 in Europe (previously known only from Central Asia) shows that at least some of them had a wider distribution than previously thought.¹;

6789 s[6786] = "ZAPALSKI M.K., TRAMMER J. & MISTIAEN B. (2012).- Unusual growth pattern in the Frasnian alveolitids (Tabulata) from the Holy Cross Mountains (Poland).- *Palaeontology* 55, 3: 697-706.- FC&P 37, 062, ID=7358Topic(s): colonial corals, growth patterns; Systematics: Cnidaria, Tabulata, Alveolitidae; Stratigraphy: Devonian U, Frasnian L; Geography: Poland, Holy Cross MtsGrowth periodicity is a phenomenon occurring in fossil and modern corals. The most apparent feature is growth banding, and environmental changes are broadly accepted as controls on this phenomenon. If environment controls the growth, then all corallites within a colony should repeat the same growth pattern, as individuals are clones and must have shared the same environment. A study on several species of Alveolitidae (Anthozoa, Tabulata) from the Late Devonian (Early Frasnian) of the Holy Cross Mountains (Poland) shows that the growth pattern varies between neighbouring individuals within the same corallum. This contradicts observations of closely related Favositida as demonstrated on *Pachyfavosites* sp. from the Givetian of Avesnois, France, where neighbouring individuals repeat the same pattern. Therefore, environmental control on growth rhythm in Alveolitidae can be excluded, the causes of differences between individuals remain unknown.¹;

6790 s[6787] = "ALVAREZ-PEREZ G. (2010).- Presencia del género *Eupsammia* en el Eoceno de la Cuenca de Igualada (NE de Espana).- *Publicaciones del Seminario de Paleontologia de Zaragoza* 9: 49-51.- FC&P 37, 063, ID=7360Topic(s): taxonomy; Systematics: Cnidaria, Scleractinia; Stratigraphy: Eocene; Geography: Spain NE¹;

6791 s[6788] = "ILCHEVA A. & MOCHUROVA-DEKOVA N. (2011).- Catalogue of type collections of Early Cretaceous corals (Scleractinia, Anthozoa) at the National Museum of Natural History, Sofia.- *Spisanie na Balgarskoto Geologicesko Druzestvo* 72, 1-3: 129-140.- FC&P 37, 063, ID=7360Topic(s): fossil corals, museum catalogue, published material; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous L; Geography: BulgariaThe catalogue provides information about the availability of type material of Early Cretaceous coral taxa in the invertebrate fossil collections of National Museum of Natural History, Sofia, Bulgaria. The major part of the fossil coral type material was published by Zlatarski (1966; 1967a, b; 1968a, b; 1970; 1972). At present most of Zlatarski's type specimens and thin sections are housed in the museum. They belong to 24 coral species from the Barremian-Lower Aptian of several localities in central North Bulgaria (Fore-Balkan). Second well represented part of the coral type collection contains all the type specimens and all thin sections of 6 new species of Valanginian corals collected in Lyubasha Mountain, Pernik district (Srednogorie, SW Bulgaria) and published by Roniewicz (2008). Some new species introduced by Zlatarski and Roniewicz are also type species of new genera. A syntype, described by Toula (1889) is also included in the catalogue.¹;

6792 s[6789] = "KLAUS J.S., LUTZ B.P., MCNEILL D.F., JOHNSON K.G. & ISHMAN S.E. (2011).- Rise and fall of Pliocene free-living corals in

the Caribbean.- *Geology* 39: 375-378.- **FC&P** 37, 063, ID=7361^**Topic(s)**: free-living corals, biodiversity, temporal trends; **Systematics**: Cnidaria, Scleractinia; **Stratigraphy**: Pliocene; **Geography**: Caribbean^Climate change is currently having an impact on shallow-water corals, and global circulation models predict that levels of pCO₂ and temperature will rise within the next century above anything recorded for at least the past 650 k.y. The Pliocene Epoch is a recent, albeit imperfect, geologic analog for such conditions in the Caribbean. Diverse communities of free-living solitary and flabellomeandroid (FSFM) corals inhabited shallow nearshore to deeper oligophotic habitats of the Pliocene. FSFM corals were well suited to the low-angle depositional profiles, increased productivity, increased sedimentation, and warmer temperatures of the Pliocene. Origination rates of FSFM coral species between 8 and 4 Ma are roughly double other zooxanthellate corals. FSFM corals underwent abrupt extinction between 2 and 1 Ma, as environmental conditions changed and suitable habitat was eliminated. The evolutionary bottleneck of Pliocene-Pleistocene extinctions and relic steep-margined Pleistocene topography may leave modern faunas vulnerable as we return to Pliocene-like conditions.^1";

6793 s[6790] = "KOŁODZIEJ B., IVANOV M. & IDAKIEVA V. (2012).- Prolific development of pachythecaliines in Late Barremian, Bulgaria: coral taxonomy and sedimentary environment.- *Annales Societatis Geologorum Poloniae* 82: 291-330.- **FC&P** 37, 064, ID=7362^**Topic(s)**: fossil corals, taxonomy, ecology; **Systematics**: Cnidaria, Scleractinia, Pachythecaliina; **Stratigraphy**: Cretaceous L, Barremian, Lovech Urgonian Gr, Emen Fm; **Geography**: Bulgaria N-central^Diversified and abundant corals of the suborder Pachythecaliina (order Hexanthiniaria) are described from Upper Barremian, biostromal reefs of the Emen Formation, Lovech Urgonian Group, north central Bulgaria. The corals are mostly of the phaceloid growth form and represent 14 species (six new), 12 genera (three new), belonging to five families. Pachythecaliines occur along, with the small, monopleurid cylindrical rudist *Mathesia darderi*. The rudists frequently are densely clustered, occur between coral branches or are in contact with them. Other corals, with the exception of the phaceloid *Calamophylliopsis* and other rudists, are rare. Non-laminated microbialite crusts provided additional, structural support for bioconstruction development. Microbialites (automicrites) can be interpreted as a product of microbial activity, or alternatively, as a result of carbonate precipitation, brought about by non-living organic substrates (organomineralization s.s.). In addition to microbialites, metazoans are encrusted by heterotrophic skeletal microorganisms, while photophilic and oligotrophic microencrusters, usually common in other coral-bearing limestones of the Emen Formation, are very rare. The section at the Rusalya Quarry (NW of Veliko Tarnovo), about 42 m thick, provides the sedimentary and environmental context for the reefal biostromes. The vertical biotic and sedimentary succession displays a general shallowing trend: from the outer carbonate platform with bioclastic limestones containing small boundstone patches (corals, but not pachythecaliines, *Lithocodium aggregatum*), to the inner platform with rudist biostromes. The pachythecaliine-rich biostromes, 2.5 m thick, were developed in a low-energy environment, referred to the distal part of the rudist-dominated area of the platform. The development of microbialites was facilitated by a low sedimentation rate, and possibly by increased nutrient level. Only poorly diversified and non-phaceloid pachythecaliines occur in other coral-rich limestones and marls of the Urgonian complex in Bulgaria. The assemblage described is the most remarkable, Early Cretaceous coral community worldwide, with regard to pachythecaliines. Phaceloid pachythecaliines are only more common in the Upper Jurassic rocks, being particularly diversified in the Tithonian-Lower Berriasian Štramberg Limestone (Czech Republic) and its equivalent in the Polish Outer Carpathians. However,

- their sedimentary context differs from that described for the corals of the Emen Formation.¹¹;
- 6794 s[6791] = "LIAO Wei-Hua, JI Zhang-Sheng & WU Gui-Chun (2012).- Late Jurassic scleractinian corals from Gerze, Northwestern Xizang (Tibet).- Acta Palaeontologica Sinica 51, 3: 290-307.- FC&P 37, 065, ID=7363Topic(s): fossil corals, taxonomy, biogeography; Systematics: Cnidaria, Scleractinia; Stratigraphy: Jurassic U; Geography: China, Tibet NW, GerzeThe described and illustrated scleractinian corals comprise 17 genera and 23 species, including one new species Stylosmilia xizangensis sp. nov. and six which are specifically indeterminable. Amongst them are: Heliocoenia aff. etalloni, H. bandukidzea, Heliocoenia orbigny, Isastraea bernensis, Axosmilia sessilis, Cryptocoenia octosepta, genus Dermosmilia with D. laxata and D. cf. laxata, Thecosmilia trichotoma, Thamnasteria coquandi, Thamnasteria mettensis, Mitrodendron ogilvieae, Rhipidogyra flabellum, Isastraea rariseptata, Latiastraea pakongensis, Mitrodendron yilashanensis. Taken as a whole, this coral fauna indicates a Late Jurassic age. It bears a close relationship with those of Europe (Portugal, France, Germany, Switzerland, Poland, Czech, Romania, Ukraine and Greece), with Central South Asia (Azerbaijan, Georgia), and with parts of Gondwana (Madagascar and India).¹¹;

6795 s[6792] = "LOPEZ-PEREZ R.A. (2008).- Fossil corals from the Gulf of California, México: still a depauperate fauna but it bears more species than previously thought.- Proceedings of the California Academy of Sciences 4, 59, 12: 503-519.- FC&P 37, 065, ID=7364Topic(s): fossil corals, taxonomy, ecology; Systematics: Cnidaria, Scleractinia; Stratigraphy: Miocene, Pliocene, Pleistocene; Geography: Mexico, Gulf of CaliforniaA new collection of fossil hermatypic corals from the late Miocene Imperial Formation, the early Pliocene San Marcos Formation, the middle to late Pliocene Carmen Formation and the Pleistocene, Gulf of California, Mexico, has yielded four undescribed species Siderastrea sp., cf. Placosmilia sp., Favia sp. 1., and Favia sp. 2. Additionally, new occurrences of the previously described Pocillopora damicornis (Linnaeus 1758), Pocillopora verrucosa (Ellis and Solander 1786), Pocillopora meandrina Dana 1846, Gardineroseris planulata (Dana 1846), Pavona clavus (Dana 1846), Porites lobata Dana 1846, Diploria sarasotana Weisbord 1974 as well as Dichocoenia eminens Weisbord 1974, are reported. The fauna occurs either in low-angle ramps or flat lying terraces of variable extension. Most outcrops are small, and reminiscent of more extensive deposits usually deposited on open, exposed, high-energy environments. However, well reserved units deposited on protected embayments are also present. Except at Isla Coronados and La Ventana where multiple coral terraces occur, coral bearing units represent single spatio-temporal growth episodes. The present analysis shows that hermatypic coral fauna between late Miocene to late Pleistocene in the Gulf of California is still depauperate; nonetheless it bears many more species than previously thought.¹¹;

6796 s[6793] = "LOPEZ-PEREZ R.A. (2012).- Late Miocene to Pleistocene Reef Corals in the Gulf of California.- Bulletins of American Paleontology 383: 1-78.- FC&P 37, 066, ID=7365Topic(s): fossil corals, taxonomy, ecology; Systematics: Cnidaria, Scleractinia; Stratigraphy: Miocene, Pliocene, Pleistocene; Geography: Mexico, Gulf of CaliforniaA new collection of fossil reef corals from the late Miocene Imperial Formation, the early Pliocene San Marcos Formation, the middle to late Pliocene Carmen Formation, and the Pleistocene, Gulf of California, Mexico, has yielded four new species Siderastrea annae n. sp., Placosmilia? aliciae n. sp., Favia maitreyiae n. sp., and Favia tulsidasi n. sp. Additionally, new occurrences of the previously described Pocillopora damicornis (Linnaeus, 1758), Pocillopora verrucosa (Ellis & Solander, 1786), Pocillopora meandrina Dana, 1846, Gardineroseris planulata (Dana, 1846), Pavona

clavus (Dana, 1846), *Porites lobata* Dana, 1846, *Diploria sarasotana* Weisbord, 1974, as well as *Dichocoenia eminens* Weisbord, 1974, are reported. Morphometric analysis failed to distinguish between *S. californica* Vaughan, 1917, and *S. mendenhalli* Vaughan, 1917, therefore the former is synonymized with the latter. The fauna occurred either in low-angle ramps or flat-lying terraces of variable extension. Most outcrops were small, and reminiscent of more extensive deposits usually formed in open, exposed, high-energy environments. However, well preserved units deposited in protected embayments are also present. Except at Isla Coronados and La Ventana where multiple coral terraces occur, coral bearing units represent single spatiotemporal growth episodes. The present analysis shows that the reef coral fauna between late Miocene to late Pleistocene in the Gulf of California can be considered depauperate when compared to the Caribbean fauna; nonetheless, it bears many more species than previously thought.¹¹;

- 6797 s[6794] = "LOPEZ-PEREZ R.A. & BUDD A.F. (2009).- Coral diversification in the Gulf of California during Late Miocene to Pleistocene.- In: Johnson M.E., Ledesma-Vásquez J. (Eds.): Atlas of coastal ecosystems in the Western Gulf of California: past and present. University of Arizona Press, Tuscon, Ariz., pp 58-71.- FC&P 37, 067, ID=7366Topic(s): fossil corals, biodiversity; Systematics: Cnidaria, Scleractinia; Stratigraphy: Miocene, Pliocene, Pleistocene; Geography: Mexico, Gulf of California¹¹";
- 6798 s[6795] = "LÖSER H. (2011).- Remarks on the Scleractinian coral genus *Anisoria* Vidal, 1917.- *Treballs del Museu de Geologia de Barcelona* 17: 7-10.- FC&P 37, 067, ID=7367Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, *Anisoria*; Stratigraphy: Cretaceous U, Campanian, Maastrichtian; Geography: Spain N^The Scleractinian coral genus *Anisoria* Vidal, 1917 is a Late Cretaceous (Campanian - Maastrichtian) coral endemic to the north of the Iberian peninsula. Herein it is reconsidered on the basis of thin sections obtained from one syntype of the type species *Anisoria vidali* and additional material of the type species from its type locality. This makes it possible to define the fine structure of this coral in greater detail and to state its systematic position more precisely. The genus is comparable to other so-called Meandrinid genera such as *Meandroria*, *Pachygyra* and *Orbignygyra*. The closest relationship exists with *Pachygyra*, which has a lamellar columella that is lacking in *Anisoria*.¹¹";
- 6799 s[6796] = "LÖSER H. (2011).- Systematic revision of the Placocoeniidae (Scleractinia; Late Cretaceous).- *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 261: 195-200.- FC&P 37, 067, ID=7368Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, Placocoeniidae; Stratigraphy: Cretaceous U; Geography: ^The Late Cretaceous coral family Placocoeniidae is revised on the base of the type and topotypic material of the type species of *Placocoenia*, *Astrea macrophthalma* Goldfuss, 1826. The types of the type species of genera currently assigned to this family were examined and confirmed or discarded as members of the family. After its revision, the Placocoeniidae contains four genera - *Barycora*, *Columnocaeniopsis*, *Columnocoenia*, and *Placocoenia* - which are all very similar, if not synonymous. The family ranges from the Coniacian to Maastrichtian. All Jurassic and Early Cretaceous species currently assigned to these genera need to be reclassified to genera of the Columaestraeidae because they do not fit into the concept of the Placocoeniidae or its genera.¹¹";
- 6800 s[6797] = "LÖSER H. (2011).- The Cretaceous corals from the Bisbee Group (Sonora; Late Barremian - Early Albian): introduction and family *Aulastraeoporidae*.- *Revista mexicana de ciencias geológicas* 28, 2: 254-261.- FC&P 37, 068, ID=7369Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, *Aulastraeoporidae*; Stratigraphy: Cretaceous L, Barremian-Albian,

- Bisbee Gr; **Geography:** Mexico, Sonora^The present contribution is the first instalment in a systematic revision of the corals from the Sonoran Bisbee Group (Late Barremian to Early Albian). The article gives a short overview on the lithostratigraphy and outcrops of the study area and reports the corals of the family Aulastraeoporidae (suborder Rhipidogyrina). The family contains 10 genera, three of which were found in Sonora. Since the genera Aulastraeopora and Preverastraea were recently systematically revised including the material from the Bisbee Group, the details are not repeated here. For the genus Paraacanthogyra a new species from the Early Albian of the Cerro la Ceja mountain range is reported. This species is the first indication of the genus in the western Hemisphere. It differs from other species of the same genus by its very small calicular diameter.^1";
- 6801 s[6798] = "LÖSER H. (2011).- Revision of the Microsaraea species from the Monti d'Ocre area (Scleractinia; Early Cretaceous).- Rivista italiana di paleontologia e stratigrafia 117, 2: 347-352.- FC&P 37, 068, ID=7370^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Scleractinia, Microsaraea; Stratigraphy: Cretaceous L, Aptian; Geography: Italy, Abbruzzi^Two coral species from the Early Aptian of the Monti d'Ocre area (Abbruzzi) originally assigned to the genus Microsaraea Koby, 1889 are revised on the basis of their type material. Both are assigned to the genus Polyphylloseris. They are considered synonymous. The senior synonym, Microsaraea distefanoi Prever, 1909, was formerly assigned to the genus Microsolena and has a wide geographical and stratigraphical distribution. Since Microsaraea distefanoi Prever belongs to a different genus, the citations in the literature of this species are critically reviewed and, where possible, assigned to the proper Microsolena species.^1";
- 6802 s[6799] = "LÖSER H. (2011).- Revision of the coral genera Neocoenia and Helladastraea from the Cretaceous of Greece.- Palaeodiversity 4: 7-15.- FC&P 37, 069, ID=7371^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, Neocoenia, Helladastraea; Stratigraphy: Cretaceous; Geography: Greece, Panourgias (former Dremisa)^The two Cretaceous scleractinian coral genera Neocoenia and Helladastraea are revised on the basis of the type material of their respective type species. The type material of the type species of both genera come from the Greek locality Panourgias (former Dremisa) originally dated as Cenomanian in age. Regarding the geological outcrop situation, this age is only valid for part of the samples, which come from different coral bearing layers. Neocoenia is a plocoid form closely related to Columastrea and probably a senior synonym of Stephanaxophyllia. Helladastraea, originally established as a subgenus of Aspidiscus and long-time considered a junior synonym of this genus is indeed very closely related to this genus, but differs by its conical monticules.^1";
- 6803 s[6800] = "LÖSER H. (2012).- Revision of Actinastrea, the most common Cretaceous coral genus.- Paläontologische Zeitschrift 86, 1: 15-22.- FC&P 37, 069, ID=7372^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, Actinastrea, Stelidioseris; Stratigraphy: Jurassic, Cretaceous; Geography: ^The very common and species rich Scleractinian genus Actinastrea (family Actinastraeidae, suborder Archeocaeniina) is revised on the basis of the type material of its type species and additional material from the type locality. A lectotype is designated for the type species. It was discovered that Jurassic to Early Cretaceous corals currently assigned to Actinastrea do not fit into the concept of this genus. These species belong to the genus Stelidioseris, which is also revised on the basis of the type of the type species including designating a lectotype. These two genera are distinguished by various characteristics: septal external parts are swollen in Actinastrea but not in Stelidioseris, the costae are confluent in

Stelidioseris, but not in Actinastrea, the coenosteum is granulated in Actinastrea, but narrower than in Actinastrea and only with costae in Stelidioseris. Actinastrea is restricted to the Late Cretaceous (Late Turonian - Maastrichtian) whereas Stelidioseris originates in the Jurassic and reaches into the Late Cretaceous, but is less common from the Turonian on.^1";

- 6804 s[6801] = "LÖSER H. (2012).- Campanian corals from Bayburt (Turkey).- Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen 264, 1: 20-29.- FC&P 37, 070, ID=7373^Topic(s): fossil corals, taxonomy, biostratigraphy; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous, Campanian; Geography: Turkey N-central^Seven coral species in six genera are reported from the limit between Early and Late Campanian of North-Central Turkey. The fauna encompasses typical Late Cretaceous elements, but the ranges of three genera are changed. The last occurrence of Hemiporites Alloiteau, 1952 could be modified from the Turonian to the Early Campanian. The first occurrence of Montastraea Blainville, 1830 is modified from the middle Eocene to the Early Campanian. The first occurrence of the genus Hydnothra Fischer de Waldheim, 1807 is the Early Cenomanian.^1";
- 6805 s[6802] = "LÖSER H. (2012).- The type of Aplosmilium vidali Angelis d′Ossat, 1905 (Scleractinia; Early Cretaceous).- Treballs del Museu de Geologia de Barcelona 18: 5-7.- FC&P 37, 070, ID=7374^Topic(s): fossil corals, taxonomy, type material; Systematics: Cnidaria, Scleractinia, Aplosmilium; Stratigraphy: Cretaceous L; Geography: ^The Early Cretaceous Scleractinian coral species Aplosmilium vidali Angelis d'Ossat, 1905 is revised and a lectotype is designated. The solitary coral belongs to the genus Tiarasmilium and is probably a senior synonym of the type species of this genus, Tiarasmilium casteri Wells, 1932.^1";
- 6806 s[6803] = "LÖSER H. (2012).- Taxonomy, distribution and diversity of the genus Placocoenia (Scleractinia; Late Cretaceous).- Bataillera 17: 20-31.- FC&P 37, 070, ID=7375^Topic(s): fossil corals, taxonomy, distribution, biodiversity; Systematics: Cnidaria, Scleractinia, Placocoenia; Stratigraphy: Cretaceous U; Geography: ^The Late Cretaceous coral genus Placocoenia is revised on the species level. Species of the synonymous genera Barycora, Columnocoenia and Columnocaeniopsis are included. Reviewing the available type material, nine species are separated which differ mainly by their calicular dimensions, septal symmetry and septal counts. The genus occurred from the Early Turonian to Late Maastrichtian, but is only known from a few areas. Species which were formerly assigned to one of these genera including Placocoenia but do not belong to them, are assigned to the correct genus as far as the corresponding type material was available for study.^1";
- 6807 s[6804] = "LÖSER H. (2012).- Revision of the family Hemiporitidae (Scleractinia, Late Cretaceous).- Geodiversitas 34, 2: 399-407.- FC&P 37, 071, ID=7376^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, Hemiporitidae; Stratigraphy: Cretaceous U; Geography: ^The Late Cretaceous Scleractinian family Hemiporitidae (suborder Faviina) is revised on the basis of its type genus and respective type species. The family is characterised by having large trabeculae, compact and strong septa with poor ornamentation at their lateral faces, short and non-confluent costae, a strong lamellar columella, a septothecal wall, and an endotheca made of thick tabulae. Together with the name-giving genus Hemiporites, the two coral genera Cerionefocoenia Reig Oriol, 1995 and Pachynefocoenia Reig Oriol, 1989 from the Late Cretaceous of Spain are assigned to the family. All genera are revised on the basis of the types of their respective type species. Further genera formerly or currently assigned to the Hemiporitidae family are discussed. The family occurs from the Turonian to Maastrichtian.^1";

- 6808 s[6805] = "LÖSER H. (2012).- Intraspecific variation in the genus *Stelidioseris* (family Actinastraeidae, suborder Archeocaeiniina, order Scleractinia; Jurassic-Cretaceous).- *Geologica Belgica* 15, 4: 382-387.- FC&P 37, 071, ID=7377^Topic(s): fossil corals, taxonomy, morphometrics, statistical analysis; Systematics: Cnidaria, Scleractinia, Stelidioseris; Stratigraphy: Jurassic, Cretaceous; Geography: ^The genus *Stelidioseris* (= *Actinastrea* s.l.) is one of the most common genera in the Late Jurassic and Early Cretaceous and has a high number of species. Species separation is generally based on calicular dimensions, septal symmetry, and septal number. To obtain better insight into intraspecific variation and results for species separation, systematic measurements of the corals were taken and statistically analysed. As a preliminary study, ten type specimens were selected for analysis. In thin sections a large number of calices (up to 200) were measured, including their diameter, distance and the thickness of the wall and coenosteum. For all values, the arithmetic mean, standard deviation and the coefficient of variation were calculated. In *Stelidioseris*, the calicular diameter is the character with the lowest variation. The distance of the calicular centres, the thickness of the wall, and the number of calices per a given area show a much higher variation and are therefore less suitable for distinguishing samples within a population or species of different faunas. It was found that about 70% of all values of the lumen diameter fall in the first interval (range of the arithmetic mean ± standard deviation). Hence, the first interval is a good representation for most types of measured values in fossil corals. The results are compared to traditional methods by remeasuring published material. It is concluded that the application of systematic measuring should be extended to other species rich coral genera.^1";
- 6809 s[6806] = "LÖSER H. (2012).- Revision of the family Amphiastreaeidae from the Monti d'Ocre area (Scleractinia; Early Cretaceous).- *Rivista italiana di paleontologia e stratigrafia* 118, 3: 461-469.- FC&P 37, 072, ID=7378^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, Amphiastreaeidae; Stratigraphy: Cretaceous L, Aptian; Geography: Italy, Greece central^The four *Amphiastrea* species from the Early Aptian of the Monti d'Ocre area described as new by Prever (1909) are revised on the basis of the type material. One species - *Amphiastrea paronai* - remains in this genus. Another - *Amphiastrea delorenzoi* - cannot be assigned to any genus. The remaining two species belong to the new genus *Hexamphiastrea*, which differs from all amphiastreid genera by its regular hexameral septal symmetry. *Amphiastrea suprema* Morycowa & Marcopoulou-Diacantoni, 1997 from the Early Aptian of Greece is designated as the type species. The new genus is only known from the Early Aptian of Italy and Central Greece.^1";
- 6810 s[6807] = "LÖSER H. (2012).- Corals from the Maastrichtian Ocozocoautla Formation (Chiapas, Mexico) - a closer look.- *Revista mexicana de ciencias geológicas* 29, 3: 534-550.- FC&P 37, 072, ID=7379^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous U, Maastrichtian; Geography: Mexico, Chiapas^The small Maastrichtian coral fauna of Ocozocoautla (Chiapas, Mexico) is being taxonomically reviewed. In contrast to an older study, the material is examined by preparing thin sections and carrying out systematic measurements to ensure that any comparisons of the material with existing species are of statistical significance. Twelve species in ten genera from the suborders Archeocaeiniina, Fungiina, Meandrinina, Microsolenina and Poritina are described. The genera *Multicolumnastrea* and *Favioseris* are discussed in detail. One genus and its species are described as new: *Filkornia* is a colonial coral genus with very large calices that belongs to the Late Cretaceous family *Felixaraeidae*. All species are colonial corals from a shallow marine environment and many

- of them are known from localities outside the study area, mostly from the Maastrichtian of Jamaica.¹";
- 6811 s[6808] = "LÖSER H. (2012).- Podoseris - a poorly known solitary coral from the Albian of England (Scleractinia).- Palaeodiversity 5: 7-11.- FC&P 37, 073, ID=7380^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Scleractinia, Podoseris; Stratigraphy: Cretaceous L, Hunstanton Red Chalk; Geography: England, Norfolk^The late Early Cretaceous coral genus Podoseris has been revised on the basis of the type material of its type species and topotypical material from the type locality. Podoseris is a small solitary cupulate to tympanoid coral, which is endemic to the Hunstanton Red Chalk in Norfolk, England. The genus is characterised by almost compact pennular septa. It is therefore assigned to the family Synaestraeidae. Podoseris counts with eight species, which are considered synonymous, with the exception of the Jurassic species, which does not belong to this genus.¹";
- 6812 s[6809] = "LÖSER H. (2013).- Late Aptian (Cretaceous) corals from Central Greece.- Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen 267, 1: 89-116.- FC&P 37, 073, ID=7381^Topic(s): fossil corals, taxonomy, phylogeny; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous L, Aptian; Geography: Greece, Helicon Mts^Twenty-six coral species from twenty-one genera of Late Aptian (Early Cretaceous) age are reported from the Helicon Mountains in the Greek province of Boeotia. The studied section close to the village Aliartos includes mainly coarse, massive limestone-conglomerates with a relatively high amount of lithoclasts and carbonatic intraclasts. Most of the intraclasts originate from reefal limestones of similar environments and age. The fauna encompasses typical Early Cretaceous elements of the suborders Archeocaeniina, Faviina, Fungiina, Heterocoeniina, Meandrinina, Microsolenina, and Stylinina. The range of two genera has changed - the first occurrence of *Adelastrea* Reuss, 1854, and *Pachyphyllia* Alloiteau, 1957, were assigned to the Late Aptian, unlike the Turonian as considered earlier. The fauna shares species with localities worldwide, and their ages mainly range from Barremian to Early Albian. In contrast to very common Early Aptian coral faunas, Late Aptian faunas are rare. The present fauna helps to understand relationship to Albian and Cenomanian faunas.¹";
- 6813 s[6810] = "LÖSER H. (2013).- An Early Albian shallow marine coral fauna from Southern France - insight into evolution and palaeobiogeography of Cretaceous corals.- Palaeobiodiversity and Palaeoenvironments 93, 1: 1-43.- FC&P 37, 073, ID=7382^Topic(s): fossil corals, taxonomy, phylogeny, biogeography; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous L, Albian L; Geography: France S, Aude^A species rich hermatypic coral fauna from the late Early Albian (Mammillatum Zone) from Padern (Les Corbieres, Aude, France) is taxonomically revised. The fauna encompasses 45 species in 24 genera. Genera of the suborders Faviina and Microsolenina dominate, followed by genera of the suborders Stylinina and Fungiina. The suborders Caryophylliina, Fungiina, Heterocoeniina, Meandrinina and Rhipidogyrina are represented by only a few genera. One species of the genus *Parnassomeandra* is described as new. The hitherto poorly known genera *Trochoseropsis* and *Cyathophoropsis* are supported with new material and described and depicted in greater detail. The overall faunal composition is comparable with Aptian to Early Albian coral faunas of the same region and facies, however, the fauna shows some exotic elements that persisted into the Late Cretaceous. Most species are known from Barremian to Albian faunas of the western Atlantic, the Aptian of the Central Tethys and the Albian Boreal South England Basin.¹";
- 6814 s[6811] = "LÖSER H. (2013).- Revision of the family Asteroseriidae (Cretaceous).- Geodiversitas 35, 1: 23-31.- FC&P 37, 074,

- ID=7383^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, Asteroseriidae; Stratigraphy: Cretaceous, Hauterivian-Cenomanian; Geography: ^The Cretaceous coral family Asteroseriidae (suborder Fungiina) is revised on the basis of its type genus and respective type species. The family encompasses small solitary patellate corals with compact septa in a regular hexameral symmetry. Septa are made of large trabeculae expressed in a regularly ornamented upper septal margin and septal lateral face. Synapticulae are present. In addition to the name-giving genus *Asteroseris* de Fromentel, 1867, the genera *Actinoseris* d'Orbigny, 1849 and *Microseris* de Fromentel, 1867, from the Cretaceous of France are assigned to the family. All genera are revised on the basis of the types of their respective type species, as far as available. Possible species of all three genera are presented. The family ranges from Hauterivian to Cenomanian.^1";
- 6815 s[6812] = "LÖSER H. (2013).- Morphology and taxonomy of the genus *Valloria* (Scleractinia; Late Cretaceous).- *Batalleria* 18: 25-27.- FC&P 37, 074, ID=7384^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, *Valloria*; Stratigraphy: Cretaceous L; Geography: ^The Late Cretaceous coral genus *Valloria* is revised on the basis of toptotypical material from the type locality. Based on its septal structure, the genus is assigned to the family *Phyllosmiliidae* (suborder Meandrinina). It shows a meandrinoid growth pattern with a strongly reduced coenosteum, indistinct calices and a lamellar columella. The genus is very closely related to *Pachygyra*, but differs by its much narrower coenosteum. Two species are included: the type species and *Orbignygyra pyrenaica* Reig Oriol, 1997.^1";
- 6816 s[6813] = "LÖSER H. (2013).- Revision of the Hauterivian (Early Cretaceous) corals of the Paris Basin, France: a work in progress.- *Bulletin d‘information des géologues du Bassin de Paris* 50, 1: 17-24.- FC&P 37, 075, ID=7385^Topic(s): fossil corals, taxonomy, revision, interim report; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous L, Hauterivian; Geography: France, Paris Basin^The coral fauna that comes from sediments cropping out widely in the Aube, Haute-Marne and Yonne departments, is the most species-rich Early Cretaceous coral fauna known. The literature reports 159 species, among which 18 type species have their type locality in the study area. This article gives a brief overview of the research history, geology, lithostratigraphy, outcrop situation and gives a preliminary list of genera with illustrations.^1";
- 6817 s[6814] = "LÖSER H. (2013).- Taxonomy and distribution of the Early Cretaceous coral genus *Actinastraeopsis*.- *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 269, 2: 189-202.- FC&P 37, 075, ID=7386^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, *Actinastraeopsis*; Stratigraphy: Cretaceous L; Geography: ^The poorly known Early Cretaceous coral genus *Actinastraeopsis* is revised on the basis of available type material. It includes six species (*Cladophyllia birleyoe* Gregory, 1899; *Thecosmilia catalaunica* Angelis d‘Ossat, 1905; *Enallhelia gracilis* Orbigny, 1850; *Stylosmilia organisans* Orbigny, 1850; *Actinastraeopsis phaceloides* Sikharulidze, 1977; *Actinastraeopsis* sp.); most of them were formerly assigned to the genus *Cladophyllia*. *Actinastraeopsis* forms phaceloid colonies made of densely packed thin branches. These colonies may reach large dimensions and form bioherms measuring several meters in width and height. *Actinastraeopsis* specimens show a large variation in their calicular dimensions, whereas the number of septa is regular within colonies and shows little variation. Septal counts and calicular dimensions are mainly used to distinguish species. To cope with variation within *Actinastraeopsis* species, the available material was systematically measured and statistically analysed. About fifty samples

- from numerous worldwide localities ranging from the Hauterivian to the Middle Albian were included.¹";
- 6818 s[6815] = "LÖSER H. (2013).- The Cretaceous corals from the Bisbee Group (Sonora; Late Barremian - Early Albian): genus *Stelidioseris* (Actinastreaeidae).- *Paleontologia mexicana* 63: 79-89.- FC&P 37, 076, ID=7387^Topic(s): fossil corals, taxonomy, revision; Systematics: Cnidaria, Scleractinia, *Stelidioseris*; Stratigraphy: Cretaceous L, Barremian-Albian, Bisbee Gr; Geography: Mexico, Sonora^The current work constitutes the second part of the systematic revision of the corals from the Bisbee Group (Late Barremian to Early Albian) and deals with the genus *Stelidioseris* (Family Actinastreaeidae, suborder Archeocaeniina). To distinguish samples within the Sonoran fauna and species of this genus, systematic measurements of the corals were taken and statistically analysed. From the Bisbee Group, six *Stelidioseris* species are here described and illustrated: *S. bellensis*, *S. hourcqi*, *S. japonica*, *S. major*, *S. ruvida*, *S. whitneyi*. Most of them are common Early Cretaceous species with a wide geographic and stratigraphic distribution.¹";
- 6819 s[6816] = "MELNIKOVA G.K. & RONIÖWICZ E. (2012).- Early Jurassic corals of the Pamir Mountains - a new Triassic-Jurassic transitional fauna.- *Geologica Belgica* 15, 4: 376-381.- FC&P 37, 076, ID=7388^Topic(s): fossil corals, taxonomy, biogeography, biostratigraphy; Systematics: Cnidaria, Scleractinia; Stratigraphy: Jurassic L; Geography: Asia Central, Pamir Mts^Four microstructural groups of corals representing the orders Scleractinia and Hexanthiniaria are known in the Triassic and in the Early Jurassic of the Tethys realm. In the south-eastern Pamir Mountains, Lower Jurassic corals occur from the Hettangian to Toarcian sediments. Hettangian?-Sinemurian and Sinemurian coral faunas discussed in this paper come from the Gurumdy and Mynkhajir facies zones. Coral associations are composed of classical Early Jurassic west European and North African (Moroccan) taxa, accompanied by several genera previously unknown in the West Tethys. After the end-Triassic extinction, the Early Jurassic recovery faunas of the Pamir Mountains contain *Stylophylloopsis*, *Eocomoseris*, a genus related to *Elysastrea*, and a large number of Jurassic genera: *Oppelismilia*, *Archaeosmilia*, *Archaeosmiliopsis*, *Stylosmilia*, *Proaplophyllia*, *Cylismilia*, *Intersmilia*, *Prodonacosmilia*, *Pachysmilia*, *Placophyllia* and *Stephanastrea*. More or less fragmented corals and complete skeletons are found in detrital carbonate, oolitic, or micritic limestone facies. Phaceloid growth forms prevail over solitary and massive ones.¹";
- 6820 s[6817] = "MORYCOWA E. (2012).- Corals from the Tithonian carbonate complex in the Dabrowa Tarnowska-Szczucin area (Polish Carpathian Foreland).- *Annales SociÖtatis Geologorum Poloniae* 82: 1-38.- FC&P 37, 077, ID=7389^Topic(s): fossil corals, taxonomy, biostratigraphy, biogeography; Systematics: Cnidaria, Scleractinia; Stratigraphy: Jurassic U, Tithonian, Swarzew Fm; Geography: Poland, Carpathian Foreland^The studied corals have been collected from cores of boreholes located in the central part of the Polish Carpathian Foreland in the Dabrowa Tarnowska-Szczucin area. The Jurassic complex in this area presents a continuous stratigraphic section from the Upper Callovian to Tithonian, locally passing to the Lower Cretaceous (Berriasian). Its thickness exceeds 1,100m in this area. This complex is composed of marine, mainly shallow-water deposits. The corals occur within the upper part of the Upper Jurassic (Tithonian) deposits, almost entirely within the Swarzew Limestone Formation (= coral-algal limestone formation). This occurrence marks the northernmost extent of Tithonian shallow-water corals in Poland and one of the northernmost in Europe. 42 coral species (among them 14 in open nomenclature) were identified in deposits of this formation. They include two new species: *Complexastrea magna* and *Complexastrea dabroviensis*. All taxa, except one, belong to the order Scleractinia. The described assemblage displays a Late Jurassic character. The

broader stratigraphic span is assigned to some species, which are quoted from the Middle Jurassic and some species lasted until the Early Cretaceous, Berriasian and/or Valanginian.¹;

- 6821 s[6818] = "PANDEY D.K., FÜRSICH F.T., GAMEIL M. & AYOUB-HANNAA W.S. (2011).- *Aspidiscus cristatus* (Lamarck) from the Cenomanian of Wadi Quseib, East Sinai, Egypt.- *Journal of the Palaeontology Society of India* 56: 29-37.- FC&P 37, 077, ID=7390Topic(s): fossil corals, taxonomy, ecology; Systematics: Cnidaria, Scleractinia, *Aspidiscus*; Stratigraphy: Cretaceous U, Cenomanian; Geography: Egypt, Sinai E*Aspidiscus cristatus* (Lamarck) has been described and illustrated from three coral-bearing horizons of the Cenomanian sedimentary succession of Wadi Quseib, East Sinai, Egypt. The new specimens show well-preserved internal microarchitectures, which corroborate its assignment to family Latomeandridae Alloiteau, 1952. The stratigraphic range of *Aspidiscus cristatus* suggests that it can be used as index for the Middle to early Late Cenomanian. Based on the morphology of *Aspidiscus cristatus* and its consistent record, it is suggested here that the coral had a narrow facies range, being adapted to a free mode of life on soft, marly to argillaceous substrate, in low-energy environments subjected to high rates of sedimentation.¹";
- 6822 s[6819] = "PERRIN C. (2012).- Paleobiogeography of scleractinian reef corals: Changing patterns during the Oligocene - Miocene climatic transition in the Mediterranean.- *Earth-Science Reviews* 111: 1-24.- FC&P 37, 078, ID=7391Topic(s): fossil reef corals, biogeography, temporal trends, numerical data; Systematics: Cnidaria, Scleractinia; Stratigraphy: Oligocene, Miocene; Geography: MediterraneanDuring the Oligocene-Miocene Greenhouse-to-Icehouse climatic transition, the biogeography of reef corals or zooxanthellate-like scleractinian corals was gradually changing from a pan-tropical Tethyan Province in the Eocene to three reef-coral Provinces of the Western Atlantic - Caribbean, Indo-Pacific and Mediterranean. Our REEFCORAL database encompasses updated and homogenized data on paleoenvironmental and systematics of scleractinian corals occurring in the Oligocene and Miocene outcrops from circum-Mediterranean regions, provided by most of relatively recently published data in the literature and by the study of published and unpublished collections of coral specimens from the same area, including the important collections housed at the MNHN (Paris) and our own collections. As there is no validated direct criterion for the identification of the coral-zooxanthellate symbiosis in the fossil record, and considering the difficulty to use the biogeochemical approaches in the context of this study, the subjectivity of the morphological criteria and the relative recent age of the fossil corals we are dealing with, a uniformitarian approach has been used for inferring the symbiotic status of scleractinian genera in REEFCORAL. Among the 158 genera included in our database, 93 can be considered as zooxanthellate and 10 have a doubtful zooxanthellate status. This relatively exhaustive database was used to reconstruct the temporal and spatial distribution of scleractinian corals in the Mediterranean during the Oligocene - Miocene time in order to discuss the interplaying effects of the global cooling at that time, the reorganization of the Tethyan realm resulting from the African, Arabian and Eurasian plate collision and the emergence of the Alpine chains, driving the gradual northward movement of the whole region outside the tropical/subtropical belt. * It is shown that the structure of the Mediterranean z-coral Oligocene - Miocene paleobiodiversity was characterized by many geographically-restricted genera with a moderate to short stratigraphical range and a few long-ranging widespread genera. A major consequence of this structure is that the extinction pattern has proceeded through the preferential extinction of rare-occurrence genera through time. The potential rapid long-distance dispersal of most coral larvae compared to the size of the Oligocene -

Miocene Mediterranean, explains why no biogeographical sub provinces can be distinguished for the z-coral fauna. On a local scale, ecological processes tend to sort coral taxa by limiting z-coral development to geographically restricted and discontinuous areas. This accounts for the large amount of geographically-restricted taxa forming the Mediterranean coral fauna. ** The interaction of plate-tectonics, Alpine orogenesis and climate at local to subregional scales exerts strong controls over the spatio-temporal distribution of z-coral assemblages within the circum-Mediterranean realm. In particular, we suggest that the richness and composition of the Eastern Atlantic coral fauna are indirectly related to the opening and closure of the eastern seaway connection with the Indian Ocean, which controlled the E-W circulation of surface waters and hence the westwards dispersal of pelagic larvae. At the scale of the whole region, the gradual regional climatic change produced by the northwards migration of the entire area, superimposed on the global cooling, appears in large part responsible for the extinction pattern of z-corals through time in the Mediterranean biogeographical Province.¹";

6823 s[6820] = "RONIEWICZ E. (2011).- Early Norian (Triassic) corals from the Northern Calcareous Alps, Austria, and the intra-Norian faunal turnover.- Acta Palaeontologica Polonica 56, 2: 401-428.- FC&P 37, 079, ID=7392Topic(s): fossil corals, taxonomy, phylogeny; Systematics: Cnidaria, Scleractinia; Stratigraphy: Triassic U, Norian; Geography: Austria, N Calcareous AlpsThe first description of early Norian coral fauna from the Northern Calcareous Alps (Dachstein Plateau and Gosaukamm), Austria, is presented: 31 scleractinian species from 24 genera (including three corals not formally determined), and three hexanthinarian species belonging to two genera. The stratigraphical position of the main part of the fauna discovered in the South Dachstein Plateau at the Feisterscharte is determined by means of the conodont Epigondolella quadrata (Lacian 1); single finds are from the horizons with Epigondolella triangularis and Norigondolella navicula (Lacian 3), and one close to the horizon with Epigondolella cf.multidentata (Alaunian 1). Rare corals from the Gosaukamm are from the Lacian 1 and Alaunian. Five species are described as new: Retiophyllia vesicularis, Retiophyllia aranea, Margarosmia adhius, Hydrasmilia laciana; one new genus and species from the family Coryphylliidae, Margarogyra hirsuta; one new genus and species, Thamnasterites astreoides, cannot be assigned to a family. Two hexanthinarian species, Pachysolenia cylindrica and Pachydendron microthallos, known exclusively from the Tethyan lower Norian, represent stratigraphically valuable species. A regularly porous coral from the family Microsolenidae, Eocomoseris, which up to now has only been known from the Jurassic and Cretaceous, is here identified from the Triassic strata (originally described as Spongiomorpha [Hexastylopsis] ramosa). Predominant taxa show solitary and phaceloid (pseudocolonial) growth forms and an epithelial wall; pennules-bearing corals are common. Carnian genera and genera typical of the Lacian and Lacian-early Alaunian prevail; a hydrozoan genus Cassianastraea has also been encountered as well as a scleractiamorph coral, Furcophyllia septafindens. The faunal composition contrasts with that of well known late Norian-Rhaetian ones, the difference being observed not only at the generic but also at the family level. The post-early Norian change in coral spectrum documents the turnover of the coral fauna preceding that at the Triassic/Jurassic boundary.¹";

6824 s[6821] = "RONIEWICZ E. & STANLEY G.D. jr (2013).- Upper Triassic Corals from Nevada, western North America, and the Implications for Paleocology and Paleogeography.- Journal of Paleontology 87, 5: 934-964.- FC&P 37, 080, ID=7393Topic(s): fossil corals, taxonomy, biogeography, ecology; Systematics: Cnidaria, Scleractinia; Stratigraphy: Triassic U; Geography: USA, NevadaLate Carnian-early Norian corals from the Luning and Osobb

formations in west-central Nevada represent an important Late Triassic fauna for understanding the paleoecology and the paleogeography of the eastern Panthalassa region during Late Triassic time. The corals occur in bedded limestone representing biostromes and patch reefs and their composition presages the important global changeover of faunas of the intra-Norian interval. A taxonomic analysis of over 60 specimens reveals a majority of colonial corals ranging from cerioid, astreoid (i.e., cerioid-plocoid lacking walls), meandroid and thamnasterioid types. Surprisingly, remnants of the original aragonite microstructure remain in some specimens, allowing a better comparison with more remote Tethyan corals. In total, 14 genera have been identified from Nevada while two genera remain undetermined. The fauna is composed of species considered typical of both the North American Cordillera and cratonal South America. The following genera and species are new and endemic to the Americas: *Khytrastrea silberlingi* and *K. cuifiamorpha*, *Flexastrea serialis*, *Nevadoseris punctata*, *Areaseris nevadaensis* and a new genus *Minasteria* (with *Astrocoenia shastensis* Smith, 1927 as type species). Likewise are the new species: *Margarogyra silberlingi* and *Curtoseris dunlapcanyonae*. Genera *Meandrovolzeia*, *Margarogyra*, *Cerienstella*, *Ampakabastraea*, *Retiophyllia*, *Distichomeandra*, *Curtoseris*, *Thamnasteria* and *Astraeomorpha* provide important links to the former Tethys province. The revised coral fauna changes previous views of the close taxonomic similarity with the Tethys, instead producing a paleogeographic pattern emphasizing a much greater degree of endemism. This pattern emphasizes the isolation of Nevada from the Tethys and the similarities with some outboard terranes of the Cordillera.¹";

6825 s[6822] = "SENTOKU E. & EZAKI Y. (2012).- Constraints on the formation of colonies of the extant azooxanthellate scleractinian coral *Dendrophyllia arbuscula*.- *Lethaia* 45, 1: 62-70.- FC&P 37, 179, ID=7394Topic(s): corals, blastogeny; Systematics: Cnidaria, Scleractinia, Dendrophyllia; Stratigraphy: Recent; Geography: ^Scleractinia display a variety of growth forms, whether zooxanthellate or azooxanthellate, as the consequence of the combined effects of both intrinsic and extrinsic factors. New modules arise in colonial corals through asexual reproduction, including budding and division. The azooxanthellate, branching dendrophylliid *Dendrophyllia arbuscula* van der Horst 1922, is a good species to investigate intrinsic regularities in budding, because: (1) the lateral corallites always occur in the vicinity of four primary septa, excluding the two directive primary septa; (2) the two directive septa in lateral corallites tend to be oriented almost perpendicular to the growth orientation of parental corallites; (3) the lateral corallites grow more-or-less diagonally upwards; and (4) these regularities are retained from the axial to the derived lateral corallites during colony growth. Accordingly, a colony of apparently complex dendroid corals is formed according to certain universal rules that apply to successive generations of corallites. The presence of two opposite sectors in which budding does not occur seems to be common to other azooxanthellate scleractinian families. Regularities, other than the orientation of the directive septa, are also commonly found at least in other azooxanthellate dendrophylliid genera. These regularities suggest the presence of strict developmental constraints on the asexual reproduction of the Scleractinia, both extant and extinct. These regularities by azooxanthellate scleractinians, as one of the representative colonial metazoan groups, provide us with fundamental data with which we can understand how colonies are constructed.¹";

6826 s[6823] = "SENTOKU E. & EZAKI Y. (2012).- Regularity and polarity in budding of the colonial scleractinian *Dendrophyllia ehrenbergiana*: consequences of radio-bilateral symmetry of the scleractinian body plan.- *Lethaia* 45, 4: 586-593.- FC&P 37, 081, ID=7395Topic(s): corals, blastogeny; Systematics: Cnidaria, Scleractinia, Dendrophyllia; Stratigraphy: Recent; Geography: ^Regularities and polarity in budding of the

azooxanthellate scleractinian *Dendrophyllia ehrenbergiana* were examined with the aim of understanding the developmental constraints on the formation of colonies. Its mode of budding, in light of the orientations of directive septa of offsets and the inclination angle of budding, is consistent with that of other dendrophyllids; however, the offsets of *D. ehrenbergiana* only occur near the two primary septa on the convex side of individual corallites, showing a plane of bilateral symmetry with a distinct polarity. These regularities and polarity are seen in the axial and its derived corallites throughout growth. Of note, the polarity at individual corallites is clearly reflected in subsequent colony growth by the branching pattern and corallite number. These characteristics imply the presence of radio-bilateral symmetrical constraints on the asexual reproduction of the Scleractinia and give us invaluable clues to the understanding of shape-making mechanisms of marine modular organisms.¹¹;

6827 s[6824] = "SENTOKU E. & EZAKI Y. (2012).- Regularity in budding mode and resultant growth morphology of the azooxanthellate colonial scleractinian *Tubastraea coccinea*.- *Coral reefs* 31, 1: 67-74.- FC&P 37, 082, ID=7396^Topic(s): corals, blastogeny; Systematics: Cnidaria, Scleractinia, Tubastraea; Stratigraphy: Recent; Geography: ^Scleractinia exhibit a variety of growth forms, whether zooxanthellate or azooxanthellate, according to factors that control asexual reproduction and ensuing coral growth. The azooxanthellate branching scleractinian *Dendrophyllia arbuscula* shows regular modes of budding in terms of the locations of budding sites, the orientations of directive septa, and the inclination angle of budding throughout colonial growth. This study reports that such regularities are also found in the apparently different growth form of the massive dendrophylliid *Tubastraea coccinea*, which shows the following growth features: (1) the offsets (lateral corallites) always occur near four primary septa, except the two directive primary septa, meaning that the lateral corallites do not appear in the sectors of the two directive septa; (2) the two directive septa in lateral corallites tend to be oriented subperpendicular to the growth direction of the parental corallites; (3) the lateral corallites grow approximately diagonally upwards; and (4) these regularities are seen in the axial and derived lateral corallites among all generations during colony growth. Large differences in growth form are found between the branching *D. arbuscula* and massive *T. coccinea*, irrespective of the presence of specific regularities. It is likely that subtle modifications of certain parameters (e.g., budding interval, branch length, corallite size, and inclination angle of lateral corallites) have a strong effect on the overall growth morphology. A precise understanding of such regularities, which occur regardless of generation or taxonomic position, would contribute to understanding the "shape-controlling mechanism" of corals, which are an archetypal modular organism.¹¹;

6828 s[6825] = "SENTOKU E. & EZAKI Y. (2012).- Regularity in budding mode and resultant growth morphology of the azooxanthellate colonial scleractinian *Cyathelia axillaris*: effective and adaptive ways of utilizing habitat resources.- *Paleontological Research* 16, 3: 252-259.- FC&P 37, 083, ID=7397^Topic(s): corals, blastogeny; Systematics: Cnidaria, Scleractinia, Cyathelia; Stratigraphy: Recent; Geography: ^Azooxanthellate coral species obtain nutrients by themselves, retaining their colonial growth forms independently of other species. This study examines the regularity of budding in the bushy, azooxanthellate scleractinian oculinid *Cyathelia axillaris* in order to identify the developmental constraints on colony formation and the ecological significance of colonial forms. The sympodial form of *C. axillaris* develops its bushy morphology by repeated dichotomous branching without clear axial corallites. The regularities in budding process are as follows: (1) in most cases, two buds originate simultaneously on opposite sides of medially constricted

corallites near two parental second-order septa at individual distal ends; (2) the two directive septa of lateral corallites are oriented almost perpendicular to the directive septa of the immediate parental corallites; (3) the lateral corallites grow more or less diagonally upwards; and (4) these regularities remain valid from parental to derived lateral corallites throughout growth. Thus, apparently complex, threedimensional colonies with numerous offsets are formed according to certain rules, irrespective of the generation of individual corallites. The strict developmental constraints and the subtle modifications on asexual reproduction greatly affect the colonial growth that is unique to *C. axillaris*, for which the regularities in budding are effective and adaptive ways of utilizing limited resources (i.e., growth spaces and nutrients).¹¹;

6829 s[6826] = "SENTOKU E. & EZAKI Y. (2013).- Intrinsic constraints on sympodial growth morphologies of azooxanthellate scleractinian coral *Dendrophyllia*.- Plos One 8, 5; doi: 10.1371/journal.pone.0063790.- FC&P 37, 083, ID=7398Topic(s): corals, blastogeny; Systematics: Cnidaria, Scleractinia, Dendrophyllia; Stratigraphy: Recent; Geography: ^Background Asexual increase occurs in virtually all colonial organisms. However, little is known about the intrinsic mechanisms that control asexual reproduction and the resultant morphologies of colonies. Scleractinian corals, both symbiotic (zoaxanthellate) and non-symbiotic (azooxanthellate) corals are known to form elaborate colonies. To better understand the growth mechanisms that control species-specific type of colony in azooxanthellate dendrophyllid scleractinian corals, we have studied details of the budding pattern in the sympodial colonies of *Dendrophyllia boschmai* and *Dendrophyllia cribrosa*. Principal Findings Budding exhibits the following regularities: (1) the two directive septa of offset corallites are oriented almost perpendicular to the growth direction of parent corallites; (2) offsets generally occur in either of the lateral primary septa that occur on one side of a corallite; the individuals thus show a definite polarity with respect to the directive septa, and only when branching dichotomously offsets occur in both primary septa; (3) the lateral corallites grow more-or-less diagonally upwards; and (4) the regularities and polarities are maintained throughout growth. Given these regularities, *D. boschmai* grows in a zigzag fashion by alternately budding on the right and left sites. In contrast, *D. cribrosa* grows helically by budding at a particular site. Conclusions / Significance The strict constraints on budding regularities and shifts in budding sites observed in the sympodial growth forms of corals greatly affect resulting morphologies in azooxanthellate coral colonies. A precise understanding of these intrinsic constraints leads to a fundamental comprehension of colony-forming mechanisms in modular organisms.¹¹;

6830 s[6827] = "SHEPHERD H.M.E., STANLEY G.D. jr & AMIRHASSANKHANI F. (2012).- Norian to Rhaetian scleractinian corals in the Ferdows patch reef (Nayband Formation, East Central Iran).- Journal of Paleontology 86, 5: 801-812.- FC&P 37, 084, ID=7407Topic(s): fossil corals, taxonomy, reefs, biostratigraphy; Systematics: Cnidaria, Scleractinia; Stratigraphy: Triassic U, Norian, Rhetian, Nayband Fm; Geography: Iran central^The Nayband Formation is one of the best known sedimentary units in central Iran. The type section consists of a thick succession of shale, siltstone, reef limestone and sandstone that is subdivided into five distinct members: Gelkan, Bidestan, Hoz-e-Sheykh, Howz-e-Khan and Qadir. Abundant and well-preserved framework-building scleractinian corals are included among the macrofossils of the Nayband Formation; these corals characterize the formation and are the subject of this study. The Hassan-Abad section, located in northeast Iran in Lute Block (northwest of Ferdows city), was chosen for detailed study and sampling. Analysis of sedimentary lithofacies and faunal assemblages in the Bidestan and the Howz-e-Khan members indicate both biostromal and biohermal

characters for the former shallow-water patch reefs and support a Norian to Rhaetian age. The useful biostratigraphic hydrozoan *Heterastridium conglobatum* was studied along with 14 taxa of scleractinian corals: *Stylophyllopsis rudis*, *Distichophyllia norica*, *Paradistichophyllum dichotomum*, *Retiophyllia frechi*, *Retiophyllia norica*, *Retiophyllia robusta*, *Chondrocoenia schafhaeutli*, *Chondrocoenia ohmanni*, *Astraeomorpha crassisepata*, *Astraeomorpha confusa*, *Astraeomorpha minor*, *Procyclolites triadicus*, *Pamiroseris rectilamellosa*, and *Eocomoseris ramosa*. These fossils clarify the stratigraphy of the Nayband Formation, as well as provide new information on the patch reefs and the framework constructors of these reefs.¹¹;

6831 s[6828] = "SORAUF J.E. & HARRIES P.J. (2010).- Morphologic Variation in *Manicina areolata* (Cnidaria, Scleractinia) from the Pleistocene of South Florida.- *Journal of Paleontology* 84, 3: 505-517.- FC&P 37, 085, ID=7400^Topic(s): fossil corals, morphology, environmental variation; Systematics: Cnidaria, Scleractinia, *Manicina*; Stratigraphy: Pleistocene; Geography: USA, Florida s^Environmental variability exerts a substantial control on massive, free-living, colonial corals such as *Manicina areolata*, influencing their shape and size as well as other characters, such as base morphology and colline complexity in meandroid forms. This species is well adapted for life in shallow, wave-swept waters due to its self-righting capabilities. Two different ecophenotypes of *M. areolata*, as defined by overall shape and base morphology, are present in two approximately coeval Pleistocene localities (PBA Quarry and Holey Land Canal) in southern Florida. These differences reflect adaptation to two depositional settings. Corallum size, shape, and oral complexity allow clear differentiation between these two environments. Greater corallum size, as primarily manifested by significantly greater height, tends to accompany increased grain size. The basal area and weight per cm² of the coralla appear to be primary limiting factors in *M. areolata*'s growth by controlling the coral's ability to self-right after overturning or causing sinking into less cohesive substrates. Complexity of confluent corallites increases with increasing size and colony volume. Thus, complexity of valley and colline patterns on the oral surface increases as a function of base area, so that collines developed on smaller, soft-substrate-inhabiting colonies are characteristically less complex than are those of larger, higher colonies. These complexities and variation in shape are apparently related to environmental conditions, predominantly substrate, water depth, and physical energy, resulting in recognizable ecophenotypes.¹¹;

6832 s[6829] = "SØRENSEN A.M., FLORIS S. & SURLYK F. (2011).- Late Cretaceous scleractinian corals from the rocky shore of Ivö Klack, southern Sweden, including some of the northernmost zooxanthellate corals.- *Cretaceous Research* 32: 259-263.- FC&P 37, 086, ID=7401^Topic(s): fossil corals, taxonomy, ecology, biogeography; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous U; Geography: Sweden S, Ivö Klack^A relatively low diversity coral fauna comprising eight zooxanthellate, three azooxanthellate, and one unidentified species is described from a Late Cretaceous rocky shore at Ivö Klack, southern Sweden. All species, except the solitary azooxanthellate *Paracyathus?* sp., are represented by one or two specimens only, indicating low preservation potential similar to the aragonite-shelled gastropod fauna from the same locality. The fauna comprises one out of two northernmost zooxanthellate forms known and adds important environmental information to the fauna and depositional conditions of the rocky shore at Ivö Klack.¹¹;

6833 s[6830] = "STOLARSKI J., KITAHARA M.V., MILLER D.J., CAIRNS S.D., MAZUR M. & MEIBOM A. (2011).- The ancient evolutionary origins of Scleractinia revealed by azooxanthellate corals.- *BMC Evolutionary*

Biology 11, 316: 1-10.- **FC&P** 37, 086, ID=7402^Topic(s): fossil & living corals, phylogeny, molecular clocks; Systematics: Cnidaria, Scleractinia; Stratigraphy: Paleozoic - Recent; Geography: ^* Background. Scleractinian corals are currently a focus of major interest because of their ecological importance and the uncertain fate of coral reefs in the face of increasing anthropogenic pressure. Despite this, remarkably little is known about the evolutionary origins of corals. The Scleractinia suddenly appear in the fossil record about 240 Ma, but the range of morphological variation seen in these Middle Triassic fossils is comparable to that of modern scleractinians, implying much earlier origins that have so far remained elusive. A significant weakness in reconstruction(s) of early coral evolution is that deep-sea corals have been poorly represented in molecular phylogenetic analyses. ** Results. By adding new data from a large and representative range of deep-water species to existing molecular datasets and applying a relaxed molecular clock, we show that two exclusively deep-sea families, the Gardineriidae and Micrabaciidae, diverged prior to the Complexa/Robusta coral split around 425 Ma, thereby pushing the evolutionary origin of scleractinian corals deep into the Paleozoic. *** Conclusions. The early divergence and distinctive morphologies of the extant gardineriid and micrabaciid corals suggest a link with Ordovician "scleractiniamorph" fossils that were previously assumed to represent extinct anthozoan skeletonized lineages. Therefore, scleractinian corals most likely evolved from Paleozoic soft-bodied ancestors. Modern shallow-water Scleractinia, which are dependent on symbionts, appear to have had several independent origins from solitary, non-symbiotic precursors. The Scleractinia have survived periods of massive climate change in the past, suggesting that as a lineage they may be less vulnerable to future changes than often assumed.^1";

6834 s[6831] = "TAVIANI M., VERTINO A., LOPEZ CORREA M., SAVINI A., DE MOL B., REMIA A., MONTAGNA P., ANGELETTI L., ZIBROWIUS H., ALVES T., SALOMIDI M., RITT B. & HENRY P. (2011).- Pleistocene to Recent scleractinian deep-water corals and coral facies in the Eastern Mediterranean.- Facies 57: 579-603.- **FC&P** issue number, page, ID=****^Topic(s): corals fossil & living, taxonomy, ecology, history; Systematics: Cnidaria, Scleractinia; Stratigraphy: Pleistocene - Recent; Geography: Mediterranean E^Recent investigations of the Eastern Mediterranean Sea carried out during the GECO cruise with RV Urania provided a substantial number of new cold-water coral (CWC) records, including branching and solitary scleractinian species. These new sites are located along steep escarpments and on topographic highs along the margins of Crete, Karpathos, and Rhodes. The majority of the corals represent fossil occurrences, predominantly Late Pleistocene assemblages. Our research documents that the Eastern Mediterranean Basin has been colonized by CWC at favorable times during the Last Glacial, in particular during the Younger Dryas. Schizocyathus fissilis is reported for the first time for the Mediterranean, while the finding of Ceratotrochus magnaghii represents the first record for the Eastern Mediterranean. Various coral facies occur on the southerly island slopes of Crete, Karpathos, and Rhodes, including hardgrounds and loose skeletal sediments. Hardgrounds occur on steep topographies between ca. 500 and 1,700m, and can conveniently be subdivided as (1) Neopycnodonte-Desmophyllum framestone, (2) Desmophyllum-Caryophyllia framestone, (3) Madrepora-Lophelia rudstone, (4) Pelagic mudstone and wackestone, and (5) siliciclastic-carbonate conglomerate and breccia. Unconsolidated skeletal sediments containing corals mainly occur on gentler topographic situations between ca. 140 and 600m and can be subdivided as: (A) Lophelia-Madrepora rubble, (B) Dendrophyllia rubble, (C) Stenocyathus rubble, (D) Caryophyllia calveri rubble, and (E) fine-grained sediment with octocoral axes. Many of these facies types

are also present in the western part of the Mediterranean and have fossil representatives from the Pleistocene to the Recent. Radiocarbon dating (AMS-14C) reveals Younger Dryas ages between 12.4 and 12.0 ka cal BP for *Lophelia pertusa* and *Madrepora oculata*. *Desmophyllum dianthus* occurs during the Last Glacial Maximum (21.8 ka cal BP) and the Younger Dryas (11.7 ka cal BP), as well as during the Late Holocene and subrecent times (4.4-0.6 ka cal BP). *Caryophyllia sarsiae* occurs during the Late Glacial (15.5 ka cal BP), while *Caryophyllia calveri* occurs during the Early Preboreal (10.8 ka cal BP). The ages for the framework-constructing corals *L. pertusa* and *M. oculata* are coherent with their temporal predominance during the Younger Dryas in other parts of the Mediterranean.¹¹;

6835 s[6832] = "TOKUDA Y. & EZAKI Y. (2012).- Asexual reproduction of Pliocene solitary scleractinian coral *Truncatoflabellum*: a morphological and biometric study.- *Journal of Paleontology* 86, 2: 268-272.- FC&P 37, 088, ID=7404Topic(s): fossil corals, reproduction patterns; Systematics: Cnidaria, Scleractinia, *Truncatoflabellum*; Stratigraphy: Pliocene; Geography: ^*Truncatoflabellum* has been considered a free-living genus that exhibits both sexual and asexual phases; divided lower coralla (anthocauli) are specialized for asexual reproduction by transverse division through a decalcification process, whereas the upper coralla (anthocyathi) only undertake sexual reproduction, in a life-cycle strategy that includes a distinct alternation of generations. However, little evidence has been presented to support this idea of its life cycle. We elucidate the life mode of *Truncatoflabellum* by identifying key fossil characters (e.g., multiple rejuvenations and decalcification records just beneath lateral spines) and statistically analyzing the size distributions of over 500 individual coralla. Results of those morphological and biometric analyses clearly indicate alternation of generations in the life cycle of *Truncatoflabellum*.¹¹;

6836 s[6833] = "TOKUDA Y. & EZAKI Y. (2012).- Attachment structures in *Rhizotrochus* (Scleractinia): macro- to microscopic traits and their evolutionary significance.- *Lethaia* 46, 2: 232-244.- FC&P 37, 089, ID=7405Topic(s): corals, attachment structures, phylogeny; Systematics: Cnidaria, Scleractinia, *Rhizotrochus*; Stratigraphy: Recent; Geography: ^Marine sessile benthic organisms living on hard substrates have evolved a variety of attachment strategies. *Rhizotrochus* (Scleractinia, Flabellidae) is a representative azooxanthellate solitary scleractinian coral with a wide geographical distribution and unique attachment structures; it firmly attaches to hard substrates using numerous tube-like rootlets, which are extended from a corallum wall, whereas most sessile corals are attached by stereome-reinforced structures at their corallite bases. Detailed morphological and constructional traits of the rootlets themselves, along with their evolutionary significance, have not yet been fully resolved. Growth and developmental processes of spines in *Truncatoflabellum* and rootlets in *Rhizotrochus* suggest that these structures are homologous, as they both develop from the growth edges of walls and are formed by transformation of wall structures and their skeletal microstructures possess similar characteristics, such as patterns of rapid accretion and thickening deposits. Taking molecular phylogeny and fossil records of flabellids into consideration, *Rhizotrochus* evolved from a common free-living ancestor and invaded hard-substrate habitats by exploiting rootlets of spines origin, which were adaptive for soft-substrate environments.¹¹;

6837 s[6834] = "YAZDI M., BAHRAMI A. & LELOUX J. (2011).- *Funginella? isfahanensis* n. sp. from the Upper Albian of Iran.- *Revista mexicana de ciencias geológicas* 28, 2: 226-234.- FC&P 37, 089, ID=7406Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous L, Albian U; Geography: Iran^*Funginella? isfahanensis* n. sp. is a new

nominal solitary scleractiniid coral from the upper Albian of Iran. Its dimensions, associated sedimentary facies and descriptions, all conform to those of the four specimens described as *Funginella* sp. 2034; in Abdel-Gawad and Gameil (1995, Cretaceous and Palaeocene Coral Faunas in Egypt and Greece: Coral Research Bulletin 4: 1-36) from North Sinai, Egypt. A preliminary discussion on small solitary cupulate coral species is presented. 11";

6838 s[6835] = "REICH M. 038; KUTSCHER M. (2011).- Sea Pens (Octocorallia: Pennatulacea) from the Late Cretaceous of Northern Germany.- Journal of Paleontology 85, 6: 1042-1051.- FC038;P 37, 090, ID=7407^Topic(s): fossil corals, taxonomy; Systematics: Cnidaria, Octocorallia, Pennatulacea; Stratigraphy: Cretaceous U, white Chalk; Geography: Germany N, R252;gen Island^The Late Cretaceous white chalk of the Isle of R252;gen, northeastern Germany, yields a highly diverse marine floral and faunal assemblage with more than 1,400 described species, including pennatulacean corals. All the new collected material, composed of fragments of the axial rods, belongs to 039;Graphularia039; quadrata Voigt, 1958, which was revised, and a new species, 039;Graphularia039; rugia. Analyses of the microstructure of axial rods of modern and fossil sea pens facilitate the discussion of the systematic relationships of the fossil material. 039;Graphularia039; quadrata shows an affinity to the Funiculinidae, whereas the new species 039;Graphularia039; rugiaresembles the axial structure of the Pennatulidae. 11";

6839 s[6836] = "ZUSCHIN M. 038; GEBHARDT H. (2009).- Octocorals as hosts to serpulid-macroids from the Cretaceous of the Potiguar Basin, Brazil.- Lethaia 42, 3: 381-382.- FC038;P 37, 090, ID=7408^Topic(s): fossil corals, substrate to epibionts; Systematics: Cnidaria, Octocorallia; Stratigraphy: Cretaceous; Geography: Brazil, Potiguar Basin^11";

6840 s[6837] = "JOHN D.L., HUGHES N.C., GALAVIZ M.I., GUNDERSON G.O. 038; MEYER R. (2010).- Unusually Preserved Metaconularia manni (Roy, 1935) from the Silurian of Iowa, and the Systematics of the Genus.- Journal of Paleontology 84, 1: 1-31.- FC038;P 37, 091, ID=7409^Topic(s): fossil scyphozoans, taxonomy, taphonomy, variation; Systematics: Cnidaria, Conulariina; Stratigraphy: Silurian L, Scotch Grove Fm; Geography: USA, Iowa^The Welton Member of the Scotch Grove Formation at Shaffton Quarry, near Camanche, Iowa, is about 427 Ma old and contains numerous metaconulariid specimens, many of which are preserved in apex-downward orientation. Some of these show an unusual, splayed, 034;Maltese cross034; configuration. Apex-downward configurations suggest rapid burial, consistent with the soft part preservation known in other taxa from this locality. The abundance of Metaconularia at Shaffton Quarry, and of topotype specimens of *M. aspersa*, the generic type species, permits evaluation of the degree of individual and intracollectional variation in peridermal ornament. Variation within and among individuals precludes reliance on ornamental differences in species differentiation in most cases. In view of these results we assign all Shaffton specimens to *Metaconularia manni* (Roy, 1935), and revise *Metaconularia* based on its type material from Europe and other material from Europe and North America. An exploratory phylogenetic analysis highlights aspects of character distribution within the genus, but the small number of characters states and possible taphonomic influences upon them limit confidence in the clade topology. Subgroups within the genus are characterized by larger, discoidal papillae, and by strong transverse corrugation and sinuous rows of smaller papillae. The genus itself comprises those conulariids with an external ornamentation of simple, round, small papillae, paired internal septae along the midlines, and a thin periderm that was to some degree pliable during life. 11";

6841 s[6838] = "ROBSON S.P. 038; YOUNG G.A. (2013).- Late Ordovician

Conulariids from Manitoba, Canada.- Journal of Paleontology 87, 5: 775-785.- **FC#038;P** 37, 091, ID=7410^Topic(s): fossil scyphozoans, taxonomy; Systematics: Cnidaria, Conulariina; Stratigraphy: Ordovician U, Red River Fm; Geography: Canada, Manitoba S^Six species of conulariids, assigned to four genera, were recovered from the type locality of the Cat Head Member of the Red River Formation in southern Manitoba, Canada. These are middle Katian (Late Ordovician) in age. The most abundant conulariid species from this locality, *Conularia porcella*, is new, and is represented by 21 specimens. Additionally, 28 three-dimensionally preserved micromorphic conulariids, assigned to *Eoconularia* aff. *loculata*, were recovered using acetic acid preparation from limestone samples of late Katian (Late Ordovician) age. These samples had been collected from Churchill, northern Manitoba, by the Geological Survey of Canada's J.B. Tyrrell in 1894. These taxa are unusually abundant for conulariids, which are normally represented by only a few specimens from any given locality, and this abundance may be a reflection of the exceptional preservation at these two localities.^1";

6842 s[6839] = "SENDINO C., ZAGORSEK K. & TAYLOR P.D. (2012).- Asymmetry in an Ordovician conulariid cnidarian.- *Lethaia* 45, 3: 423-431.- **FC&P** 37, 092, ID=7411^Topic(s): fossil scyphozoans, asymmetry; Systematics: Cnidaria, Conulariina; Stratigraphy: Ordovician; Geography: Czech Republic, Drabov^Conulariids are fossils of the presumed polyps of an extinct scyphozoan cnidarian group. Their cone-shaped skeletons normally show perfect tetradial symmetry. However, in the Ordovician species *Metaconularia anomala* (Barrande 1867) from Drabov (Czech Republic), tetradial symmetry is compromised in three ways: (1) the skeleton often shows torsion; (2) the four sides may vary in width at the same level within one individual; and (3) one side may be deleted to give a triradial skeleton. Almost 2000 specimens were studied in museum collections. About 56% of analysed specimens are twisted in an anticlockwise direction (sinistral) when viewed from the apex towards the aperture, 28% show no torsion, 1% exhibit clockwise torsion (dextral) and the remaining 15% cannot be classified. Maximum measured torsion rate was 1.5°/mm. A significant negative correlation between torsion rate and length suggests that more highly torqued individuals may have survived less well. Almost 5% of individuals show loss of one side for at least part of their lengths. Although many individuals have four sides of equal width, in a significant proportion the sides are of unequal width, up to a maximum / minimum side width ratio of 2 (i.e. widest face twice the width of the narrowest). In the absence of a satisfactory taphonomic model to explain the asymmetries, they are regarded as mirroring asymmetries in the living conulariids, with the strong preference for sinistral torsion interpreted as an example of a fixed asymmetry that was genetically controlled and heritable. It is speculated that the signalling protein Nodal as well as Hox-like genes were involved in controlling the asymmetries described in *M. anomala*.^1";

6843 s[6840] = "SENDINO C., ZAGORSEK K. & VYHLASOVA Z.D. (2011).- The aperture and its closure in an Ordovician conulariid.- *Acta Palaeontologica Polonica* 56, 3: 659-663.- **FC&P** 37, 093, ID=7412^Topic(s): fossil scyphozoans, aperture closure; Systematics: Cnidaria, Conulariina; Stratigraphy: Ordovician U; Geography: Czech Republic, Prague Basin^The conulariids, an enigmatic fossil group believed to be of cnidarian (scyphozoan) affinity, have four-sided, acutely pyramidal exoskeletons terminated in apertural closures. To date, three main closure types have been recognised in conulariids (plicated, triangular lappets, and lobate lappets) but the first type is poorly illustrated in the literature. Here we present the first photographic illustration of an unequivocal plicated closure in *Metaconularia? anomala*, based on study of the rich (1700+ specimens) material from the Upper Ordovician of the

Prague Basin. This closure is formed by inwardly folded, triangular lappets centred on each of the four faces, with kite-shaped elements centred on the four corners forming a webbing between the lappets. Plicated closures were evidently rare in conulariids and restricted to a few Ordovician species.¹¹;

6844 s[6841] = "VAN ITEN H. & SUDKAMP W.H. (2010).- Exceptionally preserved conulariids and an edrioasteroid from the Hunsrueck Slate (Lower Devonian, SW Germany).- Palaeontology 53, 2: 403-414.- FC&P 37, 093, ID=7413^Topic(s): fossil scyphozoans; Systematics: Cnidaria, Conulariina; Stratigraphy: Devonian L, Emsian, Hunsrueck Slate; Geography: Germany, Bundenbach^Nineteen partial specimens of Conularia sp., together with an articulated agelacrinitid edrioasteroid and several discinid brachiopods, occur in close association with a probable biological substrate on a small slab of silty Hunsrueck Slate (Lower Devonian, Emsian) from Bundenbach, Germany. Most of the conulariids occur in V-like pairs or in a single cluster of 12 specimens arranged in a fan-like radial pattern. Together with the edrioasteroid and (possibly) brachiopods, the conulariids probably were attached to the substrate in life and then were buried and possibly killed by a single influx of silty mud. The apertural end of many of the conulariids is partially covered by inwardly folded short lappets, which may have closed in response to rapid (but gentle) burial. Rock matrix in the apertural region of the peridermal cavity of nearly all of the conulariids exhibits irregular, variably dense concentrations of pyrite. The concentrations occur almost exclusively within the conulariids, where they probably formed as a result of the decay of retracted conulariid soft parts. Although the concentrations lack clearly defined anatomical features that can be unambiguously homologized with particular anatomical structures of any extant taxon, their form and distribution within the conulariids are consistent with the hypothesis that conulariids were polypoid scyphozoans.¹¹;

6845 s[6842] = "VAN ITEN H., TOLLERTON V.P. jr, VER STRAETEN C.A., DE MORAES LEME J., SIMOES M.G. & RODRIGUES M.G. (2013).- Life mode of in situ Conularia in a Middle Devonian epibole.- Palaeontology 56, 1: 29-48.- FC&P 37, 094, ID=7414^Topic(s): fossil scyphozoans, life mode; Systematics: Cnidaria, Conulariina; Stratigraphy: Devonian M, Givetian, Mount Marion Fm; Geography: USA, New York^Exceptionally abundant specimens of Conularia aff. desiderata Hall occur in multiple marine obrution deposits, in a single sixth-order parasequence composed of argillaceous and silty very fine sandstone, in the Otsego Member of the Mount Marion Formation (Middle Devonian, Givetian) in eastern New York State, USA. Associated fossils consist mostly of rhynchonelliform brachiopods but also include bivalve molluscs, orthoconic nautiloids, linguliform brachiopods and gastropods. Many of the brachiopods, bivalve molluscs and conulariids have been buried in situ. Conulariids buried in situ are oriented with their aperture facing obliquely upward and with their long axis inclined at up to 87 degree to bedding. Most specimens are solitary, but some occur in V-like pairs or in radial clusters consisting of three specimens, with the component specimens being about equally long or (less frequently) substantially different in length. The compacted apical end of Conularia buried in situ generally rests upon argillaceous sandstone. With one possible exception, none of the examined specimens terminates in a schott (apical wall), and internal schotts appear to be absent. The apical ends of specimens in V-like pairs and radial clusters show no direct evidence of interconnection of their periderms. The apical, middle or apertural region of some inclined specimens abuts or is in close lateral proximity to a recumbent conulariid or to one or more spiriferid brachiopods, some of which have been buried in their original life orientation. The azimuthal bearings of Conularia and nautiloid long axes and the directions in which conulariids open are nonrandom, with conulariids

being preferentially aligned between 350 and 50 degree and with their apertural end facing north-east, and nautiloids being preferentially aligned between 30 and 70 degree. Otsego Member Conularia were erect or semi-erect, epifaunal or partially infaunal animals, the apical end of which rested upon very fine bottom sediment. The origin of V-like pairs and radial clusters remains enigmatic, but it is probable that production of schotts was not a regular feature of this animals life history. Finally, conulariids and associated fauna were occasionally smothered by distal storm deposits, under the influence of relatively weak bottom currents.^1";

6846 s[6843] = "VAN ITEN H., ZHU Maoyan & LI Guoxiang (2010).- Redescription of Hexaconularia He and Yang, 1986 (Lower Cambrian, South China): implications for the affinities of conulariid-like small shelly fossils.- Palaeontology 53, 1: 191-199.- FC&P 37, 095, ID=7415^Topic(s): small shelly fossils, taxonomy, biology; Systematics: Cnidaria? Conulariina?; Stratigraphy: Cambrian L; Geography: China S^Hexaconularia, a Lower Cambrian small shelly fossil (SSF) that has been allied with conulariids and scyphozoan cnidarians, is redescribed and refigured. A salient feature of this monospecific genus is the presence of distinct apical and abapical regions. The apical region probably represents an embryonic shell that apparently lacked a basal attachment structure. Comparisons of this feature with the apical end of the smallest known conulariids and with conulariids terminating in an apical wall (schott) reveal substantial differences in structure and ornamentation. Differences in apical anatomy between conulariids and Arthrochites, possibly the nearest SSF relative of Hexaconularia, are also apparent. Comparisons of Hexaconularia with Punctatus, an SSF taxon showing distinct apical and abapical regions in both posthatching specimens and prehatching embryos, suggest that the early development of Hexaconularia was direct. These results have important implications for hypotheses of a conulariid / scyphozoan affinity for Hexaconularia and its possible SSF relatives, and they suggest that Hexaconularia-bearing strata may yield prehatching embryos of this genus.^1";

6847 s[6844] = "MUSCENTE A.D. & ALLMON W.D. (2013).- Revision of the Hydroid Plumalina Hall, 1858 in the Silurian and Devonian of New York.- Journal of Paleontology 87, 4: 710-725.- FC&P 37, 096, ID=7416^Topic(s): fossil hydrozoans, revision; Systematics: Cnidaria, Hydrozoa; Stratigraphy: Silurian, Wenlock, Devonian, Givetian - Famennian; Geography: USA, New York^The feather-shaped Plumalina Hall, 1858 is revised on the basis of new and reexamined specimens from New York. Previously described from Givetian through Famennian deposits, a single compression of P. tenera n. sp. from the Rochester Shale extends the range into the Wenlock, and provides new information regarding Plumalina's biology. We assess the utility of morphologic characters in diagnoses of taxa, and present the first quantitative analysis of fossil hydroids to distinguish P. brevis n. sp. (Frasnian) from other Devonian species. * Plumalina has been compared to plants, graptolites, and octocorals. Some interpretations have proposed affinities among hydrozoans based on colony form and the presence of putative polyp bases. Our analysis shows that, like extant thecate hydrozoans, Plumalina had a delicate, chitinous hydrocaulus with weakly articulated hydrocladia. An assemblage of in situ specimens, steeply inclined relative to the bedding plane in an Ithaca Formation (Frasnian Stage) turbidite, indicates that Devonian species produced sessile, erect colonies attached to a hard substrate, comparable to extant hydroids that feed in currents. Morphometric comparisons between putative Plumalina polyp bases and polyp bases of modern analogues reveal similarities to hydroids in the superfamily Plumularioidea McCrady, 1859. Plumalina is the most abundant fossil hydroid so far reported, and is pertinent to interpretations of the hydrozoan record.^1";

6848 s[6845] = "STANLEY G.D. & ZONNEVELD J.-P. (2011).- The occurrence

of the Hydrozoan genus *Cassianastraea* from Upper Triassic (Carnian) rocks of Williston Lake, British Columbia, Canada.- *Journal of Paleontology* 85, 1: 29-31.- **FC#038;P** 37, 097, ID=7417^Topic(s): fossil hydrozoans; Systematics: Cnidaria, Hydrozoa?; Stratigraphy: Triassic U, Carnian; Geography: Canada, British Columbia^Cassianastraea is an enigmatic colonial Triassic cnidarian first described as a coral but subsequently referred to the Hydrozoa. We report here the first occurrence in Canada of fossils we designate as *Cassianastraea* sp. from the Williston Lake region of British Columbia. The specimens come from older collections of the Geological Survey of Canada, collected in Upper Triassic (Carnian) strata assigned to either the Ludington or Baldonnel Formations. While well known in reef associations of the former Tethys region, *Cassianastraea* is relatively rare in North America. The Carnian Baldonnel Formation contains the earliest coral reefs from the North American craton and we suspect that *Cassianastraea* sp. also came from this reef association.^1";

6849 s[6846] = "DENG Zhan-Qiu & WANG Guang-Xu (2012).- The Llandoveryan coral fauna from Xikeer, Western Tarim Basin.- *Acta Palaeontologica Sinica* 51, 2: 176-185.- **FC#038;P** 37, 097, ID=7418^Topic(s): fossil corals; Systematics: Cnidaria, Tabulata, Rugosa; Stratigraphy: Silurian L, Llandoveryan; Geography: China, Xinjiang, Tarim Basin w^The coral fauna dealt with in this paper was collected from Xikeer in Jiashi County, Xinjiang, in the western Tarim Basin. The coral-bearing strata are assigned to the middle-lower part of the Kolpingtag Formation, of Lower Llandovery age. Xikeer is the only locality with Early Llandoveryan corals in the Tarim Basin and hence is of considerable palaeobiogeological interest within the Silurian of China as a whole. The coral fauna includes following species: *Paleofavosites schmidti* Sokolov, *P. schmidti borealis* Sokolov, *Schedohalysites raregonopora* sp. nov., *Mcleodea jiashiensis* sp. nov., *M. xikeerensis* sp. nov., and *Kodonophyllum* cf. *undulatum* He and Huang.^1";

6850 s[6847] = "DENG Zhan-Qiu & WANG Guang-Su (2013).- Mesozoic corals and sponges from Ge'Gyai and Rutong, Xizang.- *Acta Palaeontologica Sinica* 52, 2: pp?.- **FC#038;P** 37, 098, ID=7419^Topic(s): fossil corals & sponges; Systematics: Cnidaria, Anthozoa, Porifera; Stratigraphy: Mesozoic; Geography: China, Tibet, Ge'Gyai & Rutong^^1";

6851 s[6848] = "JELL J., COOK A.G. & JELL P.A. (2011).- Australian Cretaceous Cnidaria and Porifera.- *Alcheringa* 35, 2: 241-284.- **FC#038;P** 37, 098, ID=7420^Topic(s): fossil corals & sponges, review; Systematics: Cnidaria, Anthozoa, Porifera; Stratigraphy: Cretaceous; Geography: Australia^Australian Cretaceous sponge and coral faunas are reviewed and increased with new discoveries. The largest new fauna described, from the very thin Maastrichtian Miria Formation, an uncemented chalky marl, in the Carnarvon Basin, western Australia, includes a poriferan, *Ventriculites* sp., the hydrozoans, *Stylaster* cretaceous sp. nov. and *Astya nielsenii* Wells, 1977 originally described from the Eocene of Tonga and the scleractinian corals *Smilotrochus carnarvonensis* sp. nov., *Conotrochus giraliensis* sp. nov., *Parasmilia cyensis* sp. nov., *Palaeopsammia cardabiaensis* sp. nov., *Flabellum miriaensis* sp. nov., *Ballanophyllia acostae* sp. nov., representatives of five genera left in open nomenclature and *Caryophyllia arcotensis* (Forbes, 1846), originally described from south India. The Santonian Gingin Chalk, in the northern Perth Basin, western Australia has yielded the scleractinian corals *Ceratotrochus ginginensis* (Etheridge 1913), originally assigned to *Coelosmia* and *Caryophyllia arcotensis* (Forbes, 1846), holdfast structures that probably supported octocorals and the poriferans, *Peronidella*(?) *globosa* (Etheridge 1913) and *Pachyteichisma corrugatus* sp. nov. *Mckenziephyllia accordensis* gen. et sp. nov. is described as the first scleractinian coral (Faviidae) from the Eromanga Basin. It

- comes from the Albian Allaru Formation in the Barcaldine district of central Queensland. *Purisiphonia clarkei* Bowerbank, 1869 is noted from the Aptian wallumbilla Formation as the only known poriferan in the Surat and Eromanga basins.¹¹;
- 6852 s[6849] = "JIANG Hong-Xia (2013).- Tabulate and rugose corals from the Ordovician reefs in the southern edge of the Ordos Basin and their paleoecology significance.- *Acta Palaeontologica Sinica* 52, 2: pp?.- FCP 37, 098, ID=7421Topic(s): fossil corals, ecology, reefs; Systematics: Cnidaria, Tabulata, Rugosa; Stratigraphy: Ordovician; Geography: China, Ordos Basin¹¹;
- 6853 s[6850] = "LIAO Wei-Hua, DENG Zhan-Qiu, MA Xue-Ping & LI Hua (2013).- Corals of the transitional zone (Middle-Upper Devonian boundary) in the Caiziyan section, Guilin, Guangxi.- *Acta Palaeontologica Sinica* 52, 1: 001-017.- FCP 37, 098, ID=7422Topic(s): fossil corals; Systematics: Cnidaria, Anthozoa; Stratigraphy: Devonian M/U; Geography: China, Guangxi, Guilin¹¹;
- 6854 s[6851] = "WANG Guang-Xu, DENG Zhan-Qiu & ZHAN Ren-Bin (2011).- Coral fauna of the Baiyun'an Formation (Silurian; Llandovery) from Huaying Mountain, Eastern Sichuan.- *Acta Palaeontologica Sinica* 50, 4: 450-469.- FCP 37, 099, ID=7423Topic(s): fossil corals; Systematics: Cnidaria, Anthozoa; Stratigraphy: Silurian, Llandovery; Geography: China, Sichuan E¹¹;
- 6855 s[6852] = "ADACHI N., EZAKI Y. & LIU Jianbo (2011).- Early Ordovician shift in reef construction from microbial to metazoan reefs.- *Palaios* 26, 02: 106-114.- FCP 37, 099, ID=7424Topic(s): reefs, bioconstructors, temporal trends; Systematics: microbes, metazoans; Stratigraphy: Ordovician L; Geography: ^The Ordovician is a period when novel reef ecosystems appeared along with new reef constructors and skeletal-dominated reefs. The Lower Ordovician (late Tremadocian) Fenshiang Formation of the Three Gorges area in South China contains the oldest known bryozoan reefs (lithistid sponge-bryozoan and bryozoan-pelmatozoan reefs) alongside lithistid sponge-microbial reefs. The latter are characterized by the dominance of microbialites that encrusted and bound the frame-building sponges and inter-sponge sediments. In contrast, the lithistid sponge-bryozoan and bryozoan-pelmatozoan reefs are generally characterized by bryozoans that encrusted the frame-building sponges or pelmatozoans and grew to fill the inter-frameworks. These sponges and pelmatozoans did not construct the rigid frameworks unaided; their association with bryozoans enabled the development of small skeletal-dominated reefs with rigid frameworks. Skeletal-dominated reefs, for which frame-constructing and encrusting roles are conspicuous, were largely unknown before the Early Ordovician. The appearance of skeletal organisms (specifically colonial, encrusting bryozoans) enabled the development of skeletal-dominated reefs, which were pioneers in the rise of Middle-Late Ordovician reefs. The Early Ordovician establishment of skeletal-dominated reefs at the earliest stages of the Great Ordovician Biodiversification Event would have created novel niches and biological interactions that further promoted the evolution of reef-building and -dwelling organisms, as well as ensuing reef ecosystems.¹¹;
- 6856 s[6853] = "ADACHI N., EZAKI Y. & LIU J. (2012).- The oldest bryozoan reefs: a unique Early Ordovician skeletal framework construction.- *Lethaia* 45, 1: 14-23.- FCP 37, 100, ID=7425Topic(s): reefs, ecological succession, temporal trends; Systematics: bryozoans; Stratigraphy: Ordovician L; Geography: China S, Three Gorges Area^The oldest bryozoan reefs occur in the Lower Ordovician (late Tremadocian) Fenshiang Formation of the Three Gorges area, South China. These reefs show a unique type of bryozoan (*Nekhorosheviella*) framework, and were constructed as follows:

the first stage involved colonization by lithistid sponges, which acted as a baffler to trap sediments, providing bryozoans with a stable substrate for attachment. The bryozoans then grew as an encruster on the surfaces of sponges, showing a preferential downwards and lateral growth within the sponge scaffolding to avoid biological and physical disturbance. Finally, these biotic combinations among skeletal organisms formed a rigid, three-dimensional skeletal framework. This mode of bryozoan growth in association with lithistid sponges is remarkable and unique in its growth direction, and the appearance of such reefs, just prior to the widespread development of skeletal-dominated reefs as part of the Great Ordovician Biodiversification Event, provides an excellent example of the earliest attempts by skeletal organisms to form frameworks by themselves. This find significantly enhances our understanding of the initial stages of skeletal-dominated reef evolution and the ensuing development of reefs during the Middle-Late Ordovician.¹¹;

6857 s[6854] = "ADACHI N., LIU J. & EZAKI Y. (2013).- Early Ordovician reefs in South China (Chenjahe section, Hubei Province): deciphering the early evolution of skeletal-dominated reefs.- *Facies* 59, 2: 451-466.- FC&P 37, 100, ID=7426^Topic(s): bryozoan reefs, reef structures, temporal trends; Systematics: bryozoans; Stratigraphy: Ordovician L, Floian L; Geography: China S, Hubei^The Lower Ordovician (late Tremadocian-early Floian) Fenhsiang and the overlying Hunghuayuan Formations at the Chenjahe section in the Three Gorges area of Hubei Province, South China, include four types of reef: microbe-dominated (lithistid sponge-stromatolite and lithistid sponge-calcimicrobial) reefs, and skeletal-dominated (lithistid sponge-bryozoan and bryozoan-pelmatozoan) reefs. The microbe-dominated reefs are characterized by the dominance of microbial sediments that encrusted and bound the surfaces of sponges to reinforce the reef frameworks. In contrast, the skeletal-dominated reefs are distinguished by bryozoans that encrusted frame-building sponges and pelmatozoans, and that grew downward to fill the open spaces available within the frameworks. A series of these reefs shows a temporal succession in reef type, with a decline in the lithistid sponge-stromatolite reefs and an increase in the lithistid sponges and receptaculitids within the lithistid sponge-calcimicrobial reefs in the Hunghuayuan Formation, the lithistid sponge-bryozoan reefs are common in both the Fenhsiang and Hunghuayuan Formations. These features of the Chenjahe reefs are in marked contrast to other coeval reefs on the Yangtze Platform and elsewhere. Skeletal-dominated reefs first developed in the Three Gorges and adjacent areas, located on the central part of the platform. Likewise, lithistid sponges and receptaculitids first developed in the Three Gorges area and then expanded their range. In contrast, stromatolites declined over time, but remained abundant on a marginal part of the platform. The spatial-temporal distributions of these reefs on the Yangtze Platform reflect the initiation of the Great Ordovician Biodiversification Event and its consequences, although influenced by local environmental conditions. The Three Gorges area was a center for the development of skeletal-dominated reefs, which were established earlier here than elsewhere in the world. These reef types and their spatial-temporal successions provide invaluable clues to the earliest evolution of skeletal-dominated reefs and their ensuing development during the Middle-Late Ordovician.¹¹;

6858 s[6855] = "ADAMS E.W. & HASLER C.-A. (2010).- The intrinsic effect of shape on the retrogradation motif and timing of drowning of carbonate patch reef systems (Lower Frasnian, Bugle Gap, Canning Basin, western Australia).- *Sedimentology* 57: 956-984.- FC&P 37, 101, ID=7427^Topic(s): reefs, reef drowning, reef shapes; Systematics: ; Stratigraphy: Devonian U, Frasnian L; Geography: Australia W, Canning Basin^The evolution and architecture of a set of retreating Lower Frasnian patch reef outcrops

in the Canning Basin of Western Australia were evaluated, and their depositional and stratigraphic contacts spatially recorded using digital surveying tools. The geological data, together with high-resolution digital elevation models, were assembled in three-dimensional visualization and modelling software and subsequently used for building two-dimensional surface models and three-dimensional volumetric models. Numerical data on geometry and shape were extracted from these models and used to quantitatively assess the retrogradation motif of patch reef development. The development of the patch reefs comprises three stages. During stages 1 and 2, the patch reefs exhibited an overall retrogradational escarpment-type configuration displayed by, on average, 60° steep reef-margin walls that lacked the support of coeval slope deposits. The subdivision between stages 1 and 2 is based on minor backstepping reducing less than 10% of the platform top area. The onset of stage 3 is recognized by stromatolite development fringing reef-margin walls. During stage 3 an aggrading accretionary reef margin developed, comprising allochthonous and autochthonous slope deposits. [abridged]¹;

6859 s[6856] = "ALVARO J.J. & DEBRENNE F. (2010).- The Great Atlasian Reef Complex: An early Cambrian subtropical fringing belt that bordered West Gondwana.- Palaeogeography, Palaeoclimatology, Palaeoecology 294, 3-4: 120-132.- FC&P 37, 102, ID=7428^Topic(s): archaeocyathan reefs, tectonics; Systematics: Porifera, Archaeocyatha; Stratigraphy: Cambrian L; Geography: Morocco, Atlas^The so-called Great Atlasian Reef Complex developed during early Cambrian time throughout the Moroccan margin (Souss Basin) of West Gondwana. According to the syndepositional tectonic activity associated with its intracratonic Ediacaran-Cambrian rift, the great reef complex can be subdivided into four major archaeocyathan-microbial reef episodes: * (i) The Atdabanian episode is recorded by a SW-NE-trending, 400km long barrier reef that extended across the western Anti-Atlas. It was controlled by large-scale reactivation of an inherited rifting branch, which resulted in the nucleation and growth of linear reef complexes located along its margin. The interplay of block tilting, sharp modifications in accommodation space, and relative sea-level rise led to a composite retrogradational-aggradational reef systems tract, characterized by archaeocyathan-microbial kalyptate complexes (Tiout Member and Amouslek Formation) that protected stromatolite-dominated, back-barrier environments (lower member of the Igoudine Formation). ** (ii) The western Anti-Atlas recorded an early Botoman reactivation of the same rifting branch that triggered a lateral migration of frame-building centres of carbonate productivity. As a result, the involved grabens and half-grabens recorded the development of fringing mound complexes (lower Issafen Formation). These occupied some linear intra-platform, deeper depressions capped by marls and shales, whereas laterally equivalent shallower environments recorded the development of patch-reefs and bioherms. *** (iii) The western Anti-Atlas subsequently recorded a late Botoman interval of tectonic quiescence superimposed to a local interval of progradational pulses. This favoured the nucleation of dispersed archaeocyathan-microbial patch-reefs and bioherms. **** (iv) A distinct palaeogeographic area is recognized in the southern High Atlas, where the entire Atdabanian-Botoman interval recorded small-scale, syndepositional block tilting and high rates of volcanoclastic input. As a result, this sector was characterized by the record of microbial and archaeocyathan-microbial patch-reefs and bioherms, preferentially developed on the uplifted parts of tilted blocks. * The end of reef development and carbonate productivity in the Souss Basin is related to the progradation of siliciclastic depositional systems (Toyonian regression), considered to have caused the collapse of reef communities throughout West Gondwana.^1";

6860 s[6857] = "BILL M., O'DOGHERTY L. & BAUMGARTNER P.O. (2011).- Dynamics of a paleoecosystem reefs associated with oceanic change in

carbonate sedimentary regime and carbon cycling (Oxfordian, Swiss Jura).- *Palaios* 26, 04: 197-211.- **FC** 37, 103, ID=7429^**Topic(s):** reefs, reefs dynamics, oceanic change; **Systematics:**; **Stratigraphy:** Jurassic U, Oxfordian; **Geography:** Swiss Jura Mts^Herein we report an analysis of an Oxfordian (Upper Jurassic) paleoreef located in the Swiss Jura Mountains. The paleoreef is located in a Middle Oxfordian transitional interval in which sedimentation switched from marl-dominated to carbonate-dominated deposits. The paleoecosystem is composed of four successive fossil communities characterized by microsolenid corals and organisms that specialized in suspension feeding. Carbon isotopes measured from echinoid spine carbonates exhibit a positive trend from ~1.0 ‰ to 2.5 ‰; in ‰¹³C values from the base to the top of the paleoreef. Comparison of ‰¹³C curves with organic matter and belemnites shows different patterns not compatible with a global variation of the carbon cycle. Similar fossil assemblages and stratigraphic sequences identical in age are found along the continental margin of the Tethys-Atlantic Ocean. This biolithostratigraphic succession corresponds to increasing ‰¹³C values of marine and biogenic carbonates, to the transition from marl-dominated to carbonate-dominated deposits, and to the development of carbonate platforms, which together suggest a change in the carbon cycling regime within the Tethys-Atlantic Ocean system.¹";

6861 s[6858] = "CHABLAIS J., MARTINI R., SAMANKASSOU E., ONOUE T. & SANO H. (2010).- Microfacies and depositional setting of the Upper Triassic mid-oceanic atoll-type carbonates of the Sambosan Accretionary Complex (southern Kyushu, Japan).- *Facies* 56, 2: 249-278.- **FC** 37, 104, ID=7430^**Topic(s):** reef carbonates, reef ecology, mid-oceanic reefs; **Systematics:**; **Stratigraphy:** Triassic U, Carnian ? Rhaetian, Sambosan Accretionary Complex; **Geography:** Japan, Kyushu S^The Upper Triassic shallow-water limestones of the Sambosan Accretionary Complex are reconstructed as a remnant of a mid-oceanic atoll-type build-up upon a seamount in the Panthalassan Ocean. The Sambosan atoll-type carbonates and its pedestal were accreted along with deep-water ribbon-chert and related siliceous rocks to the eastern margin of Asia during the Late Jurassic to Early Cretaceous. Studied limestones crop out in southern Kyushu Island, southwest Japan. Although the prevailing and intense deformation during the accretionary process prevents measurement of sections in stratigraphic successions, and sedimentary structures are poorly preserved, microfacies description and foraminifers analysis allow us to speculate the depositional setting of the Sambosan limestones. Seventeen microfacies are distinguished and several foraminifers of Tethyan affinity are identified. Foraminifers indicate a Late Carnian to Rhaetian age. The Tethyan affinity of the macro- and microfaunas suggests that the Sambosan seamount was located presumably in a low- to middle-latitudinal zone of the southern hemisphere during the Late Triassic.¹";

6862 s[6859] = "CHABLAIS J., ONOUE T. & MARTINI R. (2010).- Upper Triassic reef-limestone blocks of southwestern Japan: New data from a Panthalassan seamount.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 293, 1/2: 206-222.- **FC** 37, 104, ID=7431^**Topic(s):** reefs, reef-derived blocks, reef reconstructions; **Systematics:**; **Stratigraphy:** Triassic U, Norian - Rhaetian, Sambosan Accretionary Complex ; **Geography:** Japan, Shikoku W^Norian-Rhaetian reef-limestone outcrops belonging to the Sambosan Accretionary Complex located near and within Inaba Cave, western Shikoku Island (Japan), are described in detail for the first time. This patch-reef complex is inferred to have formed within an atoll-type carbonate system accumulated over a mid-oceanic seamount surrounded by deep-water radiolarian cherts in the Panthalassic Ocean during the Late Triassic. Because most Upper Triassic reef studies are from the former Tethys Ocean, counterparts from the Panthalassic Ocean,

such as this study, are fundamental in resolving sedimentological, palaeontological and palaeobiogeographical issues related to Late Triassic reefs. The microfacies, palaeontology and palaeoecology of the Inaba reef limestones were investigated. The reef-boundstone facies is characterised by abundant coralline sponges that, in association with microbial crusts, constitute the main framebuilders. Some phaceloid and/or dendroid corals occur, but these groups are poorly represented, as are algae. Microproblematica and foraminifers exhibit rich associations, acting as secondary reef builders and/or reef dwellers. The surrounding setting comprises biodetrital sponge-coral rudstone and well-preserved megalodont rudstone-floatstone. The sedimentary contact between reef and lagoon facies is observed for the first time within Inaba Cave. Important similarities with the coeval Upper Triassic reefs of the southern classic Peri-Tethys area and especially with the Omani seamounts are recognised, suggesting a more southern-Hemisphere origin for Upper Triassic Japanese reefs than predicted by previous reef studies.¹¹;

6863 s[6860] = "COPPER P. & JIN J. (2012).- Early Silurian (Aeronian) East Point Coral Patch Reefs of Anticosti Island, Eastern Canada: First Reef Recovery from the Ordovician/Silurian Mass Extinction in Eastern Laurentia.- Geosciences (MDPI) 2: 64-89; Basel.- FC&P 37, 104, ID=7432Topic(s): reefs, patch reef swarm, reef facies, post-extinction reefs; Systematics: ; Stratigraphy: Silurian L, Aeronian; Geography: Canada, Anticosti IslandAn extensive late Aeronian patch reef swarm outcrops for 60-70 km on Anticosti Island, eastern Canada, located in the inner to mid-shelf area of a prominent tropical carbonate platform of southeastern Laurentia, at 20°-25° S paleolatitude of the southern typhoon belt. This complex, described here for the first time, includes more than 100 patch reefs, up to 60-80 m in diameter and 10 m high. Reefs are exposed three-dimensionally on present-day tidal flats, as well as inland along roads and rivers. Down the gentle 1°-2° paleoslope, the reefs grade into coral-sponge biostromes, and westerly they grade into inter-reef or deeper 'crinoidal meadow' facies. The reef builders were dominantly tabulate and rugose corals, with lesser stromatoporoids. Other components include crinoids, brachiopods, green algae (especially paleoporellids), and encrusting cyanobacteria: reefs display some of the earliest known symbiotic intergrowths of corals and stromatoporoids. Reefs were variably built on a base of crinoidal grainstones, meadows of baffling tabulate corals, brachiopod shells, or chlorophytes. These reefs mark an early phase of reef recovery after a prominent reef gap of 5-6 million years following the Ordovician/Silurian mass extinction events. The reefs feature a maximal diversity of calcifying cyanobacteria, corals and stromatoporoids, but low diversity of brachiopods, nautiloids and crinoids. Following the North American Stratigraphic Code, we define herein the Menier Formation, encompassing the lower two members of the existing Jupiter Formation.¹¹;

6864 s[6861] = "CORLETT H., JONES B. & JIN Jisuo (2011).- Ecological controls on Devonian stromatoporoid-dominated and coral-dominated reef growth in the Mackenzie Basin, Northwest Territories, Canada.- Canadian Journal of Earth Sciences 48, 12: 1543-1560.- FC&P 37, 106, ID=7433Topic(s): strom reefs, coral reefs, ecological constraints; Systematics: ; Stratigraphy: Devonian M, Horn Plateau Fm; Geography: Canada, NW Territories, Mackenzie BasinThe Horn Plateau Formation, composed of isolated reefs, is part of the Devonian strata that formed in the Mackenzie Basin in the Northwest Territories, Canada. The reefs stretch over a ~350 km northeast-southwest trend and are dominated by tabulate and rugose corals in the northeast, near exposed Canadian Shield rocks, and stromatoporoids further out in the basin. Detailed facies analyses of each reef type shows distinct differences in their biological makeup, energy regimes, and carbonate sedimentation rates. Geochemical analyses

(stable isotopes and rare-earth elements) set against established paleogeography in the Mackenzie Basin reveal that the coral-dominated and stromatoporoid-dominated reefs grew under different ecological conditions. Separations in the data imply that the coral-dominated reefs grew in waters that were relatively enriched in nutrients and the stromatoporoid-dominated reefs, further down the ramp, were in oligotrophic conditions. With no current established method to directly measure Paleozoic nutrient levels or to detect where they were sourced from, it is unclear why the coral-dominated reefs experienced higher nutrient levels. The paleogeography of the Mackenzie Basin could have affected the apparent stratification of nutrients on the carbonate ramp. Possible nutrient sources in the area are from coastal upwelling from the open ocean northwest of the ramp, or locally sourced nutrients from runoff on the adjacent exposed Canadian Shield rocks.¹¹;

6865 s[6862] = "DENAYER J. & ARETZ M. (2011).- Discovery of a Mississippian Reef in Turkey: The Upper Viséan Microbial-Sponge-Bryozoan-Coral Bioherm From Kongul Yayla (Taurides, S Turkey).- Turkish Journal of Earth Sciences 20, 2011: 1-?.- FC&P 37, 107, ID=7434Topic(s): reefs, bioconstructors, reef structures; Systematics: ; Stratigraphy: Carboniferous L, Viséan, Asbian; Geography: Turkey, Taurides centralFor the first time, a Mississippian reef is described from Turkey. This microbial-sponge-bryozoan-coral bioherm has been discovered in the Central Taurides (South Turkey), at Kongul Yayla located between Hadim and Taskent. The bioherm contains a rich and diversified fauna: sponges and rugose corals are of particular interest. The bioherm shows four main facies reflecting distinct growth stages from the base to the top: (1) the basal bioclastic beds, (2) the core facies formed of framestone comprising rugose corals, lithistid sponges, fistuliporid bryozoans and microbial boundstone, (3) the crest facies with large colonies of cerioid rugose corals and chaetetid sponges, and (4) the bioclastic facies containing reworked material from the bioherm in lateral and overlying positions to it. The entire bioherm is topped by siltstones with thin bioclastic horizons, often slumped. Siphonodendron pauciradiale and Lithostrotion maccoyanum are the guide taxa for the RC7β biozone and indicate an upper Asbian age for the bioherm. The Kongul Yayla bioherm resembles most the Cracoean reefs from northern England. It confirms the position of this buildup type along the platform margins and edges in the Palaeotethyan realm as seen in the British Isles, Belgium, southern France, southern Spain and North Africa. Facies and the coral fauna argue for a European affinity of the Anatolian terrane.11";

6866 s[6863] = "EZAKI Y., LIU J. & ADACHI N. (2012).- Lower Triassic stromatolites in Luodian County, Guizhou Province, South China: evidence for the protracted devastation of the marine environments.- Geobiology 10, 1: 48-59.- FC&P 37, 108, ID=7435Topic(s): mass extinctions, reef crises, stromatolites; Systematics: ; Stratigraphy: Triassic L, Olenekian; Geography: China S, GuizhouStromatolites are one of the oldest and most intriguing organosedimentary deposits. In contrast to stromatolites of the Precambrian to Early Ordovician, Phanerozoic equivalents occurred episodically under specific conditions. A group of previously undescribed stromatolites in composition occur in the Lower Triassic (Olenekian) at the Dajiang section in the Luodian region of Guizhou Province, South China. We described the textures of these stromatolites with the aim of determining the genetic mechanisms and revealing the nature of interactions between micro-organisms and marine environments. Mesoscopic features show that the stromatolites consist of several sets of stacked slices, and that they are embedded in alternating beds of fine and coarse microsphere packstones that include aggregates of microspheres, forming grapestones and lumps. Microscopically, the stromatolites consist of spar- and dolomite-infilled microspheres (average diameter, 100 μm),

micrites, peloids, small-sized pyrite framboids (average diameter, 5.8 µm) and fenestrae. Micrite-dominant intercalations accentuate laminated textures at a mesoscopic level and are laterally continuous with micrite-rich parts in surrounding interstromatolites, indicating the simultaneous, widespread deposition of these layers. The microspheres and associated micrites were the products of in situ microbial activity, probably sulphate-reducing or anoxygenic phototrophic bacteria, which led to the formation of these unusual stromatolites. Even during a protracted period of harsh marine conditions, the micrite-rich carpets were deposited intermittently on the stromatolites and their surroundings under severely anoxic/sulphidic conditions. The presence of Early Triassic stromatolites and their subtle but important vertical variations in texture provide a record of temporal changes in marine conditions during geobiologically critical intervals.¹;

6867 s[6864] = "FAGERSTROM J.A. & WEST R.R. (2011).- Roles of clone-clone interactions in building reef frameworks: principles and examples.- *Facies* 57: 375-394.- FC;P 37, 109, ID=7436Topic(s): reef frameworks, clonal organisms, biological interactions; Systematics: ; Stratigraphy: fossil & living; Geography: ^In living and fossil reefs, rapid upward clone growth provides positive topographic relief, the skeletal framework provides rigidity. Clonal organisms have been the chief frame-builders during most of the Phanerozoic, large clone size, growth habit, growth form, and arrangement of these clones in the framework result from rapid growth rates. Dense skeletal packing enhances rigidity and results in live-live interactions between juxtaposed clones. These interactions are both heterospecific and conspecific, the former mostly involve spatial competition whereas the latter involve clone fusion, self-overgrowth, and fission. We describe three types of fusion: (a) inter-clone fusion of two or more clones, each from a separate propagule, (b) intra-clone fusion of parts of the same clone having its origin from a single propagule, it includes recovery from partial clone degradation and self-overgrowth, (c) quasifusion between a live bud/polyp/zooid and a dead part (stem, branch) of the same or a different clone, i.e., a livedead association.¹;

6868 s[6865] = "FAICHNEY I.D.E., WEBSTER J.M., CLAGUE D.A., BRAGA J.C., RENEMA W. & POTTS W.C. (2011).- The impact of the Mid-Pleistocene Transition on the composition of submerged reefs of the Maui Nui Complex, Hawaii.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 299, 3-4: 493-506.- FC;P 37, 110, ID=7437Topic(s): reefs, sea-level oscillations; Systematics: ; Stratigraphy: Pleistocene-mid, Maui Nui Complex; Geography: USA, Hawaii^The submarine reef terraces (L1-L12) of the Maui Nui Complex (MNC-the islands of Lanai, Molokai, Maui and Kahoolawe) in Hawaii provide a unique opportunity to investigate the impact of climate and sea level change on coral reef growth by examining changes in reef development through the Mid-Pleistocene Transition (900-800 ka). We present an analysis of the biological and sedimentary composition of the reefs that builds directly on recently published chronological and morphological data. We define nine distinct limestone facies and place them in a spatial and stratigraphic context within 12 reef terraces using ROV and submersible observations. These include oolitic, two coral reef, two coralline algal nodule, algal crust, hemi-pelagic mud, bioclastic and peloidal mud facies. These facies characterise environments from high energy shallow water coral reef crests to low energy non-reefal deep-water settings. Combining the bottom observations and sedimentary facies data, we report a shift in the observed sedimentary facies across the submerged reefs of the MNC from dominant shallow coral reef facies on the deep reefs to coralline algae dominated exposed outcrop morphology on the shallower reefs. We argue that this shift is a reflection of the change in period and amplitude of glacioeustatic sea level cycles (41 kyr and 60-70 m to 100

kyr and 120 m) during the Mid-Pleistocene Transition (MPT, ~800 ka), coupled with a slowing in the subsidence rate of the complex. The growth of stratigraphically thick coral reef units on the deep Pre-MPT reefs was due to the rapid subsidence of the substrate and the shorter, smaller amplitude sea level cycles allowing re-occupation and coral growth on successive cycle low-stands. Longer, larger amplitude sea level cycles after the MPT combined with greater vertical stability at this time produced conditions conducive to deep-water coralline algae growth which veneered the shallower terraces. Additionally, we compare reef development both within the MNC, and between the MNC and Hawaii. Finally we suggest that climatic forcings such as sea-surface temperature and oceanographic currents may also have influenced the distribution of coral species within the sample suite, e.g., the disappearance of the *Acropora* genus from the Maui Nui Complex in the Middle Pleistocene.¹¹;

6869 s[6866] = "GISCHLER E. & ERKOC M.M. (2013).- Facies of Devonian fore reef limestones: a quantitative study (Iberg Reef, Harz Mts., Germany).- *Palaeobiodiversity and Palaeoenvironments* 93, 1 : 91-101.- FC&P 37, 111, ID=7438Topic(s): reefs, reef facies, diagenesis; Systematics: ; Stratigraphy: Devonian M U, Iberg reef; Geography: Germany, HarzFacies in a 238-m-long core drilled through the fore reef of the Devonian (Givetian-Frasnian) Iberg Reef is largely characterised by detrital deposits. Fibrous, early marine cements are common. Stromatoporoids, corals, and crinoids are the dominant reef-building taxa. Brachiopods, cephalopods, and conodontophorids belong to the reef dwellers. Reef destroyers include gastropods and rare echinoids. Quantitative analysis of abundance data allows for delineation of five facies including detritus-rich grainstones- rudstones, cement- and detritus-rich grainstones-rudstones, cement-rich rudstones, stromatoporoid rudstones, and crinoid grainstones. Time-series analysis indicates cyclic sedimentation that might have been related to mid-late Devonian third-order sea-level variations. However, the long-term (mid-Devonian to Early Carboniferous) development of the Iberg Reef including the post-reef seamount stage was presumably controlled by subsidence.¹¹;

6870 s[6867] = "GUIDO A., HEINDEL K., BIRGEL D., ROSSO A., MASTANDREA A., SANFILIPPO R., RUSSO F. & PECKMANN J. (2013).- Pendant bioconstructions cemented by microbial carbonate in submerged marine caves (Holocene, SE Sicily).- *Palaeogeography, Palaeoclimatology, Palaeoecology* 388: 166-180.- FC&P 37, 112, ID=7439Topic(s): reefs, reef cavities, pendant bioconstructions; Systematics: ; Stratigraphy: Holocene; Geography: Italy, Sicily SEUnusual pendant bioconstructions occur within two submerged caves in the Plemmirio Marine Protected Area, south of Syracuse (SE Sicily). These cm- to dm-sized bioconstructions project downward from the cave roofs. The main framework builders are serpulids belonging to the genera *Protula*, *Semivermilia* and *Josephella*. Encrusting bryozoans, corals, hydrozoans and sponges are subordinately present, whereas bivalves and brachiopods are overall rare. These faunal associations are characteristic of the studied caves, but only in some places they form small bioconstructions that are cemented by microbial carbonates made up by autochthonous, peloidal to clotted peloidal and aphanitic micrite. The autochthonous micrite stabilizes the pendant bioconstructions, herein referred to as biostalactites. The microbial carbonate reveals high contents of bacterial lipid biomarkers. Among the most abundant compounds are mono-O-alkyl glycerol ethers (MAGES) and branched fatty acids (10-Me-C16:0; iso- and anteiso-C15:0 and -C17:0), interpreted as biomarkers of sulfate-reducing bacteria. Other compounds preserved in the autochthonous carbonates include lipids derived from marine zoo- and phytoplankton (brassicasterol, dinosterol and monounsaturated short-chain fatty acids), unspecified marine bacteria (saturated and monounsaturated short-chain fatty acids) and land plants (long-chain

fatty acids, long-chain alcohols, stigmasterol, sitosterol and campesterol). The observed lipid biomarker signatures are remarkably similar to those of post-glacial reefal microbialites, where microbialite formation in cavities of the coral framework was also mediated by sulfate-reducing bacteria. In the submerged caves of Plemmirio Marine Protected Area, serpulid colonies apparently occur preferentially where freshwater is seeping through crevices in the limestone. The consequent nitrification is believed to favor serpulid aggregation and the growth of other skeletal (i.e., bryozoans and corals) and soft-bodied organisms (i.e., sponges and ascidiae). The resultant accumulation of biomass and its taphonomy provide niches for sulfate-reducing bacteria, which induce carbonate precipitation cementing and stabilizing the biostalactites. The finding of pendant, cemented bioconstructions in the Mazzere and Granchi caves of the Plemmirio Marine Protected Area reveals that sulfate-reducing bacteria are involved in microbialite formation in various cryptic environments. The formation of such peloidal to clotted peloidal microcrystalline carbonates in cryptic ecosystems is a significant factor for the stabilization of different kinds of bioconstructions, spanning from small biostalactites to large reefs.¹¹;

6871 s[6868] = "VAN HULTEN F.F.N. (2012).- Devono-carboniferous carbonate platform systems of the Netherlands.- *Geologica Belgica* 15, 4: 284-296.- **FC&P** 37, 113, ID=7440^Topic(s): reefs, hydrocarbon traps; Systematics: ; Stratigraphy: Devonian, Carboniferous; Geography: Netherlands, deep subsurface^Large Palaeozoic carbonate build-ups, globally important for hydrocarbon exploitation, are generally not associated with the Netherlands or with the larger Southern North Sea region. The last ten years, information of new wells and seismic imaging have changed this perception. Recent seismic interpretations have indicated massive reef like carbonate platforms far below conventional petroleum exploration targets in the Netherlands. Some of the platforms are very sizeable and comparison with dimensions of Mississippian build-ups in the Caspian region or Devonian reefs of Canada can be made. New well information, released the last two years, dates the upper part of the platform as Mississippian. Based on seismic interpretation, some platforms most likely contain a Devonian core. UK petroleum exploration on the Mid North Sea High also provides new insights into Devonian carbonate build-ups. Due to the great depth of the Devono-Carboniferous strata in most areas, it is unclear if these carbonate platform reservoirs are a new petroleum exploration frontier or are situated below the economic basement. For many years the same palaeogeographic map could be used for North Western Europe for the Devonian and Mississippian time interval. The new data requires a revised palaeogeography. The following summary provides an overview.¹¹;

6872 s[6869] = "KIESSLING W. (2010).- Reef expansion during the Triassic: Spread of photosymbiosis balancing climatic cooling.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 290, 1-4: 11-19.- **FC&P** 37, 114, ID=7441^Topic(s): reefs, photosymbiosis, climate cooling; Systematics: ; Stratigraphy: Triassic; Geography: ^The PaleoReefs Database indicates that reef abundance increased profoundly during the Triassic period, from a pronounced low in the Early Triassic to a major peak in the Norian. This expansion is also evident when standardizing for sampling. Corresponding to the reef expansion is a relative increase of scleractinian corals as reef builders, whereas the contribution of hypercalcifying sponges and microbes decreased during the Triassic. The numerical expansion of corals is paralleled by a proportional increase of morphological features that are suggestive of photosymbiosis, such that the Norian reef boom might be explained by the spread of photosymbiosis in corals. The geographical expansion of reefs was far less pronounced especially concerning palaeolatitude. Late Triassic reef growth was limited to more or less the same latitudinal range as modern reefs. As

oxygen isotope data and new modeling results indicate declining temperatures and CO₂ concentrations during the Late Triassic, the lack of latitudinal expansion might be attributed to global cooling. Reef development during the Triassic can thus be explained by the evolutionary spread of photosymbiosis balancing the effects of climatic cooling.¹¹;

6873 s[6870] = "KIESSLING W. & SIMPSON C. (2011).- On the potential for ocean acidification to be a general cause of ancient reef crises.- Global Change Biology 17: 56-67.- FC&P 37, 114, ID=7442^Topic(s): ocean acidification, reef crises; Systematics: ; Stratigraphy: ; Geography: ^Anthropogenic rise in the carbon dioxide concentration in the atmosphere leads to global warming and acidification of the oceans. Ocean acidification (OA) is harmful to many organisms but especially to those that build massive skeletons of calcium carbonate, such as reef corals. Here, we test the recent suggestion that OA leads not only to declining calcification of reef corals and reduced growth rates of reefs but may also have been a trigger of ancient reef crises and mass extinctions in the sea. We analyse the fossil record of biogenic reefs and marine organisms to (1) assess the timing and intensity of ancient reef crises, (2) check which reef crises were concurrent with inferred pulses of carbon dioxide concentrations and (3) evaluate the correlation between reef crises and mass extinctions and their selectivity in terms of inferred physiological buffering. We conclude that four of five global metazoan reef crises in the last 500 Myr were probably at least partially governed by OA and rapid global warming. However, only two of the big five mass extinctions show geological evidence of OA.¹¹;

6874 s[6871] = "KÖNIGSHOF P., NESBOR H.-D. & FLICK H. (2010).- Volcanism and reef development in the Devonian: A case study from the Lahn syncline, Rheinisches Schiefergebirge (Germany).- Gondwana Research 17: 264-280.- FC&P 37, 115, ID=7443^Topic(s): reefs, submarine volcanoes; Systematics: ; Stratigraphy: Devonian, Givetian - Frasnian; Geography: Germany, Rhenish Slate Mts, Lahn syncline^New data from the Rheinisches Schiefergebirge in Germany offer insights into a complex marine basinal facies setting on the southern shelf area of the Old Red Continent. This interdisciplinary approach has the aim of providing a reconstruction of depositional and palaeoecological conditions of volcanic island induced reef growth during the Middle Devonian time. Devonian volcanic activity culminated in a Givetian-Frasnian phase producing mainly alkali-basaltic to basanitic melts. Some volcanic buildups reached sea level and gave rise to the development of reefs during times of reduced volcanic activity. Reef communities in the Lahn syncline were dominated by corals and stromatoporoids. In terms of conodont stratigraphy they began to flourish during the Middle varcus-subzone in the Givetian and lasted until the Late falsiovalis-subzone in the Frasnian. A facies model is presented for the entire area that clarifies the association of volcanism and reef development.¹¹;

6875 s[6872] = "KOSSOVAYA O., VACHARD D. & IZART A. (2013).- Climatic impact on the reef biota in the Cisuralian and Guadalupian (Permian), East European Platform.- Geological Society, London, Special Publication 376: 343-366.- FC&P 37, 116, ID=7444^Topic(s): reef biota, climate change; Systematics: ; Stratigraphy: Permian L M; Geography: Russia, East European Platform^As important components of extinct as well as modern reefs, the measurement of changes in the composition of reef biota is crucial in order to evaluate the influence of extrinsic factors on the marine communities. The dramatic abiotic changes in the eastern and northern Pangea was mirrored by a gradual transition from a photozoan to a heterozoan association and the appearance of cool- (temperate-) water carbonates both in reef and carbonate ramp environments. Analyses of large skeletal and microbiotic components as well as microfacies

succession were used for detailed explanation of reef structure, especially for lesser-known heterozoan skeletal mounds. The youngest skeletal mounds are recognized in the Roadian. The stable isotope data demonstrated a negative oxygen shift between latest Sakmarian and late early Artinskian coinciding with the end of P2 glaciation. The multiplicative nature of the event included the series of successive changes of extrinsic factors such as ice melting in interglacial episodes, eustatic ocean level rise, change of oceanic circulation and decrease of water temperature. The late Artinskian and subsequent Kungurian climatic impacts in the Northern Hemisphere were irreversible for the photozoan biota and prevented its further development. Roadian (Guadalupian) bryonoderm extended skeletal mounds developed in rather warm-water environments.¹¹;

6876 s[6873] = "LASAGNA R., ALBERTELLI G., COLANTONI P., MORRI C. & BIANCHI C.N. (2010).- Ecological stages of Maldivian reefs after the coral mass mortality of 1998.- *Facies* 56, 1: 1-11.- FC&P 37, 116, ID=7445Topic(s): coral bleaching 1998, reef recovery; Systematics: ; Stratigraphy: Recent; Geography: Indian Ocean, MaldivesThe bleaching event of 1998 caused widespread mortality on coral reefs in the Maldives. Nearly 10 years after the coral mass mortality, the state of Maldivian reefs was evaluated paying specific attention to three ecological stages, linked to the 3D structure of the coral community: young (high living hard coral cover), mature (a balance between living coral cover and loose sediment), and regressive (high amount of rubble and sand). The relative importance of three biogeomorphological descriptors (living hard corals; rubble and sand; coralline algae on rock) in the reef flat (2-7 m depth) and in the slope (7-18 m) of three reefsapes related to wave exposure was assessed. The role of wave energy in shaping ecological stages is different in the reef flat (early stages are found in low energy conditions) and in the slope (early stages are associated with high energy sites).¹¹;

6877 s[6874] = "LI Qi-Jian, WANG Yuan-Yuan, LI Yue, MA Jun-Ye, ZHANG Yuan-Yuan, DENG Xiao-Jie & CAI Xi-Yao (2012).- Embryonic patchy reefs from the Silurian of Guizhou - an example of muddy sediments constraining reef-bank growth.- *Acta Palaeontologica Sinica* 51, 1: 127-136.- FC&P 37, 117, ID=7446Topic(s): patch reefs, muddy environment; Systematics: ; Stratigraphy: Silurian; Geography: China, Guizhou¹¹;

6878 s[6875] = "MACNEIL A.J. (2011).- ”Microbial mounds prior to the Frasnian-Famennian mass extinctions, Hantang, Guilin, South China” by Shen et al., *Sedimentology* 57: 1615-1639: Discussion.- *Sedimentology* 58: 2061-2065.- FC&P 37, 117, ID=7447Topic(s): microbial mounds, polemical note; Systematics: ; Stratigraphy: Devonian U, Frasnian U; Geography: China s[discussion of a paper; see FC&P37 pp 130 & 132 for original paper and reply of the authors to MacNeil]¹¹;

6879 s[6876] = "MARTINDALE R.C., BOTTJER D.J. & CORSETTI F.A. (2012).- Platy coral patch reefs from eastern Panthalassa (Nevada, USA): unique reef construction in the Late Triassic.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 313-314: 41-58.- FC&P 37, 117, ID=7448Topic(s): reefs, platy corals; Systematics: ; Stratigraphy: Triassic U, Norian; Geography: USA, NevadaUpper Triassic (Lower Norian) reefal buildups near Mina, Nevada, represent some of the earliest scleractinian coral reefs from eastern Panthalassa. The small patch reefs (~ 20-40 m high and ~ 50-150 m wide, obvious metre-scale elevation above the surrounding sediments) are from the Luning Allochthon and grew on an inner to middle ramp or in a deep lagoon. The Mina patch reefs were constructed by several different coral ecomorpho- types (platy, tabular, domal/massive, and branching corals) interpreted to have had zooxanthellate symbionts, and record subtle coral zonation within the reefs. Based on modern coral

ecomorphotypes, platy to tabular corals at Mina grew in the lower euphotic zone (stressed by low light conditions), and the massive or domal corals inhabited shallower water (possibly above fair weather wave base) and were stressed by wave energy. Unlike most other Late Triassic reef ecosystems where phaceloid branching corals or calcareous sponges constitute the principal bioconstructors, the platy to tabular corals were the primary builders in the Mina patch reefs. The Mina reefs are also unique because cryptic and cavernous internal environments, epibionts, cryptobionts, and thick microbial crusts are rare or absent. The combination of platy coral dominance with the lack of epibionts/cryptobionts/microbial crusts suggests that the Norian reefs from Mina, Nevada represent a unique form of scleractinian reef construction from the Late Triassic.¹¹;

6880 s[6877] = "MARTINDALE R.C., KRYSZYN L., BOTTJER D.J., CORSETTI F.A., SENOWBARI-DARYAN B. & MARTINI R. (2013).- Depth transect of an Upper Triassic (Rhaetian) reef from Gosau, Austria: Microfacies and community ecology.- Palaeogeography, Palaeoclimatology, Palaeoecology 376: 1-21.- FC&P 37, 118, ID=7449^Topic(s): reefs, bathymetry, ecology; Systematics: ; Stratigraphy: Triassic U, Rhaetian; Geography: Austria, Gosau^In the Late Triassic (~235-201.3 Ma) scleractinian corals and hypercalcified sponges built large, diverse reef ecosystems, the most famous of which are the Dachstein reefs. This study presents a depth transect along an Upper Triassic (lower Rhaetian) Dachstein reef from the Gosausee margin of the Dachsteingebirge (Gosau, Austria). The Gosausee microbial-sponge-coral reef is a complete barrier reef with an almost continuous fore reef to lagoon transect preserved (a very rare occurrence for the Triassic), and thus provides a window into depth zonation of Dachstein-type reef facies and biotic succession. The Gosausee reef facies exhibit strong depth control and five classic reef facies or zones are identified: the fore reef, reef front, reef crest, back reef, and lagoon facies. Thin, rare microbial fabrics and a high abundance of fine-grained, mud-rich skeletal wackestones (transported reef debris) characterize the deepest fore reef. As the reef shallows, muddy sediments decrease in abundance and are replaced by microbial fabrics, corals, and cements. Abundant sponges, microbial crusts, and thick, marine cements typify the reef crest, whereas microbialite-coated phaceloid corals are dominant in the back reef facies. Heavily cemented oncoids or microbial-sponge bindstones are characteristic of the lagoon. Based on their compositional and biotic similarities, the Gosausee reef was likely part of the same barrier reef systems as the source reef for the Gosaukamm reef breccia (one of the classic Norian-Rhaetian Dachstein reefs). The reef zones of the Gosausee margin can be used to interpret the depth or reef zone of less well preserved reef fragments, can inform models of community ecology and niche utilization in the Late Triassic, and highlight the need for additional research into the environmental factors that controlled biotic distribution in Upper Triassic reefs.¹¹;

6881 s[6878] = "MARTINDALE R.C., ZONNEVELD J.-P. & BOTTJER D.J. (2010).- Microbial framework in Upper Triassic (Carnian) patch reefs from Williston Lake, British Columbia, Canada.- Palaeogeography, Palaeoclimatology, Palaeoecology 297, 3-4: 609-620.- FC&P 37, 119, ID=7450^Topic(s): reefs, microbial framework; Systematics: ; Stratigraphy: Triassic U, Carnian; Geography: Canada, British Columbia^The Upper Triassic (Carnian) patch reefs from Pardonet Hill, British Columbia, Canada are the only known Upper Triassic reefal buildups from the craton margin of northwestern Pangaea. These buildups occur within the lower Baldonnel Formation and are characterized by a moderately diverse assemblage of corals, spongiomorphs, crinoids, echinoderms, bivalves, gastropods, brachiopods, and microbialites. Despite the evidence that these buildups had a rigid structure (e.g. brecciation and hardgrounds) and relief above the seafloor (visible in outcrop), the exact nature and

extent of the framework has previously been undetermined. This study focuses on the microfacies within these patch reefs and highlights the importance of microbialites in the framework of these diminutive buildups (~100m³ to 500m³). * The Pardonet Hill patch reefs were mapped in outcrop to determine their structure, geometry, and the importance of large metazoan framework builders. Samples of the reefal horizons and surrounding strata were evaluated utilizing point count analyses of organisms, cements, lithic grains, and microbial textures in thin section. Quantitative analysis of the microfacies in concert with traditional descriptions of reef construction and reef classification allow a more thorough understanding of organism abundance and reef structure. * Despite the presence of corals and spongiomorphs throughout the outcrop, they very rarely form a true, intergrown framework, except at the base of Patch Reef B. Instead, cemented microbialites form a rigid framework in the core of some patch reefs. Detailed examination of the microfacies and reef construction demonstrates the importance of non-skeletal framework builders in the structural fabric of these small buildups. Pardonet Hill Patch Reef B is the first true reef with a microbial framework documented from the Upper Triassic of North America. This microbial-coral framework bears a striking similarity to some Triassic and Upper Jurassic coral-microbial reefs from the Tethys, although the depositional environment of the Pardonet Hill patch reefs is likely shallower and more energetic than the Tethyan reefs.^1";

6882 s[6879] = "MARTIN-GARIN B., LATHULIERE B. & GEISTER J. (2012).- The shifting biogeography of reef corals during the Oxfordian (Late Jurassic). A climatic control?.- Palaeogeography, Palaeoclimatology, Palaeoecology 365-366: 136-153.- FC&P 37, 120, ID=7451^Topic(s): reefs, climatic change; Systematics: ; Stratigraphy: Jurassic U, Oxfordian; Geography: ^Until recently, the Jurassic was thought to have been a period characterised by a predominantly warm and equable climate. During the Oxfordian (a time span of six million years in the Late Jurassic) the distribution of tropical coral reefs was limited to about 35°N and near to 25°S. However, in Middle Oxfordian time, coral reefs were abundant only at higher latitudes and almost entirely missing near the equator. During that time the area of maximum reef development had shifted poleward to a belt lying between 20°N and 35°N, leaving hardly any coral formations at the lower inner-tropical latitudes. After demise towards the end of Middle Oxfordian time, the low-latitude reefs recovered during the Late Oxfordian, accompanied by a southward migration of reef corals in the northern hemisphere. As suggested by stable isotope and palynological data, the faunal migration can be correlated with a significant rise in seawater temperature during the Middle Oxfordian.^1";

6883 s[6880] = "MORROW J., HARRIES P.J. & KRIVANEK J.G. (2011).- Reef recovery following the Frasnian-Famennian (Late Devonian) mass extinction: evidence from the Dugway Range, West-Central Utah.- Palaios 26: 607-622.- FC&P 37, 120, ID=7452^Topic(s): reef recovery, mass extinctions; Systematics: ; Stratigraphy: Devonian U, Frasnian / Famennian; Geography: USA, Utah^The temporally extensive late Middle through Late Devonian biotic crisis involved at least three distinct peaks of elevated extinction intensity during an interval spanning ,25 myr and resulted in the preferential elimination of certain shallow-marine, warm-water taxa, especially members of reef communities. By the end of the second peak, delimited by the Frasnian-Famennian (F-F) boundary, the stromatoporoids, members of the dominant constructor guild in mid-Paleozoic reefal ecosystems, had ceased building reefs in most parts of the world. The northern Dugway Range in west-central Utah, United States, however, represents one of the few locations globally where stromatoporoids continued reef building into the Famennian. Two measured sections there, which are constrained biostratigraphically using conodonts, indicate that the

biohermal sequences occur within the middle *Palmatolepis crepida* biozone and are early Famennian in age. The post-F-F extinction Dugway reefal faunas are depauperate and dominated by labechiid and stylostromid stromatoporoids, as is characteristic of other early Famennian reefs. In this region, evidence for reefal development is episodic, with stromatoporoid-bearing units interbedded with peloidal and coated-grain carbonate units lacking evidence of reef construction. The stromatoporoid survivors, although fairly minor constituents of Frasnian reef communities, belong to long-ranging clades and may represent so called extinction-resistant taxa that flourished, albeit locally in Laurentia, following the F-F mass extinction.¹¹;

6884 s[6881] = "MORSILLI M., BOSELLINI F.R., POMAR L., HALLOCK P., AURELL M. & PAPAZZONI C.A. (2012).- Mesophotic coral buildups in a prodelta setting (Late Eocene, southern Pyrenees, Spain): a mixed carbonate-siliciclastic system.- *Sedimentology* 59: 766-794.- FC&P 37, 121, ID=7453Topic(s): reefs, coral buildups, carbonate-siliciclastic setting; Systematics: ; Stratigraphy: Eocene, Priabonian; Geography: Spain, Pyrenees S^Lower Priabonian coral bioherms and biostromes, encased in prodelta marls/clays, occur in the Ai´nsa-Jaca piggyback basin, in the South Central Pyrenean zone. Detailed mapping of lithofacies and bounding surfaces onto photomosaics reveals the architecture of coral buildups. Coral lithosomes occur either isolated or amalgamated in larger buildups. Isolated lithosomes are 1 to 8m thick and a few hundred metres wide; clay content within coral colonies is significant. Stacked bioherms form low-relief buildups, commonly 20 to 30m thick, locally up to 50m. These bioherms are progressively younger to the west, following progradation of the deltaic complex. The lowermost skeletal-rich beds consist of bryozoan floatstone with wackestone to packstone matrix, in which planktonic foraminifera are abundant and light-related organisms absent. Basal coral biostromes, and the base of many bioherms, consist of platy-coral colonies ‘floating’ in a fine-grained matrix rich in branches of red algae. Corals with domal or massive shape, locally mixed with branching corals and phaceloid coral colonies, dominate buildup cores. These corals are surrounded by matrix and lack organic framework. The matrix consists of wackestone to packstone, locally floatstone, with conspicuous red algal and coral fragments, along with bryozoans, planktonic and benthonic foraminifera and locally sponges. Coral rudstone and skeletal packstone, with wackestone to packstone matrix, also occur as wedges abutting the buildup margins. Integrative analysis of rock textures, skeletal components, buildup anatomy and facies architecture clearly reveal that these coral buildups developed in a prodelta setting where shifting of delta lobes or rainfall cycles episodically resulted in water transparency that allowed zooxanthellate coral growth. The bathymetric position of the buildups has been constrained from the light-dependent communities and lithofacies distribution within the buildups. The process-product analysis used here reinforces the hypothesis that zooxanthellate corals thrived in mesophotic conditions at least during the Late Eocene and until the Late Miocene. Comparative analysis with some selected Upper Eocene coral buildups of the north Mediterranean area show similarities in facies, components and textures, and suggest that they also grew in relatively low light (mesophotic) and low hydrodynamic conditions.¹¹;

6885 s[6882] = "NOVAK V., SANTODOMINGO N., RÖSLER A., DI MARTINO E., BRAGA J.C., TAYLOR P.D., JOHNSON K.G. & RENEMA W. (2013).- Environmental reconstruction of a late Burdigalian (Miocene) patch reef in deltaic deposits (East Kalimantan, Indonesia).- *Palaeogeography, Palaeoclimatology, Palaeoecology* 374: 110-122.- FC&P 37, 122, ID=7454Topic(s): patch reef, siliciclastics dominated setting, growth controls; Systematics: ; Stratigraphy: Miocene, Burdigalian; Geography: Indonesia, Kalimantan^Most studies of Cenozoic shallow-water, mixed carbonate-siliciclastic

depositional systems have focused on their sedimentology. To date, however, comprehensive analyses of biotas and biofacies of Indo-West Pacific reefs that developed in mixed carbonate-siliciclastic systems are lacking. This study describes the palaeoenvironment and biodiversity of a late Burdigalian patch reef that developed in a mixed carbonate-siliciclastic depositional system. The studied exposure is located at the northeast margin of the Kutai Basin near Bontang (Indonesia), and is approximately 80m wide and 25m thick. Multi-taxon analysis of the most abundant fossil groups, including larger benthic foraminifera, corals, coralline algae, and bryozoans, aims to provide a model for environmental interpretation that will allow comparison with similar deposits of Indo-West Pacific region. Based on fossil content and lithology, five different facies types have been distinguished: foraminiferal packstone (FP), bioclastic packstone with foralgal communities (BP), thin-platy coral sheetstone (CS), platy-tabular coral platestone (CP), and shales (S). Among larger benthic foraminifera, smaller and more robust forms dominate in the FP and BP facies, while larger and flatter forms are the most abundant in the CS and CP facies. Thin-platy corals are dominant in the CS facies and gradually change into thicker platy-tabular forms in the CP facies. Assemblages and growth forms of coralline algae show no major differences between the facies types and are dominated by melobesoids and *Sporolithon*. The majority of bryozoan species are encrusting and were found only in the CS facies. Light-dependent organisms occurring in the reef indicate low light conditions typical for mesophotic reefs. The relatively small size of this reef complex and quite distinct vertical changes in the facies types, combined with the high siliciclastic content in most of the units, points to strong terrigenous input affecting water transparency as the main factor controlling the reef growth.¹¹;

6886 s[6883] = "OGAR V.V. (2012).- Carboniferous buildups in the Donets Basin (Ukraine).- *Geologica Belgica* 15, 4: 340-349.- FC&P 37, 123, ID=7455^Topic(s): biostromes, bioherms; Systematics: ; Stratigraphy: Carboniferous; Geography: Ukraine, Russia, Donets Basin^The Carboniferous (Mississippian and Pennsylvanian) of the Donets Basin contains bioherms and biostromes in several stratigraphic levels. The study of buildups of this region and their comparison with other areas allows to suggest that the composition of reef-building organisms changed during the Carboniferous. Up to the late Viséan, they were formed on a shallow water carbonate platform, whereas younger bioconstructions are restricted to distinctive limestone horizons of cyclothems. Viséan shallow-marine bioconstructions are represented by *Siphonodendron*-biostromes which are typical for the Late Viséan of many areas of the Paleothetys. In the unstable conditions of the paralic basin with frequent environmental changes bioconstructions formed during transgressive phases. The late Serpukhovian buildups were complex coral-chaetetid biostromes and bioherms. In Bashkirian times appeared chaetetid and coral-chaetetid biostromes as well as algal bioherms. In the early Moscovian coral and coral-chaetetid biostromes were the most common. During the middle Moscovian dominated bioherms probably of microbial origin, and at the end of Moscovian time chaetetid biostromes were typical. At the earliest Gzhelian time algae-sponge bioherms appeared in the Donets Basin.¹¹;

6887 s[6884] = "OLIVIER M., COLOMBIE C., PITTET B. & LATHUILIERE B. (2011).- Microbial carbonates and corals on the marginal French Jura platform (Late Oxfordian, Molinges section).- *Facies* 57, 3: 469-492.- FC&P 37, 124, ID=7456^Topic(s): microbialites, coral buildups, facies patterns; Systematics: ; Stratigraphy: Jurassic U, Oxfordian U; Geography: France, Jura Mts, Molinges^Molinges was located on an Upper Jurassic ramp system of low-energy regime that developed at the southern margin of the French Jura platform. The sedimentary succession is characterized by the transition from a mixed siliciclastic-carbonate to a carbonate

depositional setting that occurred during a long-term shallowing-upward trend. The disappearance of siliciclastics is explained by a climatic change, from humid and cold to drier and warmer conditions, previously identified in Late Oxfordian adjacent basins. The base of the section shows marl-limestone alternations of outer ramp. In its middle part, the section displays oncolitic marls, coral-microbialite beds and oncolitic limestones that deposited in a mid ramp position. Finally, the upper section part is made of oolitic limestones of inner ramp. In outer- to mid-ramp settings submitted to terrigenous inputs, the stacking pattern of deposits and facies evolution allow the identification of elementary, small-, medium-, and large-scale sequences. Small amplitudes of sea-level variations probably controlled rapid shifts of facies belts and reef window occurrences. In small-scale sequences, the coral beds developed during periods of sea-level rise. The decreasing rate of sea-level rise is marked by the downramp shift of the oncolitic limestone belt that led to the demise of coral-microbialite beds. These bioconstructions are mainly represented by thin biostromes in which corals never reach great sizes. The coral assemblages mainly include the genera *Enallhelia*, *Dimorpharea*, *Thamnasteria*, and some solitary forms (*Montlivaltia* and *Epistreptophyllum*). They suggest relatively low-mesotrophic conditions in marine waters during the edification of the primary framework. Relatively cold water temperatures and periods of more elevated nutrient contents are probably responsible of the reduced coral development and the formation of a large amount of microbialites.¹;

6888 s[6885] = "OWEN A.W., DOYLE P., HARPER D.A.T. & BRITT B.B. (2012).- Corals and other reef-builders.- *Lethaia* 45, 1: 1.- FC&P 37, 125, ID=7457Topic(s): fossils, reef-builders; Systematics: ; Stratigraphy: ; Geography: ^Reefs and reef-building organisms have been a key part of marine ecosystems throughout most of the Phanerozoic. The present issue of *Lethaia* includes several papers on corals and other reef-building organisms, which together demonstrate the value of these groups in palaeoecology and particularly in understanding the influence that environmental and other factors had on colonial organisms at a wide range of scales. [extracted from editorial note of *Lethaia* thematic volume on reef-building organisms]¹;

6889 s[6886] = "PELLEGRINI A.F.A., SOJA C.M. & MINJIN C. (2012).- Post-tectonic limitations on Early Devonian (Emsian) reef development in the Gobi-Altai region, Mongolia.- *Lethaia* 45, 1: 46-61.- FC&P 37 number, 125, ID=7458Topic(s): reefs, community succession, reef suppression; Systematics: ; Stratigraphy: Devonian L, Emsian, Chuluun Fm; Geography: Mongolia, Gobi-Altay^This study investigates a Lower Devonian (Emsian) carbonate sequence from the Chuluun Formation where it is exposed in the Gobi-Altai region of southern Mongolia. Quantification of abundance patterns across guild, morphotype and general taxonomic levels was based on stratigraphical and thin-section analyses. Comparison with other Emsian carbonate platforms allowed the factors that influenced community development in the wake of a tectonic perturbation to be determined. Our evidence reveals that potential reef-building biotas preserved in the Chuluun Formation experienced rapid colonization of a newly submerged carbonate platform following an episode of tectonic uplift and the development of a coastal alluvial fan. Although critical reef-building organisms were present, colonial corals and stromatoporoids exhibited limited vertical growth and showed no significant lateral expansion of individuals or biotic assemblages. Nor did those taxa experience significant increases in abundance, density, or size. We conclude that incomplete succession and the lack of reef development occurred most likely because of an unsuitable substrate, limited accommodation space and isolation that reduced colonization potential.¹;

6890 s[6887] = "PRUSS S.B., CLEMENTE H. & LAFLAMME M. (2012).- Early

(Series 2) Cambrian archaeocyathan reefs of southern Labrador as a locus for skeletal carbonate production.- Lethaia 45, 3: 401-410.- FC&P 37, 126, ID=7459Topic(s): archaeocyathan bioherms, ecology; Systematics: Cnidaria, Archaeocyatha; Stratigraphy: Cambrian L, Series 2; Geography: Canada, Labrador S^Archaeocyathan reefs, the first reefs produced by animals, are prominent, global features of early Cambrian successions. However, microbialites - the dominant reef components of the Proterozoic - were still abundant in most archaeocyathan reefs. Although such reefs were a locus for carbonate production, it is unclear how much carbonate was produced skeletally. This analysis of well-known early Cambrian archaeocyathan patch reefs of the Forteau Formation, southern Labrador, demonstrates that skeletal carbonate was abundantly produced in these archaeocyathan reefs, although only about half was produced by archaeocyathans. Trilobites, echinoderms and brachiopods contributed substantially to the total carbonate budget, particularly in grainstone facies flanking the reefs. Through point count analysis of samples collected from the reef core and flanking grainstones, it can be demonstrated that skeletal material was most abundant in grainstone facies, where animals such as trilobites and echinoderms contributed significantly to carbonate production. In contrast, microbial fabrics were more abundant than skeletal fabrics in the reef core, although archaeocyathan material was more abundant than other skeletal debris. Similar to modern reefs, these reefs created a variety of habitats that allowed for the proliferation of skeletal organisms living on and around the reef, thereby promoting skeletal carbonate production through ecosystem engineering.^1";

6891 s[6888] = "REUTER R.C., BRACHERT T.C., BÖCKER A. & KLAUS J.S. (2011).- An unusual Pocillopora reef from the Late Miocene of Hispaniola.- Coral Reefs 30: 307.- FC&P 37, 127, ID=7460Topic(s): coral reef; Systematics: ; Stratigraphy: Miocene U; Geography: Caribbean, Hispaniola Island^^1";

6892 s[6889] = "ROCHE R.C., PERRY C.T., JOHNSON K.G., SULTANA K., SMITHERS S.G. & THOMPSON A.A. (2011).- Mid-Holocene coral community data as baselines for understanding contemporary reef ecological states.- Palaeogeography, Palaeoclimatology, Palaeoecology 299, 1-2: 159-167.- FC&P 37, 127, ID=7461Topic(s): reef ecology, reef dynamics, temporal trends; Systematics: ; Stratigraphy: Holocene-mid; Geography: ^Land-use changes and associated deteriorations in water quality are cited as major drivers of marine ecosystem change, and can modify community abundance and diversity on coral reefs. This study uses palaeoecological data derived from a mid-Holocene age coral reef in the Wet Tropics region of Australia's Great Barrier Reef to develop a record of coral community composition and diversity, from a period that significantly pre-dates European settlement in the region. Major changes in catchment sediment and nutrient yields since European settlement have been documented, and thus the data presented provides a baseline against which to compare contemporary ecological datasets. Natural variations in coral assemblage composition, as preserved in core records, clearly occurred in this mid-Holocene reef and were associated with the reef shallowing to sea level as it accreted vertically. Comparisons between modern and mid-Holocene coral community data from equivalent water depths did not reveal marked shifts in coral community composition and diversity, suggesting the long-term persistence of a resilient coral assemblage over these time periods.^1";

6893 s[6890] = "RODRIGUEZ S., SOMERVILLE I.D., SAID I. & COZAR P. (2012).- Late Viséan coral fringing reef at Tiouinine (Morocco): implications for the role of rugose corals as building organisms in the Mississippian.- Geological Journal 47, 5: 462-476.- FC&P 37, 127, ID=7462Topic(s): coral reefs, fringing reefs, rugosans; Systematics: Cnidaria, Rugosa; Stratigraphy:

Carboniferous L, Visean U; **Geography:** Morocco, Meseta^The excellent exposure and preservation of a fringing reef located at Tiouinine, near Khenifra (Central Moroccan Meseta) is a unique case in the Mississippian which allows us to distinguish different facies belts of a classical coral framework reef. The reefal facies rest on thin basal siliciclastic rocks which rest unconformably on Ordovician sandstones. There is a complete zonation from tidal deposits of the inner shelf to reefal talus of the mid to outer shelf. Tidal deposits occur in a narrow band and are composed of sandy packstones. There is a transition to reef flat deposits composed of skeletal packstone-grainstone with a patchy distribution of coral colonies. There is also a transitional change to core reef facies that are composed of fasciculate and massive corals reinforced by dasyclad algal masses around the corals and microbial micropeloidal mudstone to wackestone coating the corals and algae. The spaces between the corals and algal masses are infilled by crinoidal and coral grainstone. The dominant building organisms are rugose corals of the genera Siphonodendron, Lithostrotion, Diphyphyllum and Tizraia, as well as contributions from the tabulate genera Michelinia, Multithecopora and Syringopora. The proximal reef talus is represented by skeletal packstone and rudstone containing highly diverse bioclasts, with corals, crinoids, foraminifers, gastropods and bivalves, as well as large fragments of reworked coral colonies and some coral colonies in growth position. These beds show erosive surfaces and amalgamation of beds. A somewhat more distal reef talus is represented by well-bedded marly limestones containing mainly crinoids and branches of fasciculate corals. The existence of a well-preserved coral reef in the late Visean contradicts the concept that rugose and tabulate corals did not build reefs after the Late Devonian extinction.^1";

6894 s[6891] = "SHEN Chuan-Chou, SIRINGAN F.P., LIN Ke, DAI Chang-Feng & GONG Shou-Yeh (2010).- Sea-level rise and coral-reef development of Northwestern Luzon since 9.9 ka.- Palaeogeography, Palaeoclimatology, Palaeoecology 292, 3-4: 465-473.- FC&P 37, 128, ID=7463^Topic(s): sea-level changes, coral-reef growth, tectonic correction; Systematics: ; Stratigraphy: Holocene; Geography: Philippines, Luzon NW^Coral reef growth and relative sea-level record for the early mid-Holocene are established from three boreholes drilled on a raised Holocene reef at Currimao, northwestern Luzon, Philippines. Age control is provided by 230Th dates of 13 corals mostly in living position. The cores cover a depth interval from 3.8m above to 26.7m below present mean sea level (MSL) and consist of four lithofacies including (1) reef facies, (2) bioclastic facies, (3) clayey facies and (4) tuffaceous facies. The ages of dated corals vary from 6588 ± 27 ya at 1.4m below MSL to 9855 ± 42 ya at 22m below MSL. Results of this study indicate that the reef started growing about 9.9 ka when the minimum sea level, relative to the western Luzon coast, was about 27m below MSL after tectonic correction. During 9.2-8.2 ka, reef accretion rate was as high as 10-13m/ky. Coral reef developed to near paleo-sea level at about 6862 ± 28 ya and emerged due to tectonic uplift. The sea-level curve of Currimao is generally similar to that of the western Australia coast but at least 8-11m higher than that of Tahiti from 10 to 8.5 ka.^1";

6895 s[6892] = "SCHINDLER E. & WEHRMANN A. (2011).- Genesis and internal architecture of the Middle to Upper Devonian Gwirat Al Hyssan reef-mound (Western Sahara).- Palaeogeography, Palaeoclimatology, Palaeoecology 304: 184-193.- FC&P 37, 129, ID=7464^Topic(s): coral-reef mounds, genesis, structures; Systematics: ; Stratigraphy: Devonian M/U, Givetian / Frasnian; Geography: Western Sahara, Tindouf Basin^On the southern flanks of the Tindouf Basin (Western Sahara) reefal complexes of various sizes were developed, mostly of Givetian age but possibly reaching into the early Frasnian. Surrounding sedimentary rocks were

dominantly sandstones, siltstones and marls. The larger reef complexes in the northeastern part of Western Sahara show three reef cycles within the Givetian and lowermost Frasnian, interrupted by marly sedimentation. Farther to the west, more isolated reef structures in open shelf settings occur often showing smaller dimensions. The present study focuses on one of these western reefal build-ups. Besides large-scale reefs dominated by stromatoporoids (NE), several smaller bioherms have been investigated, such as the Gwirat Al Hyssan reef mound near Smara. Initial reef growth was of late Givetian age as indicated by corals (e.g. *Heliolites*). The main reef builders were the corals *Alveolites*, *Thamnopora*, *Aulopora*, *Frechastraea*, *Phillipsastrea*, and, to a lesser degree, *Heliolites*, *Scoliopora*, and *Roemerolites*. Stromatoporoids also contributed, but were less frequent. Chaetetids (e.g. *Rhaphidopora*) acted as pioneer stabilizers on bare sediment surfaces. Preservation in life position was frequently observed in both groups of organisms. Crinoids are not rare, but only present as debris. In distinct areas of the reef (depressions) concentrations of brachiopods and small solitary corals occur. The reef-mound has a present elevation of 17 m and measures about 370 m in diameter. Vertical as well as horizontal zonation could be recognized in detail. The initial reef growth started on a submarine shoal of siliciclastic sediments, containing various trace fossils and sedimentary structures such as cross-bedding and wave ripples, interference ripples suggest generation in very shallow water. The initial reef-building organisms were encrusting chaetetids, followed by platy *Frechastraea* colonies, thamnoporids were also present. The overlying reef limestones consist of different corals and, to a minor degree, stromatoporoids. The latter are sparsely distributed vertically as well as horizontally, depending on their position within the reef. Growth forms are more robust (bulbous) towards higher hydrodynamic conditions at the southern reef front. Reef growth is interrupted by debris limestones of thamnoporid and crinoid bioclasts, intercalated with detrital platy stromatoporoids. Generally, the debris was not transported over long distances, as demonstrated by the presence of relatively large fragments. This "debris phase" (early Frasnian) is overlain by the last documented stage in reef development represented by medium- to thin-bedded coral-rich limestones. The onset of the carbonate production of the Gwirat Al Hyssan reef-mound is maybe related to the global transgressive Givetian - Frasnian Boundary Event.¹¹;

6896 s[6893] = "SHEN Jianwei, WEBB G.E. & QING H. (2010).- Microbial mounds prior to the Frasnian-Famennian mass extinctions, Hantang, Guilin, South China.- *Sedimentology* 57: 1615-1639.- FC;P 37, 130, ID=7465Topic(s): microbial mounds, platform margin, pre-extinction buildups; Systematics: ; Stratigraphy: Devonian U, Frasnian U; Geography: China S, GuilinLate Frasnian mounds of the Yunghsien Formation, Guilin, South China, developed as part of the Guilin platform, mostly in reef-flat and platform margin settings. Microbial mounds in platform margin settings at Hantang, about 10 km west of Guilin, contain Frasnian biota, such as *Stachyodes* and *Kuangxiastraea* and, thus, occur below the Frasnian-Famennian mass extinction boundary. Platform margin facies were dominated by microbes, algae and receptaculitids. Massive corals and stromatoporoids are not common and rarely show reef-building functions as they did in Givetian time. The margin mounds are composed of brachiopod-receptaculitid cementstone, and a variety of boundstones that contain *Rothpletzella*, *Renalcis*, thrombolite and stromatolite. Other microbial communities include *Girvanella*, *Izhella*, *Ortonella* and *wetheredella*. solenoporoid algae are abundant locally. Zebra structures and neptunian dykes are well-developed at some intervals. Pervasive early cementation played an important role in lithification of the microbial boundstones and rudstones. Frasnian reefs of many regions of the world were constructed by stromatoporoids and corals, although a shift to calcimicrobe-dominated frameworks occurred before the

Famennian. However, the exact ages of many Frasnian margin outcrops are poorly constrained owing to difficulties dating shallow carbonate facies. The Hantang mounds represent a microbe-dominated reef-building community with rare skeletal reef builders, consistent with major Late Devonian changes in reef composition, diversity and guild structure occurring before the end of the Frasnian. A similar transition occurred in the Canning Basin of western Australia, but coeval successions in North America, western Europe and the northern Urals are either less well-known or represent different bathymetric settings. The transition in reef-building style below the Frasnian-Famennian boundary is documented here in the two best exposed successions on two continents, which may have been global. Set in the larger context of Late Devonian and Mississippian microbial reef-building, the Hantang mounds help to demonstrate that controls on microbial reef communities differed from those on larger skeletal reef biota. Calcimicrobes replaced stromatoporoids as major reef builders before the Frasnian-Famennian extinction event, and increasing stromatoporoid diversity towards the end of the Famennian did not result in a resurgence of skeletal reef frameworks. Calcimicrobes dominated margin facies through the Famennian, but declined near the Devonian-Carboniferous boundary. Stromatolite and thrombolite facies, which occurred behind the mound margin at Hantang, rose to dominate Mississippian shallow-water reef frameworks with only a minor resurgence of the important Frasnian calcimicrobe *Renalcis* in the Visean when well skeletonized organisms (corals) also became volumetrically significant frame builders again. [see discussion by MacNeil 2011 and reply by Shen et al 2011]^1";

6897 s[6894] = "SHEN Jianwei, WEBB G.E. & YANG Hongqiang (2011).- Reply to the Discussion by Alex MacNeil on “Microbial mounds prior to the Frasnian-Famennian mass extinctions, Hantang, Guilin, South China” by Shen et al., *Sedimentology*, 57, 1615-1639.- *Sedimentology* 58: 2066-2071.- FC&P 37, 132, ID=7466^Topic(s): microbial mounds; Systematics: ; Stratigraphy: Devonian U, Frasnian U; Geography: China S^We welcome the discussion of Shen et al. (2010) offered by MacNeil (2011) as a chance to clarify the aims of the paper and to further general discussion of the role of microbes in reef building through the Late Devonian interval of global change. The main aim of Shen et al. (2010) was to document a rare type of late Frasnian reef margin exposed at Hantang, South China...^1";

6898 s[6895] = "STOCK C.W. & SANDBERG C.A. (2013).- Comment on "Reef recovery following the Frasnian-Famennian (Late Devonian) mass extinction: evidence from the Dugway Range, West-Central Utah" published in *Palaios* by J. R. Morrow, P. J. Harries and J. G. Krivanek.- *Subcommission on Devonian Stratigraphy Newsletter* 28: 15-24; Arlington, Texas.- FC&P 37, 132, ID=7467^Topic(s): polemical paper, reef recovery; Systematics: ; Stratigraphy: Devonian U, Famennian; Geography: USA, Utah^Morrow et al. (2011) reported the first occurrence of Famennian stromatoporoids in the United States... Despite some errors in this paper in documenting a low Famennian occurrence, we herein confirm that it is datable as Middle crepida Zone... This otherwise important contribution suffers from four circumstances: (1) The senior author, Jared Morrow, who was knowledgeable in the local geology of the Dugway Range and in the Devonian of the western United States, could not have been involved in the final assembly of the published paper... (2) Unfortunately, the authors did not include stromatoporoid generic geologic range information from three extant publications by Stearn et al. (1999), Nestor & Stock (2001), and Stock (2005)... (3) The M.S. thesis by Krivanek (2006), which bears nearly the same title as Morrow et al. (2011) and is undoubtedly its source, was not referenced. (4) Morrow et al. (2011) was not peer reviewed by any scientists with extensive knowledge of stromatoporoids, conodonts, complex local geology, or geology of the western United

States... Following are some of the many errors that detract from this important contribution... Problems arise with the presentation of Morrow et al. (2011) Figure 12, a compilation of the geologic ranges of Paleozoic stromatoporoid genera, and interpretations based on that figure. Here is presented an updated genus range chart (Fig. 1), and commentary on their interpretations... [abridged]^1";

- 6899 s[6896] = "TOSOLINI A.-M.P., WALLACE M.W. & GALLAGHER S.J. (2012).- Shallow water mud-mounds of the Early Devonian Buchan Group, East Gippsland, Australia.- *Sedimentary Geology* 281: 208-221.- FC&P 37, 133, ID=7468^Topic(s): mud-mounds, ecology, facies; Systematics: ; Stratigraphy: Devonian L, Buchan Gr; Geography: Australia SE, Gippsland^The Lower Devonian Rocky Camp Member of the Murrindal Limestone, Buchan Group of southeastern Australia consists of a series of carbonate mud-mounds and smaller lagoonal bioherms. The Rocky Camp mound is the best exposed of the mud-mounds and has many characteristics in common with waulsortian (Carboniferous) mounds. Detailed paleoecological and sedimentological studies indicate that the mound initially accumulated in the photic zone, in contrast to most of the previously recorded mud-mounds. Five facies are present in the mud-mound: a Dasycladacean wackestone Facies at the base of the mound represents a moderate energy, shallow water bank environment within the photic zone. A Crinoidal wackestone Facies was deposited in a laterally equivalent foreslope setting. A Poriferan-Crinoidal Mudstone Facies developed in a quiet, deeper water, lee-side mound setting associated with a minor relative sea-level rise. A Stromatoporoid-Coralline Packstone Facies in the upper part of the mound deposited in a high-energy, fair-weather wave base, mound-front environment. The crest of the mound is represented by a Crinoidal-Receptaculitid Packstone Facies indicative of a moderate-energy mound-top environment in the photic zone, sheltered by the mound-front stromatoporoid-coral communities. A mound flank facies is present on the southern side of the mound and this consists of high-energy crinoidal grainstones. Mud-mound deposition was terminated by a transgression that deposited dark gray, fossil-poor marl of the overlying Taravale Formation. The Rocky Camp mound appears to have originated in shallow water photic zone conditions and grew into a high-energy environment, with the mound being eventually colonized by corals and stromatoporoids. The indications of a high-energy environment during later mound growth (growth form of colonial metazoans and grainstones of the flanking facies) suggest that the micrite in the mound was autochthonous and implies the presence of an energy damping mechanism (probably biological) at the mound surface.^1";
- 6900 s[6897] = "WANG Jian-Po, LI Yue, ZHANG Yuan-Yuan, LI Qi-Jian & DENG Xiao-Jie (2011).- Early-Middle Ordovician Calathium reef mounds: history and paleontology.- *Acta Palaeontologica Sinica* 50, 1: 132-140.- FC&P 37, 134, ID=7469^Topic(s): Calathium, reef mounds; Systematics: problematica, Calathium; Stratigraphy: Ordovician L-M; Geography: ^^1";
- 6901 s[6898] = "ZAMAGNI J., KOSIR A. & MUTTI M. (2009).- The first microbialite - coral mounds in the Cenozoic (Uppermost Paleocene) from the Northern Tethys (Slovenia): Environmentally-triggered phase shifts preceding the PETM?- *Palaeogeography, Palaeoclimatology, Palaeoecology* 274, 1-2: 1-17.- FC&P 37, 134, ID=7470^Topic(s): microbialite-coral mounds; Systematics: ; Stratigraphy: Paleocene / Eocene; Geography: Tethys N, Slovenia^Upper Thanetian microbialite-coral mounds from the Adriatic Carbonate Platform (SW Slovenia) are described herein for the first time, representing an important case study of extensively microbially-cemented boundstones in the Early Paleogene. The mounds are constructed primarily by microbialites associated to small-sized coral colonies, forming metric bioconstructions in a mid-ramp setting. * Detailed macroscopic and microscopic studies show that microbes are the major framework builders, playing a prominent role in the stabilization

and growth of the mounds, with corals being the second most important component. Microbial carbonates represent up to 70% of the mounds, forming centimetric-thick crusts alternating with coral colonies. The microbial nature of the crusts is demonstrated by their growth form and internal microfabrics, showing accretionary, binding, and encrusting growth fabrics, often with gravity-defying geometries. Thin sections and polished slabs reveal a broad range of mesofabrics, with dense, structureless micrite (leiolite), laminated crusts (stromatolites), and clotted micritic masses (thrombolites). A first layer of micro-encrusters, including leiolites and thrombolites, occurs in cryptic habitats, whereas discontinuous stromatolites encrust the upper surface of corals. A second encrustation, the major mound construction phase, follows and is dominated by thrombolites, encrusting corals and other micro-encrusters. This sequence represents the basic constructional unit horizontally and vertically interlocked, in an irregular pattern, to form the mounds. The processes, which favored the deposition of these microbial carbonates, were mainly related to in situ precipitation, with minor evidences for grain agglutination and trapping processes. * Scleractinian corals comprise moderately diversified community of small (centimetric) colonial, massive, platy encrusting, and branching forms. Coral colonies are distributed uniformly throughout the mounds without developing any ecological zonation. These features indicate that coral development remained at the pioneer stage throughout the mound growth. * The spatial relationships between corals and microbialites, as well as the characteristics of microbial crusts and coral colonies, indicate a strong ecological competition between corals and microbes. A model for the evolution of the trophic structures during the mound growth is proposed, with changes in the paleoecology of the main bioconstructors triggered by frequent environmental perturbations. Turbidity and nutrient pressure, interpreted here as related to frequent recurrences of wet phases during the warm, humid climate of the Uppermost Thanetian, might have promoted temporary dominance of microbes over corals, causing rapid environmentally-driven phase shifts; in the dominant biota.¹;

- 6902 s[6899] = "ADSERA P. & CALZADA S. (2009).- Holotipos y neotipos depositados en el MGSB (2000-2008) y addenda al Cat&logo y a los Suplementos.- Scripta Musei Geologici Seminarii Barcinonensis (Ser. Pal.) 8: 1-28.- FC 37, 135, ID=7471Topic(s): catalogue of holotypes and neotypes of fossils; Systematics: ; Stratigraphy: ; Geography: ¹;
- 6903 s[6900] = "AL-ROUSAN S. & FELIS T. (2013).- Long-term variability in the stable carbon isotopic composition of Porites corals at the northern Gulf of Aqaba, Red Sea.- Palaeogeography, Palaeoclimatology, Palaeoecology 381-382: 1-14.- FC 37, 135, ID=7472Topic(s): stable C isotopes, corals, long-term record; Systematics: Cnidaria, Scleractinia, Porites; Stratigraphy: Recent; Geography: Red Sea, Gulf of Aqaba N¹To study long-term variations in surface ocean $\delta^{13}C$, we investigated coral skeletal $\delta^{13}C$ records of 20 colonies of the shallow-water coral *Porites* spp. from the northern Gulf of Aqaba and the northern Red Sea. The coral colonies represent different water depths, a wide range of different periods (Last Interglacial, Holocene, the last centuries, the last decades), and various growth rates. Records from modern and fossil corals show irregular seasonal cycles, attributed mainly to the seasonal cycle of light. No attenuation in the amplitude of the seasonal skeletal $\delta^{13}C$ cycle with depth is evident, and no significant correlation between mean annual coral $\delta^{13}C$ and water depth was observed in the modern corals. The mean coral extension rates show no clear relationship with mean skeletal $\delta^{13}C$ values. The average skeletal $\delta^{13}C$ value of modern corals was -2.74 ± 0.49 , offset from both calcite and aragonite equilibrium values by about 5.22 and 6.26 , respectively. Modern corals

reveal a clear trend toward lighter skeletal $\delta^{13}\text{C}$ values since the year 1974. At longer timescales, the skeletal $\delta^{13}\text{C}$ values from Last Interglacial and Holocene corals and from coral records extending back to the mid- to late 18th century reveal much heavier $\delta^{13}\text{C}$ values compared to values from 1960 to the present. The trend toward lighter skeletal $\delta^{13}\text{C}$ values over the last decades can be attributed to changes in the $\delta^{13}\text{C}$ of the dissolved inorganic carbon of the ambient seawater due to the addition of anthropogenically derived CO_2 ($\delta^{13}\text{C}$ Suess effect) to the atmosphere. Other factors such as the metabolic effects of corals may account for the modulation of skeletal $\delta^{13}\text{C}$ on shorter timescales. A centuries-long coral record from the northern Red Sea reveals a magnitude of decrease in skeletal $\delta^{13}\text{C}$ comparable to global trends (1960–1990), whereas a centuries-long coral record from the northern Gulf of Aqaba indicates a larger decrease over the same period, probably due to local effects. In conclusion, the combined carbon isotope records obtained from *Porites* spp. corals from the northern Red Sea seem to be suited to provide information on long-term world-wide changes in atmospheric CO_2 .¹;

6904 s[6901] = "BOHATY J., AUSICH W.I., NARDIN E., NYHUIS C. & SCHRÖDER S. (2012).- Coral-crinoid biocoenosis and resulting trace fossils from the Middle Devonian of the Eifel synclines (Rhenish Massif, Germany).- Journal of Paleontology 86, 2: 282-301.- FC&P 37, 137, ID=7473^Topic(s): biotic interactions, commensalism, corals, crinoids; Systematics: ; Stratigraphy: Devonian M, Givetian; Geography: Germany, Rhenish Slate Mts, Eifel synclines^Fossil echinoderms are a rich source of information concerning biotic interactions. In this study we analyzed the pre-mortem encrustation of the highly specialized Middle Devonian rugose corals *Aspasmophyllum crinophilum* and ?" *Adradosia*" sp. on camerate crinoid stems. *Aspasmophyllum* infested living crinoid stems by sclerenchymal outgrowth that formed a skeletal ring but ?" *Adradosia*" sp. encrusted the stems rapidly, without building a ring. These coral-crinoid biocoenoses indicate a settlement advantage for the rugose corals within densely populated communities of the lower Givetian. The corals could be interpreted as large epizoozoans that benefited as secondary tierers reaching relatively high tiering levels. It also suggests the ability for the affected crinoids to repel the coral by overgrowing the corallite with a local increased stereomic growth. Because the crinoid axial canals are not penetrated, the corals cannot be considered as predators or parasites of crinoids. Therefore, the described biocoenosis is interpreted as commensalism. The species *A. crinophilum* is redescribed, and a neotype is defined, because of the loss of the initial types. Two types of ichnofossils can be attributed to the pre-mortem encrustation of both corals. They are described as *Ostiocavichnus* n. ichnogen. and are attributed to the stereomic response of the infested hosts. These swellings are characterized as either elliptical (*Ostiocavichnus ovalis* n. ichnogen. n. ichnosp. due to the assumed reaction of *A. crinophilum*) or subcircular concavities (*O. rotundatus* n. ichnogen. n. ichnosp. due to the reaction of ?" *Adradosia* sp.").¹;

6905 s[6902] = "BOND D.P.G., ZATON M., WIGNALL P.B. & MARYNOWSKI L. (2013).- Evidence for shallow-water 'Upper Kellwasser' anoxia in the Frasnian-Famennian reefs of Alberta, Canada.- *Lethaia* 46, 3: 355-368.- FC&P 37, 138, ID=7474^Topic(s): causes of extinctions, shallow-water anoxia; Systematics: ; Stratigraphy: Devonian U, Frasnian / Famennian; Geography: Canada, Alberta^The Frasnian-Famennian extinction witnessed the global devastation of both level-bottom and reef communities in low latitudes. Marine extinctions in offshore level-bottom communities are associated with two widespread, transgressive, anoxic 'Kellwasser Events' that support an anoxia-extinction link. Typical Kellwasser facies of bituminous limestones and shales are not obviously recorded in shallow-water settings, and thus, it is unclear whether anoxia

played a role in reef losses. We evaluate geochemical, petrographic and facies evidence for oxygen restriction from an extremely shallow-water carbonate platform in Alberta. Sequence stratigraphy places the Frasnian-Famennian boundary at a sequence boundary that tops a laminated mudstone and interrupts carbonate platform deposition. Two transgressive pulses have been identified, one of which is associated with the second, major transgression of T-R cycle IId of the Devonian eustatic sea-level curve. Geochemical proxies indicate that these transgressions were accompanied by influx of dysoxic or anoxic waters. Organic carbon and U enrichment in the Frasnian, particularly just below the Frasnian-Famennian boundary, points to episodic dysoxic conditions that probably persisted into the basal Famennian and were coincidental with the global Upper Kellwasser Event. This study provides the first evidence for the smoking gun of an anoxia-driven extinction in very shallow waters, implicating this potent killer in the demise of the Devonian reefs.¹¹;

6906 s[6903] = "BOVER ARNAL T., LÖSER H., MORENO BEDMAR J.A., SALAS R. & STRASSER A. (2012).- Corals on the slope (Aptian, Maestrat Basin, Spain).- Cretaceous Research 37: 43-64.- FC&P 37, 138, ID=7475^Topic(s): non-reefal corals, marly setting; Systematics: Cnidaria, Scleractinia; Stratigraphy: Cretaceous L, Aptian; Geography: Spain E, Maestrat Basin^The term "reef" has been frequently misused when applied to fossil coral communities. Our popular but biased view of coral community structure based on the idyllic picture of recent tropical reefs has failed to recognize that, in many fossil examples, alternative states of community structure with no or limited framework may occur. The Aptian colonial scleractinians analysed in the western Maestrat Basin (eastern Spain) constitute an example of non-reef-building coral populations, which thrived in marly slope settings. These corals developed within the photic zone but below the storm wave-base. All colonies are found well-preserved in life position. They are mostly decimetres in size and mainly occur isolated giving rise to a continuous and uniform (dominated by domal and massive forms) unbound growth fabric with a low to medium degree of development (coral skeletal volume = 5-20%). Occasionally, however, colonies growing on top of each other forming small metre-sized bioherms are also present. A total of 21 species were identified. Coral diversity in each sample location varies between three and nine species. These numbers of species are comparable with those exhibited by coeval coral assemblages from other basins of the Tethys, but are comparatively low when compared with diversities exhibited by many Recent and fossil coral communities. The corals studied apparently found optimal ecological conditions for their development on the marly slopes of the western Maestrat Basin. This is primarily expressed in the unusually large dimensions (up to 2.3m in width) of some of the coral colonies when compared to other Cretaceous occurrences, and in the persistence and resilience of the coral populations. The observed coral genera and species (suborders Archeocaeniina, Faviina, Fungiina and Microsolenina) are very common in the time interval between the Barremian and the Early Albian and most of them have been reported from several other localities in the western and central Tethyan realm. In addition, the coral-bearing levels also contain the poorly known and exotic genera Agrostyliastraea and Procladocora. There are no significant differences at species level or in community structure between the Early and Late Aptian faunas investigated. Therefore, the coral communities as well as the environmental conditions controlling them would have been relatively stable during the time intervals when these corals flourished. An important palaeoecological implication is that comparatively low species diversities and the absence of reef frameworks do not necessarily imply unfavourable environmental conditions for coral growth. Furthermore, this study may serve as an example for the analysis of other level-bottom coral communities

- displaying a loose growth fabric.¹";
- 6907 s[6904] = "CHOW N. & WENDTE J. (2011).- Palaeosols and palaeokarst beneath subaerial unconformities in an Upper Devonian isolated reef complex (Judy Creek), Swan Hills Formation, west-central Alberta, Canada.- Sedimentology 58: 960-993.- FC&P 37, 140, ID=7476^Topic(s): paleosols, truncated reefs; Systematics: Devonian U, Frasnian, Swan Hills Fm; Stratigraphy: Devonian U, Frasnian, Swan Hills Fm; Geography: Canada, Alberta^The isolated Judy Creek reef complex in the Lower Frasnian Swan Hills Formation in west-central Alberta, Canada, contains two subaerial unconformities, R0.5 and R4, which formed as a consequence of relative sea-level falls of at least regional scale. Deposits beneath these unconformities have distinctive palaeosol and palaeokarst features. Comparison of the R0.5 and R4 profiles indicates that the major intrinsic controls on the development and modification of the profiles are parent-material lithology, particularly the prior degree of induration and particle size, the low topographic relief at the top of the reef interior, and limited vegetation of the exposed reef top due to unfavourable growth conditions and geographic isolation. In addition to climate, the major extrinsic controls are the extent of relative sea-level fall, and the degree of shoreface erosion during the ensuing marine transgression. This study highlights the complex interplay of mainly physical and chemical processes influencing the formation of subaerial unconformities in carbonate environments during the Devonian. [abridged]¹";
- 6908 s[6905] = "CHUKI Hongo & HAJIME Kayanne (2010).- Holocene sea-level record from corals: Reliability of paleodepth indicators at Ishigaki Island, Ryukyu Islands, Japan.- Palaeogeography, Palaeoclimatology, Palaeoecology 287, 1-4: 143-151.- FC&P 37, 140, ID=7477^Topic(s): sea-level records, corals data; Systematics: ; Stratigraphy: Holocene; Geography: Japan, Ryukyu Islands^Holocene sea-level change provides direct evidence of the melting of ice sheets; however, our understanding of the timing and course of such change is limited by a lack of information regarding environmental condition of corals. For example, Holocene sea-level curves are compiled based on water depths estimated from the occurrence of a small number of coral species, as species identification is difficult work. The error associated with this method of estimating sea level exceeds ±2.5m. In addition, there generally occurs a difference in the living-water depth of corals between high-energy reefs and low- to moderate-energy reefs. This difference in living-water depth also results in an error in reconstructed sea-level curves. In the present study, we analyzed drill core and recorded the vertical distribution of corals at the high-energy Ibaruma reef and low- to moderate-energy Fukido reef, Ishigaki Island, Ryukyu Islands, Japan. Analyses of corymbose Acropora (A. digitifera), massive Goniastrea (G. retiformis), massive Pocillopora (P. verrucosa), massive Platygyra (P. ryukyuensis), and other corals enables the accurate reconstruction of a sea-level curve because these species are distributed in a narrow range, with a weighted mean (MW) error of between ±0.5 and ±2.5m. These observation data from Ibaruma and Fukido reefs can be used to reconstruct Holocene sea-level curves based on drill core data from Ibaruma reef; however, the two reefs yield contrasting sea-level curves: the curve reconstructed based on data from Fukido reef is several meters deeper than that reconstructed based on data from Ibaruma reef. This discrepancy reflects the different energy levels of the two reefs (high-energy at Ibaruma reef and low- to moderate-energy at Fukido reef). Therefore, the accurate reconstruction of a Holocene sea-level curve requires the identification of species from drill core and observations of the vertical distribution of species at the present-day reef at a location close to the drilling site. The Holocene sea-level curve reconstructed based on drill core data from Ibaruma

reef reveals a rapid sea-level rise of approximately 7.5m kyr⁻¹ between 8000 and 6000 cal. years BP. The rate of sea-level rise decreased from 7.5 to 3.5m kyr⁻¹ between 6000 and 5000 cal. years BP. A mid-Holocene highstand occurred at around 5000 cal. years BP, at a level of approximately 3 ± 2.5m above the present mean sea level. The increase in ocean volume corresponding to this sea-level rise indicates that melting of the Antarctic ice sheet continued beyond 6000 cal. years BP, as most of the Northern Hemisphere ice sheets had melted by 6000 cal. years BP, resulting in sea levels similar to those of the present day.¹¹;

6909 s[6906] = "COPP I.A. (2011).- Late Devonian (Famennian) facies of the outer Lennard Shelf, Canning Basin, Western Australia - a preliminary study.- Geological Survey of Western Australia Record 2011, 5: 1-11; Perth.- FC 37, 141, ID=7478Topic(s): subsurface reef complex, sequence stratigraphy; Systematics: ; Stratigraphy: Devonian U, Famennian; Geography: Australia W, Canning Basin, Lennard Shelf^A robust sequence stratigraphic interpretation of the Late Devonian succession over the outer Lennard Shelf requires a thorough review and integration of petroleum and mineral core, Geological Survey of Western Australia outcrop data, Geoscience Australia subsurface interpretations, and recently acquired 3D seismic. The subsurface Late Famennian platform evolution of the outer Lennard Shelf includes features and sequence boundaries that have not been recognised in outcrop. The reef extinction event is poorly cored and equivocal on well logs, and requires high-resolution biostratigraphy and seismic correlations to be fully resolved. Where identified, it is commonly within an interval with a spiky gamma-ray well log motif that is distinct from its equivalent outcrop response. In the Blina oilfield, a locally developed ramp system briefly replaced a reef-rimmed platform during a widespread backstepping transgressive event of Famennian 2A sequence (postera-expansa conodont zone). This backstepping event has not been recognized in outcrop, but would lie within Nullara Sequence 2. A possible paleokarst zone in Janpam North 1 indicates karsting may be associated with the Famennian 2A/2B sequence boundary (expansa conodont zone), but its outcrop equivalent has similarly not been recognized. Silty carbonates of the 'inner platform' facies dominate Famennian sequence 2B (expansa-praesulcata conodont zone) of the outer Lennard Shelf, but are unlike the Nullara Limestone back-reef facies in outcrop. Paleotopography may have been an important control on the extent of inner platform development on the Lennard Shelf.¹¹;

6910 s[6907] = "COZAR P., VACHARD D., SOMERVILLE I.D., MEDINA-VAREA P., RODRIGUEZ S. & SAID I. (2014).- The Tindouf Basin, a marine refuge during the Serpukhovian (Carboniferous) mass extinctions in the northwestern Gondwana platform.- Palaeogeography, Palaeoclimatology, Palaeoecology 394: 12-28.- FC 37, 142, ID=7479Topic(s): mass extinctions, marine refuges; Systematics: ; Stratigraphy: Carboniferous, Serpukhovian, Bashkirian; Geography: Morocco - Algeria, Tindouf Basin^Several macrofaunas and microfossils of the Carboniferous Saharan basins have longer stratigraphic ranges than those of other basins in the western Palaeotethys realm, particularly in the Tindouf Basin (Morocco-Algeria). Foraminifers are particularly abundant and diverse in the Serpukhovian and basal Bashkirian compared to coeval basins, and some taxa have longer ranges than in the neighbouring Reggan and Bechar basins, although this effect is more marked compared to the western Palaeotethyan assemblages in Europe. Several rugose coral species are recorded from the early Bashkirian that previously were considered to have disappeared in the Serpukhovian. The Tindouf Basin, as one of the most western Saharan basins in North Africa, shows the greatest stratigraphic ranges of taxa which diminish eastwards. Evidence for a mass extinction event during the Serpukhovian in the Tindouf Basin has not been clearly recognized, although a possible influence of

glaciation is observed in the faunal diversity. Eustatic sea-level changes were experienced in Tindouf with the cyclic pattern of sedimentation, but warm water ocean currents from the palaeoequator were able to maintain tropical conditions on the platform. Tectonics in the area, led to emerging land masses and barriers, and created a partly isolated basin in this sector of the western part of the Sahara Platform in northern Gondwana. The combination of those factors controlled the environmental conditions in the area, allowing the persistence of the fauna for longer stratigraphic ranges than its equivalent counterparts in the western Palaeotethys.¹¹;

6911 s[6908] = "DA SILVA A.-C., DEKKERS M.J., MABILLE C. & BOULVAIN F. (2012).- Magnetic susceptibility and its relationship with paleoenvironments, diagenesis and remagnetization: examples from the Devonian carbonates of Belgium.- *Studia Geophysica et Geodaetica* 56: 677-704; Prague.- FC&P issue number, page, ID=****^Topic(s): magnetic susceptibility, carbonates, isothermal remanent magnetization (IRM) acquisition curves, diagenesis; Systematics: ; Stratigraphy: Devonian; Geography: Belgium, Villers & Tailfer sections^To better understand the origin of the initial magnetic susceptibility (χin) signal in carbonate sequences, a rock magnetic investigation that includes analysis of acquisition curves of the isothermal remanent magnetization (IRM) and hysteresis parameters, was undertaken on Devonian carbonates from the Villers and Tailfer sections, Belgium. Both sections are divided into a lower unit, dominated by biostromal and external ramp facies (biostromal unit) and an upper unit, only consisting of lagoonal facies (lagoonal unit). The variations in χin signal are mainly driven by magnetite variation, mostly pseudosingle-domain (PSD) magnetite. Clay minerals, pyrite, hematite and obviously calcite and dolomite are also present but their contribution to the χin pattern is not significant. There is a correlation between detrital proxies (Zr, Rb, Al₂O₃, TiO₂) and χin for the Tailfer biostromal unit and the entire Villers section. The pervasive presence of fine-grained magnetite is interpreted as related to remagnetization. In absence of external fluids, the iron released during the smectite to illite transition remains in situ. In those situations χin may reflect an inherited primary symsedimentary signal. In the lagoonal unit of the Tailfer section, remagnetization appears to have obscured the original detrital information prompting the need for an evaluation of the composition of the susceptibility signal for individual case studies.¹¹;

6912 s[6909] = "DASSIE E.P., LEMLEY G.M. & LINSLEY B.K. (2013).- The Suess effect in Fiji coral δ13C and its potential as a tracer of anthropogenic CO₂ uptake.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 370: 30-40.- FC&P 37, 144, ID=7481^Topic(s): coral δ13C, anthropogenic CO₂; Systematics: ; Stratigraphy: Recent; Geography: Pacific, Fiji Islands^In the context of increasing anthropogenic CO₂ emissions, determining the rate of oceanic CO₂ uptake is of high interest. Centennial-scale changes in δ13C of the surface water dissolved inorganic carbon (DIC) reservoir have been shown to be influenced by the carbon isotopic composition of atmospheric CO₂. However, the availability of direct oceanic δ13C measurements is limited and methods for reconstructing past δ13C variability of the oceanic DIC are needed. Geochemical reconstructions of DIC variability can help in understanding how the ocean has reacted to historical changes in the carbon cycle. This study explores the potential of using temporal variations in δ13C measured in five Fijian Porites corals for reconstructing oceanic δ13C variability. A centennial-scale decreasing δ13C trend is observed in these Fiji corals. Other studies have linked similar decreasing δ13C trends to anthropogenic changes in the atmospheric carbon reservoir (the "13C Suess effect"). We conclude that solar irradiance is the

factor influencing the ^{13}C cycle on a seasonal scale, however it is not responsible for the centennial-scale decreasing ^{13}C trend. In addition, variations in skeletal extension rate are not found to account for centennial-scale ^{13}C variability in these corals. Rather, we found that water depth at which a Fijian Porites colony calcifies influences both ^{13}C and extension rate mean values. The water depth- ^{13}C relationship induces a dampening effect on the centennial-scale decreasing ^{13}C trend. We removed this ^{13}C -water depth effect from the ^{13}C composite, resulting in a truer representation of ^{13}C variability of the Fiji surface water DIC (^{13}C -Fiji-DIC). The centennial-scale trend in this Fiji coral composite ^{13}C -Fiji-DIC time-series shares similarities with atmospheric ^{13}C - CO_2 , implicating the ^{13}C Suess effect as the source of the this coral ^{13}C trend. Additionally, our study finds that the ^{13}C variability between the atmosphere and the ocean in this region is not synchronous; the coral ^{13}C response is delayed by ~ 10 years. This agrees with the previously established model of isotopic disequilibrium between atmospheric ^{13}C - CO_2 and oceanic surface water DIC.¹¹;

6913 s[6910] = "DELONG K.L., FLANNERY J.A., MAUPIN C.R., POORE R.Z. & QUINN T.M. (2011).- A coral Sr/Ca calibration and replication study of two massive corals from the Gulf of Mexico.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 307, 1-4: 117-128.- **FC** 37, 145, ID=7482^Topic(s): coral skeletons, Sr/Ca ratios; Systematics: Stratigraphy: Recent; Geography: Caribbean, Gulf of Mexico^This study examined the variations in the ratio of strontium-to-calcium (Sr/Ca) for two Atlantic corals (*Montastraea faveolata* and *Siderastrea siderea*) from the Dry Tortugas National Park (centered on 24.7°N, 82.8°W) in the Gulf of Mexico. Cores from coral colonies in close proximity (10s of meters) and with the same environmental conditions (i.e., depth and water chemistry) were micro-sampled with approximately monthly resolution and the resulting Sr/Ca variations were calibrated with local sea surface temperature (SST) records. Replication tests for coral Sr/Ca variations found high agreement between intra-colony variations and between individual colonies of *S. siderea* (a single *M. faveolata* colony was sampled). Regression analysis of monthly variations in coral Sr/Ca and local SST revealed significant correlation on monthly and inter-annual timescales. Verification of the calibration on different timescales found coral Sr/Ca-SST reconstructions in *S. siderea* were more accurate than those from *M. faveolata*, especially on inter-annual timescales. Sr/Ca-SST calibration equations for the two species are significantly different (cf., $\text{Sr/Ca} = -0.042 \text{ SST} + 10.070$, *S. siderea*; $\text{Sr/Ca} = -0.027 \text{ SST} + 9.893$, *M. faveolata*). Mean linear extension for *M. faveolata* is approximately twice that of *S. siderea* (4.63, 4.31, and 8.31 mm year⁻¹, A1, F1, and B3, respectively); however, seasonal Sr/Ca variability in *M. faveolata* is less than *S. siderea* (0.323, 0.353, and 0.254 mmol mol⁻¹, A1, F1, and B3, respectively). The reduced slope for *M. faveolata* is attributed to physical sampling issues associated with complex time-skeletal structure of *M. faveolata*, i.e., a sampling effect, and not a growth effect since the faster growing *M. faveolata* has the reduced Sr/Ca variability.¹¹;

6914 s[6911] = "DELONG K.L., QUINN T.M., TAYLOR F.W., SHEN Chuan-Chou & LIN Ke (2013).- Improving coral-base paleoclimate reconstructions by replicating 350 years of coral Sr/Ca variations.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 373: 6-24.- **FC** 37, 146, ID=7483^Topic(s): coral skeleton, Sr/Ca ratio, climate indication; Systematics: Cnidaria, Scleractinia, Porites; Stratigraphy: Recent; Geography: New Caledonia^Coral-based climate reconstructions are typically based on a single record and this lack of replication leads to questions in regards to chronology accuracy and reliability of the inclusive geochemical variations to record climate viability. Here we present two

multi-century coral Sr/Ca records recovered from a *Porites lutea* colony offshore of Am^d Island, New Caledonia (22^s;28.8^s;166^w;27.9^e). The chronology was developed by cross dating the coral Sr/Ca time series and verifying the chronology with high precision absolute 230Th dating. We identify chronological discrepancies of -2.3 and +3.7 years century⁻¹ for reconstructions based on a single core with uncertainty increasing after ~250 years. We assess the impact of *Porites* skeletal architecture on coral geochemistry by characterizing centimeter-scale architectural structures with respect to sampling. Optimal sampling paths are those on the slab surface parallel to the growth direction of individual corallites along the central axis of an actively extending corallite fan. Coral Sr/Ca time series extracted from optimal skeletal structures are highly reproducible with a mean absolute difference of 0.021 mmol mol⁻¹ or 0.39 ‰ for monthly determinations. Suboptimal skeletal architecture is characterized by corallites extending through the slab surface, and the coral Sr/Ca determinations derived from suboptimal paths tend to produce a warm bias that varies between +0.04 and +2.30 ‰. Disorganized skeletal architecture is characterized by small, terminating, or unclear corallite fans that produce a cold bias of -0.11 to -2.45 ‰ in coral Sr/Ca determinations. These problematic architecture types also produce biases in coral ⁹⁴⁸;180 determinations, but to a lesser extent. We assess the impact of sampling a coral colony along paths that vary from vertical to horizontal in large and small *Porites* colonies with extension rates >6 mm year⁻¹ and we determine there is no significant difference in the coral Sr/Ca records.¹;

6915 s[6912] = "DENAYER J. & POTY E. (2010).- Facies and Palaeoecology of the upper Member of the Aisemont formation (Late Frasnian, S. Belgium): an unusual episode within the Late Frasnian crisis.- *Geologica Belgica* 13, 3: 197-212.- FC 37, 147, ID=7484Topic(s): coral limestones, ecology; Systematics: ; Stratigraphy: Devonian U, Frasnian U, Aisemont Fm; Geography: Belgium, ArdennesThe upper member of the Aisemont Formation - also known as the "second biostrome" - is the last significant Upper Frasnian carbonate unit in the northern part of the Namur-Dinant Basin (Southern Belgium). It consists of bioclastic limestone, often dolomitized, with numerous oncoids and corals. Despite its local name, the member is not a biostrome because only one thin bed is constructed by corals. It is mainly composed of limestone with numerous oncoids and a rich fauna of opportunistic organisms (bryozoans, brachiopods, gastropods, sponges, etc.) where *Phillipsastrea* and *Frechastraea* are the dominant coral taxa, associated with *Alveolites*. Ragged colonies of corals, as well as multi-encrusted bodies, show that the sea floor was soft and the rate of sedimentation was seasonal. These factors were unfavourable to common reef builders (stromatoporoids), thus the occurrence of one bed constructed by corals is a remarkable event that corresponds to the colonization of a hard ground defining the base of a falling stage systems tract. This confirms the model of the Aisemont sequence (third-order transgression-regression cycle). The abundant development of microbial structures in the member (oncoids) and in its lateral equivalent in stromatolites and thrombolites of the Petit-Mont Member (Les Valisettes Formation) in the Philippeville Anticlinorium is interpreted as an evidence of the environmental deterioration corresponding to the Late Frasnian Crisis.1";

6916 s[6913] = "DIXON O.A. (2010).- Endobiotic cornulitids in Upper Ordovician tabulate corals and stromatoporoids from Anticosti Island, Quebec.- *Journal of Paleontology* 84, 3: 518-528.- FC 37, 147, ID=7485Topic(s): endobionts, cornulitids, heliolitids; Systematics: ; Stratigraphy: Ordovician U, Ashgillian, Ellis Bay Fm; Geography: Canada, Anticosti IslandConoidal shells of *Cornulites celatus* n. sp. occur commonly within host coralla

of *Propora conferta* Milne-Edwards and Haime, 1851, sensu lato, from the Laframboise Member of the Ellis Bay Formation (Ashgill: Upper Ordovician) at Pointe Laframboise on western Anticosti Island. Examples have also been found at the same locality in the tabulate corals *Paleofavosites* sp., *Acidolites arctatus* Dixon, 1986, and *A. compactus* Dixon, 1986, and the stromatoporoid *Ecclimadictyon* sp., but not in other associated tabulate coral species. Growth interference between the shells and their hosts indicates a commensal relationship. *C. celatus* apparently had a more limited paleoenvironmental range than its principal coral host species, which occurs abundantly elsewhere on the island without its endobiotic partner. The diagnosis of *Cornulites* is emended to include forms having a two-layered shell wall with a distinctive outer layer consistently preserved as prismatic calcite. This new species extends the known stratigraphic range of cornulitids in commensal relationships with corals and stromatoporoids from the Silurian back to the Upper Ordovician. ¹;

6917 s[6914] = "ERNST A. & KÖNIGSHOF P/ (2010).- Bryozoan fauna and microfacies from a Middle Devonian reef complex (Western Sahara, Morocco).- *Abhandlungen der Senckenberg Gesellschaft für Naturforschung* 568: 1-91.- FC&P 37, 148, ID=7486^Topic(s): reef complex, bryozoans, microfacies; Systematics: Bryozoa; Stratigraphy: Devonian M; Geography: Western Sahara, Morocco^Devonian bryozoans from North Africa are scarcely known. The present study is devoted to the investigation of bryozoan fauna and microfacies of a Middle Devonian reef complex in Western Sahara, Morocco. In total, 26 bryozoan species were identified. Two genera with two species are new. The studied fauna shows relations to the Middle Devonian of Holy Cross Mountains, Poland and Rhenish Massif, Germany, as well as to the Middle Devonian of North America. ¹;

6918 s[6915] = "ERNST A. & MAY A. (2012).- Bryozoan Fauna from the Lower Devonian (Middle Lochkovian) of Sierra de Guadarrama, Spain.- *Journal of Paleontology* 86, 1: 60-80.- FC&P 37, 148, ID=7487^Topic(s): taxonomy, ecology; Systematics: Bryozoa; Stratigraphy: Devonian L, Lochkovian M; Geography: Spain, Sierra de Guadarrama^A bryozoan fauna containing 11 species is described from the Lower Devonian (middle Lochkovian) of Arroyo del Agua, Sierra de Guadarrama, Guadalajara, Spain. One genus containing one species is new: rhabdomesine cryptostome *Fehlerpora insolita* n. gen., n. sp. Six additional new species are described: three cystoporates: *Cystiramus gracilis* n. sp., *Fistuliramus guadarramaensis* n. sp., and *Fistuliphragma tenuis* n. sp.; and three trepostomes: *Eridotrypella hispanica* n. sp., *Boardmanella dubia* n. sp., and *Leptotrypella inesae* n. sp. Four further trepostome species were identified: *Leioclema incompositum* Duncan, 1939, *Minussina spinosoformis* Astrova, 1964b, *Leptotrypella verisimilis* Astrova, 1970, and *Leptotrypella vulgata* Astrova, 1964b. The association is distributed over three different sedimentary environments. The high-energy one representing accumulation of debris from bryozoan-coral-pelmatozoan thickets contains eight species dominated by erect branched forms (six species). Tabulate corals are present, especially branches which most likely belong to *Subcladopora? abnormis* (Mironova, 1974). The environment with moderate to low wave influence contains only two bryozoan species, one erect branched and one encrusting. The third setting represents bryozoan thickets in situ situated in deeper water, the most tranquil environment characterized by four bryozoan species, dominated by three erect forms. Fenestrate bryozoans are absent from the two higher energy environments, whereas the bryozoan thickets in deeper water contain rare unidentified fragments of fenestrates. The bryozoan fauna shows distinct relations to the Lower Devonian (Lochkovian) of Ukraine, one species is known from the Middle Devonian of U.S.A. ¹;

6919 s[6916] = "ERNST A., MAY A. & MARKS S. (2012).- Bryozoans, corals,

and microfacies of Lower Eifelian (Middle Devonian) limestones at Kierspe, Germany.- Facies 58: 727-758.- **FC#038;P** 37, 149, ID=7488^**Topic(s):** **bryozoans, corals, taxonomy, environments, biogeography;** **Systematics:** **Bryozoa, Cnidaria, Anthozoa;** **Stratigraphy:** **Devonian M, Eifelian L;** **Geography:** **Germany, Sauerland^The Lower Eifelian Meinerzhagener Korallenkalk (= upper Cultrijugatus Beds) at Kierspe, Sauerland, contains a rich reefal fauna. Eight bryozoan species are described, two of them are new: the cystoporate *Fistuliporella kierspensis* n. sp. and the trepostome *Leptotrypella sophiae* n. sp. The bryozoans from the Meinerzhagener Korallenkalk show distinct similarities to the Lower-Middle Devonian of Spain (Santa Lucía Formation, Emsian-Eifelian), and to the Middle Devonian (Eifelian) of Transcaucasia. The coral fauna comprises five tabulate corals and one rugose coral that document a paleobiogeographic relationship between Central and Eastern Europe and Central Asia. The associated fauna is represented by brachiopods, ostracods, and echinoderms. The studied limestones also commonly contain calcimicrobes represented by three species. The faunal and microfacial characteristics indicate a shallow marine depositional environment just above the storm wave base, with a supposed depth of 20 m, within the photic zone. The nutrient regime was at least a mesotrophic. The upper boundary of the Cultrijugatus Beds coincides with the Chotec-Event that strongly affected brachiopods, whereas corals and bryozoans were insensitive to this event.^1";**

6920 **s[6917]** = "FRANKE C. (2010).- Marine Fauna der Wiltz-Schichten (Ober-Emsium, Unter-Devon) der Mulde von Wiltz und der Daleider Mulden-Gruppe (Luxemburg, Deutschland): Teil 1.- *Ferrantia* 58: 5-63; Luxembourg.- **FC#038;P** 37, 151, ID=7489^**Topic(s):** **fossils, benthic fauna, flora, shallow-marine setting;** **Systematics:** **Devonian L, Emsian;** **Geography:** **Luxembourg, Germany, Wiltz Beds^A multitude of new finds permit a fundamental revision of the fossil contents of the Wiltz layers. For this purpose, approx. 5,700 proofs of finds were evaluated. Due to the numerous finds, the study will be published in several parts. It turns out that the species-diversity is very much greater than assumed to date. The presence of many of genera and species known from other sedimentation areas have now been proved for the Wiltz-layers in the Wiltz-basin and Daleiden Synclinal Group. This publication includes plant fossils, *Rhaphidopora* sp. cf. *Rhaphidopora lonsdalei*, *Cornulites* sp. and *Pterygotoidea* fam. et gen. et sp. indet. The trilobite *Leonaspis grafi* n. sp. is redescribed. Finally, the area examined can be defined as an extensive long-lived deposit region of a shallow water situation extending from close to and far from the coast of the Ardenno-Rhenish continental shelf with multifold faunistic correspondences to other regions in the Variscan sea during the upper Emsian.^1";**

6921 **s[6918]** = "GARBEROGLIO R.M. & LASSO D.G. (2011).- Post-mortem and symbiotic Sabellid and Serpulid-coral associations from the Lower Cretaceous of Argentina.- *Revista Brasileira de Paleontologia* 14, 3: 215-228.- **FC#038;P** 37, 151, ID=7490^**Topic(s):** **epibionts, in vivo & post mortem overgrowth, annelids, corals;** **Systematics:** **Annelida, Cnidaria, Anthozoa;** **Stratigraphy:** **Cretaceous L, Hauterivian;** **Geography:** **Argentina, Neuquen Basin^One morphotype of sabellids (*Sabellida*, *Sabellidae*) and two of serpulids (*Sabellida*, *Serpulidae*), found as encrusters on scleractinian ramose corals of the species *Stereocaenia triboleti* (Koby) and *Columastrea antiqua* Gerth, from the Agrio Formation (early Hauterivian) from Neuquén Basin, Argentina, are described. The identified morphotypes, *Glomerula lombricus* (Defrance), *Mucroserpula mucroserpula* Regenhardt and *Propomatoceros sulcicarinatus* Ware, have been previously recorded from the Early Cretaceous of the northern Tethys. Two different types of sabellid and serpulid-coral associations have been recognized. The first and more abundant association corresponds to**

post-mortem encrustation on corals branches. The second one corresponds to a symbiotic association between the serpulid *P. sulcarinatus* and both species of corals. The serpulid tubes are recorded parallel to the coral branches reaching the upper tip of them and they were bioimmured within the coral as they grew upwards. The studied symbiotic relationship between serpulids and corals may be regarded as a mutualism as both members probably benefited each other. This type of association has similarities with recent cases of symbiosis between serpulids and corals, but had no fossil record until now.¹";

6922 s[6919] = "GATT M. & DE ANGELI A. (2010).- A new coral-associated decapod assemblage from the Upper Miocene (Messinian) Upper Coralline Limestone of Malta (Central Mediterranean).- *Palaeontology* 53, 6: 1315-1348.- FC&P 37, 152, ID=7491^Topic(s): coral associated decapods; Systematics: Arthropoda, Decapoda; Stratigraphy: Miocene, Messinian; Geography: Mediterranean, Malta^A rich coral-associated decapod assemblage is recorded from the 'Depiru Beds' of the upper part of the Upper Coralline Limestone (Messinian, Upper Miocene), from the island of Malta. Nineteen species within 17 genera have been discovered, where 14 genera are new for Malta. Four new species are described, namely *Micippa annamariae* sp. nov., *Pilumnus scaber* sp. nov., *Panopeus muelleri* sp. nov. and *Herbstia melitense* sp. nov. *Herbstia melitense* sp. nov. constitutes the first record of the genus from the fossil record in the Mediterranean region. This discovery more than doubles the number of known fossil decapod species from Malta. The fossil bivalve *Jouannetia* (J.) *semicaudata* Des Moulins, 1830 and the extant decapod *Maja goetziana* D'oliveira, 1888, are also recorded for the first time from Malta. Other Neogene coral-associated decapod assemblages are investigated and correlated with the new assemblage from Malta. The migration of taxa between the Mediterranean region and the Paratethys, particularly during the Lower Badenian (Langhian), is evidenced by the strong affinity of the Maltese decapod assemblage with that of the Middle Miocene Badenian assemblages from Hungary, Poland and Ukraine. Upper Miocene, Messinian assemblages from Spain, Algeria and Morocco are also similar to that from Malta.¹";

6923 s[6920] = "GIRY C., FELIS T., KÖLLING M. & SCHEFFERS S. (2010).- Geochemistry and skeletal structure of *Diploria strigosa*, implications for coral-based climate reconstruction.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 298, 3-4: 378-387.- FC&P 37, 153, ID=7492^Topic(s): coral skeleton, geochemistry, skeletal structure; Systematics: Cnidaria, Scleractinia; Stratigraphy: Recent; Geography: Atlantic, tropical^Geochemical tracers incorporated into the skeleton of reef-building corals are ideal proxies for reconstructing environmental parameters of ambient seawater such as temperature and salinity at subseasonal resolution. However, validation concerns of these environmental proxies due to the complex skeleton of some tropical Atlantic corals have hindered such coral-based environmental reconstructions in this region compared to the tropical Pacific. In order to identify complications associated with the complex skeletal architecture of the massive brain coral *Diploria strigosa*, we performed microsampling experiments along and across individual skeletal elements. We demonstrate that the mesoscale heterogeneity of Sr/Ca, δ180 and δ13C is a systematic feature of *D. strigosa* and is linked to different vital effects between skeletal elements. The thecal wall is significantly depleted in Sr, 180 and 13C compared to the adjacent septa and columella and differences between apparent temperature signatures of several degrees are greater for Sr/Ca suggesting that this temperature proxy is more sensitive to skeletal mixing than δ180. Parallel subseasonal microsampling experiments performed along individual skeletal elements of a single corallite of a *D. strigosa* coral which grew at a rate of 0.65 cm/year allow for investigating potential biases associated with its complex skeletal

mesoarchitecture. Highest correlation between Sr/Ca and $\delta^{18}O$ from skeletal material retrieved from the centre of the thecal wall suggests that microdrilling the theca provides the best environmental signal compared to adjacent microsampling profiles. Moreover, based on monthly-mean climatology, the temperature dependence of Sr/Ca for this profile is comparable to previous calibrations published from faster growing *D. strigosa*. Based on these results, we conclude that accurate microsampling along the centre of the thecal wall of *D. strigosa* is a prerequisite for generating robust climate reconstructions from its skeleton.¹¹;

6924 s[6921] = "GISCHLER E. (2010).- Indo-Pacific and Atlantic spurs and grooves revisited: the possible effects of different Holocene sea-level history, exposure, and reef accretion rate in the shallow fore reef.- *Facies* 56, 2: 173-177.- **FC&P** 37, 154, ID=7493**^****Topic(s)**: **reef morphology, spurs and grooves**; **Systematics**: ; **Stratigraphy**: **Holocene**; **Geography**: **Shallow fore-reef areas worldwide are usually characterized by spurs and grooves. A comparison of examples from the three world oceans suggests that Indo-Pacific spurs and grooves are shaped predominantly by erosion, whereas western Atlantic spur and groove systems are largely a product of constructive processes. I propose that this difference is caused by regional differences in Holocene sea-level change, which controlled exposure to waves and currents, and reef-accretion rates. The transgressive-regressive sea-level curve in the Indo-Pacific realm, i.e., the Mid-to-Late Holocene sea-level fall in these areas has maintained high-energy conditions in the shallow fore reef. Higher exposure to waves and currents favors erosion and leads to a dominance of crustose coralline algae that have relatively slow growth rates. In the western Atlantic, the transgressive Holocene sea level has caused Mid-to-Late Holocene deepening and has maintained accommodation space for reef accretion. Fast-growing acroporid corals thrive under lower exposure and are more common than coralline algae. The fossil record of the spur and groove system is rather poor, which is probably a consequence of the need of excellent, three-dimensional outcrops for identification.**¹¹;

6925 s[6922] = "GRETZ M., LATHUILLIERE B., MARTINI R. & BARTOLINI A. (2013).- Hettangian corals of the Isle of Skye (Scotland): An opportunity to better understand the palaeoenvironmental conditions during the aftermath of the Triassic-Jurassic boundary crisis.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 376: 132-148.- **FC&P** 37, 154, ID=7494**^****Topic(s)**: **corals, stable isotopes, paleoenvironment**; **Systematics**: **Cnidaria, Scleractinia**; **Stratigraphy**: **Jurassic L, Hettangian**; **Geography**: **Scotland, Isle of Skye****^****At Ob Lusa (Isle of Skye, Scotland), six distinct coral beds were observed in a modern outcrop where a Hettangian succession is exposed. The coral associations are monogenic, belonging to *Lepidophyllia*, a massive cerioid genus. The lowest bed has relatively well-developed colonies that form small bioconstructions, whereas the other beds have small and dispersed colonies that are completely drowned in the matrix. Their morphology and size can vary, but the general growth fabric is dominated by platy colonies. This type of growth fabric is defined as a platestone. The most surprising characteristic of these specimens, especially for the platy corals, is their growth pattern; many samples do not exhibit the classical growth polarity because they are bifacial. Geochemical analyses ($\delta^{18}O$, $\delta^{13}C$) were conducted on oyster shells that were associated with the corals. The results indicate that the mean palaeotemperature was approximately 22 \pm 176;C. Sedimentological analysis revealed shallow settings where the hydrodynamic energy and siliciclastic inputs fluctuated. The general faunal assemblage of the outcrop had low diversity and was mainly composed of allochthonous bioclasts. The corals at Ob Lusa clearly did not live under ideal environmental conditions for the development of corals.**¹¹;

- 6926 s[6923] = "GRIFFITHS N., MILLER W., JOHNSON K.G. & AGUILERA O.A. (2013).- Evaluation of the effect of diagenetic cements on element / Ca ratios in aragonitic Early Miocene (~16 Ma) Caribbean corals: Implications for deep-time palaeo-environmental reconstructions.- Palaeogeography, Palaeoclimatology, Palaeoecology 369: 185-200.- **FC&P** 37, 155, ID=7495^**Topic(s):** corals, skeletal geochemistry, temperature proxies; **Systematics:** Cnidaria, Scleractinia; **Stratigraphy:** Miocene, Recent; **Geography:** Early Miocene corals (*Siderastrea conferta* and *Montastraea limbata*) from the Paraguana Peninsula, Venezuela and a modern coral (*S. radians*) from Bermuda were examined in order to quantitatively assess the effect of skeletal preservation on element / Ca proxies used for palaeo-environmental reconstructions. The biostratigraphic age (Burdigalian) of the corals was confirmed via Sr isotope stratigraphy to 16.5 ± 0.4 Ma. Light and scanning electron microscopy revealed the presence of aragonite and calcite cements in both fossil and modern corals, but brucite cements were found only in the modern coral. Cement distribution is very heterogeneous, resulting in zones of excellent preservation juxtaposed with less well preserved regions in both modern and fossil coral. Oil-filled pore spaces were noted in the fossil specimens. Targeted LA-ICPMS depth profile analyses showed significant differences in Sr/Ca, Mg/Ca, B/Ca, Ba/Ca and U/Ca in aragonite and calcite cements compared to primary skeletal aragonite. Increased Sr/Ca and decreased Mg/Ca ratios were found in aragonite cements compared to skeletal aragonite, whereas in calcite cements these trends were reversed. B/Ca ratios were lower in both aragonite and calcite cements compared to primary aragonite. Estimates of the effect of 1% contamination by aragonite cements on coral Sr/Ca, Mg/Ca, B/Ca and U/Ca palaeo-sea-surface-temperature reconstructions for the fossil corals produced anomalies of -1.2±0.3, -0.2±0.1, +0.3±0.1 and -0.1±0.1 respectively. Similar percentage calcite cement contamination produced temperature anomalies of +1.7±0.2, +2.7±0.3, +0.3±0.1 and -0.1±0.1. Because of both highly elevated and depleted Ba/Ca signatures in aragonite and calcite cements respectively, care has to be exercised when reconstructing past flood or upwelling events from fossil corals. When using targeted spatially-resolved analysis, well-preserved early Miocene corals may overall yield reliable deep-time palaeo-proxy information in much the same way as commonly utilised Holocene/Pleistocene corals."
- 6927 s[6924] = "HARRIES P.J. & SORAUF J.E. (2010).- Epi- and endobionts on and in free-living colonies of *Manicina areolata* (Cnidaria, Scleractinia): a comparison of two Pleistocene communities from southern Florida.- *Palaios* 25, 6: 400-414.- **FC&P** 37, 156, ID=7496^**Topic(s):** epi- and endobionts of corals; **Systematics:** ; **Stratigraphy:** Pleistocene; **Geography:** USA, Florida SE^The epi- and endobiont communities (EEBCs) found within an exquisitely preserved collection of 48 *Manicina areolata* specimens from two Pleistocene localities in southeastern Florida, United States, were examined in detail. The EEBCs include a broad taxonomic spectrum of encrusting and boring organisms, but differ markedly between the two localities. Specimens from the Canal locality generally show an equitable distribution of EEBCs, with serpulids, spirorbids, and/or chamids numerically dominant and chamids dominating in average area, whereas the Palm Beach Aggregates (PBA) coralla have a much less even distribution of EEBC constituents and lithophagids numerically and spatially dominate virtually all bases. Given the relative proximity of the two localities and inferred distance from the Pleistocene shoreline, it seems unlikely that any of the EEBC components would have been substantially less available in one locality as compared to the other. Therefore, we favor an explanation focused on sedimentologic differences between the two areas. The Canal environment was shelly, carbonate mud, in contrast to the shelly, coarser-grained siliciclastic sediment present at PBA. The substrate at the Canal site was relatively

soft, which resulted in corallum basal morphology commencing with a prominent apical cone, whereas the substrate at the PBA site was firmer and this support produced much flatter bases as well as allowing for a substantially greater number of lithophagid bivalves to bore into the coralla.¹";

6928 s[6925] = "HEINDEL K., BIRGEL D., PECKMANN J., KUHNERT H. & WESTPHAL H. (2010).- Formation of deglacial microbialites in coral reefs off Tahiti (IODP 310) involving sulfate-reducing bacteria.- *Palaios* 25, 10: 618-635.- **FC** 37, 157, ID=7497^Topic(s): coral reefs, microbialites, sulfate-reducing bacteria; Systematics: ; Stratigraphy: Holocene; Geography: Pacific, Tahiti^During IODP Expedition 310 (Tahiti Sea Level), drowned Pleistocene-Holocene barrier-reef terraces were drilled on the slope of the volcanic island. The deglacial reef succession typically consists of a coral framework encrusted by coralline algae and later by microbialites; the latter make up ≤80% of the rock volume. Lipid biomarkers were analyzed in order to identify organisms involved in reef-microbialite formation at Tahiti, as the genesis of deglacial microbialites and the conditions favoring their formation are not fully understood. Sterols plus saturated and monounsaturated short-chain fatty acids predominantly derived from both marine primary producers (algae) and bacteria comprise 44 wt% of all lipids on average, whereas long-chain fatty acids and long-chain alcohols derived from higher land plants represent an average of only 24 wt%. Bacterially derived mono-O-alkyl glycerol ethers (MAGES) and branched fatty acids (10-Me-C16:0; iso- and anteiso-C15:0 and -C17:0) are exceptionally abundant in the microbial carbonates (average, 19 wt%) and represent biomarkers of intermediate-to-high specificity for sulfate-reducing bacteria. Both are relatively enriched in ¹³C compared to eukaryotic lipids. No lipid biomarkers indicative of cyanobacteria were preserved in the microbialites. The abundances of Al, Si, Fe, Mn, Ba, pyroxene, plagioclase, and magnetite reflect strong terrigenous influx with Tahitian basalt as the major source. Chemical weathering of the basalt most likely elevated nutrient levels in the reefs and this fertilization led to an increase in primary production and organic matter formation, boosting heterotrophic sulfate reduction. Based on the observed biomarker patterns, sulfate-reducing bacteria were apparently involved in the formation of microbialites in the coral reefs off Tahiti during the last deglaciation.¹";

6929 s[6926] = "HETZINGER S., PFEIFFER M., DULLO W.-C., GARBE-SCHÖNBERG D. & HALFAR J. (2010).- Rapid 20th century warming in the Caribbean and impact of remote forcing on climate in the northern tropical Atlantic as recorded in a Guadeloupe coral.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 296, 1-2: 111-124.- **FC** 37, 158, ID=7498^Topic(s): coral skeleton, δ180 and Sr/Ca time series, temperature proxies; Systematics: Cnidaria, Scleractinia; Stratigraphy: Recent; Geography: Caribbean, Guadeloupe^We have generated 104-year long (1895-1999) monthly δ180 and Sr/Ca time series from a fast-growing *Diploria strigosa* coral core drilled off Guadeloupe Island, Lesser Antilles. Coral Sr/Ca reliably records interannual to decadal surface air temperature (SAT) variations in the region and shows a pronounced warming of approximately 1.5°C since 1950, with the strongest warming (1.2°C) occurring since 1975. This warming is also evident in SAT measured at Guadeloupe, which ends in 1951. Thus, our Sr/Ca series extends the air temperature record by 56 years. We find that the past few decades are the warmest years over the entire period of record. The accelerated warming since 1950 is accompanied by a pronounced decrease in regional precipitation. This dampens the warming signal indicated by coral δ180, which is too low (only 0.7-0.8°C since 1951). Consistently, δ180SW estimated from the coral proxies also shows a strong decrease since 1950. Our data suggest an inverse relationship

between SAT and precipitation (i.e. warmer and drier) for the latter half of the 20th century with the strongest trends since the mid-1970s. This is consistent with recent observational and model data, which report that while over the tropical oceans rainfall has increased due to an increase in sea surface temperatures, precipitation over land regions is reduced. A continuation of this warming and drying trend over Caribbean land regions would have severe societal consequences, especially in the context of anthropogenic warming. * The El Nino Southern-Oscillation (ENSO) and the North Atlantic Oscillation (NAO) are the two major climate modes affecting large-scale SST variability in the northern tropical Atlantic. Both Sr/Ca and $\delta^{18}O$ show a close relationship to ENSO and the NAO. A quantitative comparison between extremes in mean March-May coral $\delta^{18}O$ and the Nino3 and NAO indices imply that climate variability in the northern tropical Atlantic is mainly forced by tropical Pacific and North Atlantic variability. Spectral analysis suggests that the relative importance of ENSO and the NAO is frequency dependent, with ENSO dominating at interannual, and the NAO dominating at interdecadal time scales.¹¹;

6930 s[6927] = "JAKUBOWICZ M., BERKOWSKI B. & BELKA Z. (2013).- Devonian rugose coral *Amplexus*; and its relation to submarine fluid seepage.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 386: 180-193.- **FC** 37, 159, ID=7499^Topic(s): corals, submarine seepage; Systematics: Cnidaria, Rugosa, *Amplexus*; Stratigraphy: Devonian; Geography: Morocco, Anti-Atlas^The rugose coral *Amplexus*; occurs frequently in the sedimentary cover of the Devonian submarine volcanic intrusion in the eastern Anti-Atlas, southern Morocco. This study elucidates the palaeoecology of *Amplexus*, which forms very rich and mostly monospecific, spot assemblages within the Lower and Middle Devonian carbonates. Geological and isotopic evidences show that these associations developed at hydrothermal vents and at a cold seep site. The assemblages are always spatially associated with micritic carbonate bodies, occurring within bedded, hemipelagic deposits. The *Amplexus* corals preferred locations in the close proximity of submarine hydrothermal fluid seepage, but they generally avoided places with the most elevated temperatures. The corals colonised also a hydrocarbon seep, probably only in its terminal phase of development, when the fluid flow was still at least periodically active. This was only possible as a result of the corals following a calice-in-calice growth, developed due to the environmental toxicity, which facilitated selective survival of larvae that settled in the shelter of empty calices. The *Amplexus* corals appear to have constituted ecological opportunists, thriving in the nutrient-rich, venting- and seepage-affected areas that were hostile for other benthic organisms. It can be suspected that the unusual, extremely simplified morphology of *Amplexus* made it particularly well adapted to living in environments typified by harsh and unstable conditions.¹¹;

6931 s[6928] = "JAKUBOWICZ M., BERKOWSKI B. & BELKA Z. (2013).- Cryptic coral-crinoid *hanging gardens*; from the Middle Devonian of southern Morocco.- *Geology*: online since 13 December 2013 as doi 10.1130/G35217.1- **FC** 37, 159, ID=7500^Topic(s): mud-mounds cavities, cryptic organisms, corals, crinoids; Systematics: ; Stratigraphy: Devonian M; Geography: Morocco, Hamar Laghdad^An unusual and exceptionally well preserved cryptic community of cnidarians, crinoids, sponges, and microbes developed in a submarine cavity of Middle Devonian age in the Hamar Laghdad area (Morocco). The biota encrusted the cavity roof and grew predominantly in an upside-down position, forming spectacular *hanging gardens*. The investigated assemblage differs strikingly from both its Paleozoic and modern analogues; it constitutes one of a very few known examples of fossil cryptic assemblages developed in relatively deep water settings, and is the first report of

a cryptic paleoecosystem dominated by rugose corals. The results support the view that during the middle Paleozoic there was no distinct polarization between open-surface and cryptic faunas in deep-water environments, but keen competition for space already existed in Devonian cryptic assemblages. The regional species pool seems to have been the main determinant of the ecological succession and structure of this cryptic community.^1";

6932 s[6929] = "JOHNSON M.E., WEBB G.E., BAARLI B.G. & WALSH D.R. (2013).- Upper Devonian shoal-water delta integrated with cyclic back-reef facies off the Mowanbini Archipelago (Canning Basin), Western Australia.- Facies 59, 4: 991-1009.- FC&P 37, 160, ID=7501^Topic(s): reef - siliciclastics interaction; Systematics: ; Stratigraphy: Devonian U, Frasnian; Geography: Australia W, Canning Basin^The Oscar Range in Western Australia's Canning Basin exhibits folded Proterozoic, quartzite, quartzite conglomerate, phyllite, and metavolcanic rocks that survive with positive relief. Facies of the Pillara Limestone were deposited around this relief during Late Devonian (Frasnian) time. A segment of the Great Devonian Barrier Reef with a linear reef margin strikes parallel to the outer paleoislands in the Mowanbini Archipelago. A more sheltered strait separates inner islands from the cratonic Devonian mainland on the Kimberley Block. Large fandeltas emanated from the craton, but locally small shoalwater deltas prograded from a drainage basin on one of the larger paleoislands in the Oscar Range. That island is expressed today by local topography exhumed from beneath a cover of former Devonian, Carboniferous, and Permian strata. The Devonian shoal-water delta rests unconformably on tilted Proterozoic phyllite and incorporates abundant phyllitic debris accumulated under fluvial to shoreface conditions. Some quartzite pebbles and hydrothermal quartz were derived from a source more than a kilometer away. Rare gastropods and stromatoporoid fragments in the deltaic sediments were abraded from the adjacent reef margin. The clast-supported conglomerate in the exposed shoal-water delta is mapped over a distance of 130 m to within 15 m of the inner reef margin, exposed nearby on steeply dipping phyllite. A cyclic succession of mixed clastic and carbonate parasequences, 31.5 m in thickness, follows above a disconformity surface on the delta-top facies. The overall succession represents a minor fall in relative sea level associated with erosion of delta facies and a major transgression characterized by a retrograde parasequence stacking pattern. The succession shifts through siliciclastic-rich shoreface to intertidal distal back-reef facies, ending with a subtidal, siliciclastic-poor proximal back-reef facies. The study demonstrates how variability in sedimentary cycles is influenced by local paleogeographic constraints in an island system dominated by quartzite highlands and phyllite lowlands.^1";

6933 s[6930] = "KALVODA J., BABEK O., ARETZ M., COSSEY P., DEVUYST F.X., HERGREAVES S. & NUDDS J. (2012).- High resolution biostratigraphy of the Tournaisian-Visean boundary interval in the North Staffordshire Basin and correlation with the South Wales-Mendip Shelf.- Bulletin of Geosciences 87, 3: 497-541.- FC&P 37, 161, ID=7502^Topic(s): biostratigraphy, sequence stratigraphy; Systematics: ; Stratigraphy: Carboniferous L, Tournaisian / Visean; Geography: England, N Staffordshire Basin^A study of three carbonate sections in the North Staffordshire Basin and two in the South Wales-Mendip Shelf yielded so far the richest foraminiferal associations at the Tournaisian-Visean boundary in western Europe enabling a very good correlation with the stratotype area in South China. The biostratigraphic study was refined by sedimentological and gamma-spectrometrical data in order to define and calibrate the high resolution biostratigraphy across the boundary interval. The study illustrates the cryptic entry of the stratigraphically important species of the Chadian index genus Eoparastaffella which is abundant in photozoan facies. Across the Tournaisian-Visean boundary, changes in

the character of the foraminiferal associations reflect the gradual change from heterozoan dominated late Tournaisian ramps to Visean photozoan dominated platforms. The combined application of biostratigraphic and sedimentological methods and gamma ray manifestation of the mid Avonian sequence boundaries have proved useful in the identification of the Tournaisian-Visean boundary in Carboniferous successions on either side of the Wales-Brabant Massif and has widespread applicability for successions of a similar age across Western Europe.¹";

6934 s[6931] = "KALVODA J., NUDDS J., BABEK O. & HOWELLS C. (2013).- Late Chadian-Early Arundian high-resolution biostratigraphy in the Ogmores-by-Sea section (South Wales-Mendip shelf) and the mid-Avonian unconformity.- Journal of the Geological Society, London <http://dx.doi.org/10.1144/jgs2013-023>- FC&P 37, 162, ID=7503^Topic(s): high-resolution biostratigraphy; Systematics: Foraminifera; Stratigraphy: Carboniferous, Chadian-Arundian; Geography: United Kingdom, South Wales - Mendip^The study of the foraminiferal fauna in the Ogmores section in south Wales produced a detailed late Chadian-early Arundian biostratigraphy and sequence stratigraphy with a higher resolution than in the Arundian stratotype in Hobbyhorse Bay. The earliest Visean (late Chadian) pedogenic horizon close to the Gully Oolite and Caswell Bay Mudstone boundary (MFZ9) corresponds to the mid-Avonian unconformity. The entry of primitive archaedicids of MFZ10 within the Caswell Bay Mudstone is followed by more advanced archaedicids of MFZ11 at the base of the High Tor Limestone. The mid-Avonian unconformity at the Chadian-Arundian boundary is not confined to the London-Brabant Massif, but is also present in central Europe, the East European Platform, the Urals, west Siberia and probably also in Kuzbass and North America. The global extent of the the mid-Avonian unconformity suggests that it is a consequence of early to mid-Visean glacioeustasy.¹";

6935 s[6932] = "KIDO E., SUTTNER T.J., PONDRELLI M., CORRADINI C., CORRIGA M.G., SIMONETTO L. & BERKYOVA S. (2011).- Correlation of Mid-Devonian coral deposits of the Carnic Alps across the Austro-Italian border.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts. Kölner Forum für Geologie und Paläontologie 19: 73-76.- FC&P 37, 162, ID=7504^Topic(s): coral deposits, stratigraphy, ecology; Systematics: ; Stratigraphy: Devonian M; Geography: Austria, Italy, Carnic Alps^Mid-Devonian strata of the Carnic Alps are distinguished into ten different units representing a neritic to pelagic succession within an area of approx. 240 km². Here we mainly concern Middle Devonian coral rich deposits of the neritic succession assigned to the Spinotti and Kellergrat Reef limestones and distal slope sediments of the Hoher Trieb Formation... [abridged]¹";

6936 s[6933] = "KIESSLING W., PANDEY D.K., SCHEMM-GREGORY M., MEWIS H. & ABERHAN M. (2011).- Marine benthic invertebrates from the Upper Jurassic of northern Ethiopia and their biogeographic affinities.- Journal of African Earth Sciences 59, 2-3: 195-214.- FC&P 37, 163, ID=7505^Topic(s): fossil corals, brachiopods, bivalves, taxonomy; Systematics: ; Stratigraphy: Jurassic U, Oxfordian; Geography: Ethiopia N, Mekele Outlier^We present the first modern description of corals, brachiopods and bivalves from the Antalo Limestone in the Mekele Outlier of northern Ethiopia. This fauna is largely of Oxfordian age and lived in shallow subtidal environments and in small patch reefs. In combining our new data with fossil occurrence data from the Paleobiology Database, we conducted multidimensional scaling analyses to assess biogeographic patterns and the delineation of the Ethiopian Province for the Callovian to Kimmeridgian stages. Results suggest that an Ethiopian Province is indeed evident for our focal groups, but this is more confined than traditionally assumed. The so defined Ethiopian Province includes

- Tunisia, the Levant, Arabia and much of East Africa, but excludes Tanzania and India. The special status of India and Tanzania is perhaps due to latitudinal gradients in faunal composition.¹";
- 6937 s[6934] = "KILBOURNE K.H., MOYER R.P., QUINN T.M. & GROTTOLI A.G. (2011).- Testing coral-based tropical cyclone reconstructions: An example from Puerto Rico.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 307, 1-4: 90-97.- FC&P 37, 163, ID=7506Topic(s): coral skeletons, δ180 anomalies, tropical cyclones; Systematics: ; Stratigraphy: Recent; Geography: Atlantic, Puerto RicoComplimenting modern records of tropical cyclone activity with longer historical and paleoclimatological records would increase our understanding of natural tropical cyclone variability on decadal to centennial time scales. Tropical cyclones produce large amounts of precipitation with significantly lower δ180 values than normal precipitation, and hence may be geochemically identifiable as negative δ180 anomalies in marine carbonate δ180 records. This study investigates the usefulness of coral skeletal δ180 as a means of reconstructing past tropical cyclone events. Isotopic modeling of rainfall mixing with seawater shows that detecting an isotopic signal from a tropical cyclone in a coral requires a salinity of ~33 psu at the time of coral growth, but this threshold is dependent on the isotopic composition of both fresh and saline end-members. A comparison between coral δ180 and historical records of tropical cyclone activity, river discharge, and precipitation from multiple sites in Puerto Rico shows that tropical cyclones are not distinguishable in the coral record from normal rainfall using this approach at these sites.¹";
- 6938 s[6935] = "KLEEMANN K. (2009).- *Gastrochaenolites hospitium* isp. nov., trace fossil by a coral-associated boring bivalve from the Eocene and Miocene of Austria.- *Geologica Carpathica* 60, 4: 339-342.- FC&P 37, 164, ID=7507Topic(s): coral-associated boring bivalve; Systematics: ; Stratigraphy: Eocene, Miocene; Geography: AustriaGastrochaenolites hospitium isp. nov. is a domichnial boring showing the so-called false floors in scleractinian coral skeletons. The borings are semi-circular in mid-longitudinal section. They are produced by the mytilid *Lithophaga* (*Leiosolenus*) and keep up with further growth of their hosts for years. The false floors, being a retrusive equilibrium trace, are related to annual events.¹";
- 6939 s[6936] = "KOLODZIEJ B., GOLUBIC S., BUCUR I.I., RADTKE G. & TRIBOLLET A. (2012).- Early Cretaceous record of microboring organisms in skeletons of growing corals.- *Lethaia* 45, 1: 34-45.- FC&P 37, 164, ID=7508Topic(s): microborers, living corals skeletons; Systematics: chlorophytes, fungi, microbes; Stratigraphy: Cretaceous L; Geography: RomaniaA spectacularly preserved assemblage of microbial euendoliths, penetrating into skeletons of growing scleractinian corals, has been recognized in Early Aptian (Early Cretaceous) reef limestone of the Rarau Mountains (East Carpathians, NE Romania). Microboring euendolithic filaments were found in five coral colonies of the suborder *Microsolenina*. They remained in part well-preserved, often impregnated with iron oxides, which made them visible even in strongly recrystallized parts of coral skeletons. Filaments of a wide range of sizes (2-40μm in diameter) were concentrated within medium parts of coral septa, oriented along the septa in the direction of the coral growth. The larger filaments were tubular, occurring in bundles and branched into finer, often tapering branches. Their behaviour and organization were quite similar to the modern euendolithic siphonolean chlorophyte *Ostreobium*. Filament diameters exceeded those reported for the modern species, but covered a similarly wide size range. Narrower frequently branching filaments, 4-8μm in diameter, resemble distal branching patterns of modern *Ostreobium quekettii*. Some very thin filaments (ca. 1-2μm) observed within skeleton or inside the large

tubular filaments, sometimes associated with globular swellings, may represent euendolithic fungi. The recrystallization of coral skeleton had limited effect on preservation of euendoliths due to their impregnation with iron oxides; microbial euendoliths were subjected to different taphonomic changes.¹¹;

6940 s[6937] = "KRONE R., PASTER M. & SCHUHMACHER H. (2011).- Effect of the surgeonfish *Ctenochaetus striatus* (Acanthuridae) on the processes of sediment transport and deposition on a coral reef in the Red Sea.- *Facies* 57, 2: 215-221.- FC&P 37, 165, ID=7509^Topic(s): coral reefs, reef sweepers; Systematics: surgeonfish; Stratigraphy: Recent; Geography: Red Sea^Excessive sedimentation is a major threat to coral reefs. It can damage or kill reef-building corals and can prevent the successful settlement of their planktonic larvae. The surgeonfish *Ctenochaetus striatus* feeds on rocky surfaces by sweeping loose material into its mouth with its flexible, broom-like teeth. In addition, it grasps and removes hard substrates with the aid of its special palate structure. It then transports sediment matter off the reef by defecating the ingested material outside the rocky zone of the reef. We analyzed 150 feces samples of six individuals, differentiating between (1) ingested by sweeping and (2) ingested by scraping, and compared their content with inorganic land-derived and marine sediments trapped at the feeding area. Projections based on fish densities, defecation rates, and quantities as well as composition of sediments collected by traps on the same reef site suggest that *C. striatus* removes at least 18% of the inorganic sediment sinking onto the reef crest. The eroded share in the exported matter is about 13%. This finding points to a hitherto not verified role of *C. striatus* as a reef sweeper and reef scraper, whereby the first function is by far dominating. [original abstract; wrzolek] [electronic supplementary material for this paper is available to authorized users at online version of this article - doi: 10.1007/s10347-010-0239-8]^11";

6941 s[6938] = "KRUZIC P., SRSEN P. & BENKOVIC L. (2012).- The impact of seawater temperature on coral growth parameters of the colonial coral *Cladocora caespitosa* (Anthozoa, Scleractinia) in the eastern Adriatic Sea.- *Facies* 58, 4: 477-491.- FC&P 37, 166, ID=7510^Topic(s): coral growth, seawater temperature; Systematics: Cnidaria, Scleractinia; Stratigraphy: Recent; Geography: Adriatic Sea^The scleractinian coral *Cladocora caespitosa* deserves a special place among the major carbonate bioconstructors of the Mediterranean Sea. Annual coral skeleton growth, coral calcification, and skeleton density of the colonial coral *C. caespitosa* taken from 25 locations in the eastern Adriatic Sea were analyzed and compared with annual sea surface temperatures (SST). The growth rates of the coral *C. caespitosa* from the 25 stations in the Adriatic Sea ranged from 1.92 to 4.19 mm per year, with higher growth rates of the investigated corallites in the southern part of the Adriatic Sea. These growth rates are similar to those measured in other areas of the Mediterranean Sea. The correlation between coral growth and sea temperatures in the Adriatic Sea is seen as follows: an X-radiograph analysis of coral growth in *C. caespitosa* colonies that are over 60 years old showed that higher growth rates of this coral coincided with a warmer period in the Mediterranean Sea. A positive significant correlation exists between corallite growth rates and SST and coral calcification and SST. A negative correlation exists between coral density and SST. Coral growth rates also showed a correlation with higher eutrophication caused by nearby fish farms, along with a greater depth of the investigated colonies and high bottom currents.¹¹;

6942 s[6939] = "LARMAGNAT S. & NEUWEILER F. (2011).- Exploring a link between Atlantic coral mounds and Phanerozoic carbonate mudmounds: Insights from pore water fluorescent dissolved organic matter (FDOM), Pen Duick mounds, offshore Morocco.- *Marine Geology* 282: 149-159.- FC&P 37, 166, ID=7511^Topic(s): coral mounds, mud

- mounds, Ca-carbonate authigenesis; Systematics: ;
 Stratigraphy: Recent & Phanerozoic; Geography: ^This study explores a genetic link between modern Atlantic coral mounds and ancient, sponge-rich carbonate mudmounds based on Ca-carbonate authigenesis driven by induced-and-supported organomineralization (ISOM). The potential for ISOM in Atlantic coral mounds is tracked by peak patterns of fluorescent dissolved organic matter (FDOM) present in pore waters down to 3 m of sediment depth (Gamma mound, Beta mound, Pen Duick escarpment, offshore Morocco). The modern coral-rich mound system, which by itself appears diverse and with a variety of controlling factors, maintains an excellent potential to drive ISOM and to share a crucial process of early diagenesis with Phanerozoic sponge rich carbonate mudmounds.^1";
- 6943 s[6940] = "MANNI R. (2006).- Catalogue of the type fossils stored in the palaeontological museum of "La Sapienza" University of Rome: 1.- Geologica Romana 39: 95-110.- FC&P 37, 167, ID=7512^Topic(s): museal collection, fossils, catalogue of types; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6944 s[6941] = "MANNI R. (2007).- Catalogue of the type fossils stored in the palaeontological museum of "La Sapienza" University of Rome: 2.- Geologica Romana 40: 37-47.- FC&P 37, 168, ID=7513^Topic(s): museal collection, fossils, catalogue of types; Systematics: ; Stratigraphy: ; Geography: ^^1";
- 6945 s[6942] = "MARALI S., WISSHAK M., LOPEZ CORREA M. & FREIWALD A. (2013).- Skeletal microstructure and stable isotope signature of three bathyal solitary cold-water corals from the Azores.- Palaeogeography, Palaeoclimatology, Palaeoecology 373: 25-38.- FC&P 37, 168, ID=7514^Topic(s): cold water corals, skeletons, stable isotopes; Systematics: Cnidaria, Scleractinia; Stratigraphy: Recent; Geography: Atlantic, Azores^Skeletons of cold-water corals are potential geochemical archives that record oceanographic parameters, such as bottom water temperature in the deep sea. In this study, the three solitary scleractinian species, Caryophyllia cyathus, Desmophyllum cristagalli and Stenocyathus vermiformis, were sampled from upper bathyal 500m water depths in the southern Faial Channel (Azores archipelago). The stable carbon isotope (δ13C) and oxygen isotope (δ18O) compositions of the corals were analysed and related to their skeletal architecture. Background data, including data from high-resolution temperature logs and on the ambient seawater isotopic composition, were compared with δ18O-based temperature reconstructions to test the suitability of these cold-water corals as geochemical archives and to explore the role of vital effects on skeletal geochemistry. Although all of the corals experienced identical and near-stable salinities and temperatures, the stable isotopic signatures vary within and among species. Both δ13C and δ18O values fluctuate in relation to growth bandings and are therefore most likely dependent on calcification rates and associated kinetic vital effects. The studied specimens are 13C depleted with respect to equilibrium with ambient seawater, indicating significant uptake of respired CO2 by their skeletons. Skeletal δ18O values vary by up to 3.6‰ among the growth bands of one of the coral specimens, translating into an unrealistic reconstructed temperature amplitude of ~16 °C. This contrasts with the minute intra-annual amplitude of the stable temperature regime (annual mean 12.30 ± 0.25 °C). Nevertheless, δ13C vs. δ18O regression lines can be used to deduce ambient temperatures by applying the lines technique (Smith et al., 2000; Palaios 15: 25-32), which yields temperatures that coincide with the measured maximum temperature range in the case of D. cristagalli and for most C. cyathus samples, but deviate by 2.95 °C from the measured annual mean in the case of the S. vermiformis specimen.^1";
- 6946 s[6943] = "MARTINDALE R.C., BERELSON W.M., CORSETTI F.A., BOTTJER D.J. & WEST A.J. (2012).- Constraining carbonate chemistry at a

potential ocean acidification event (the Triassic-Jurassic boundary) using the presence of corals and coral reefs in the fossil record.- Palaeogeography, Palaeoclimatology, Palaeoecology 350-352: 114-123.- FC&P 37, 169, ID=7515^Topic(s): ocean acidification, carbonate crisis, mass extinction; Systematics: ; Stratigraphy: Triassic / Jurassic; Geography: ^Ocean acidification associated with emplacement of the Central Atlantic Magmatic Province (CAMP) has been hypothesized as a kill mechanism for the end-Triassic mass extinction, but few direct proxies for ancient ocean acidity are available. This paper describes a new proxy that uses the presence of fossil corals and coral reefs to determine aragonite saturation state (ΩArag). Modern scleractinian corals struggle to biomineralize a skeleton below an ΩArag of 2 and modern shallow water coral reefs are typically only found in areas with source water of ΩArag >3, so when corals or coral reefs are preserved in the fossil record, these ocean saturation states can be inferred. Atmospheric pCO2 reconstructions are combined with the coral ΩArag limitations to calculate the total dissolved inorganic carbon (DIC) in the Late Triassic ocean, which is a measure of the buffering capacity or ocean sensitivity to acidification. Once DIC is known, the severity of an acidification due to a carbon dioxide injection can be determined, for example the Triassic-Jurassic (T-J) event. Our results suggest that if Late Triassic DIC values were low to moderate (2000-3000 μmol/kg), the T-J pCO2 increases would have depressed saturation state to the point where coral biomineralization would have been extremely challenging (ΩArag <2), resulting in the observed coral and coral reef gap in the fossil record. While the average pCO2 elevations recorded in stomatal and pedogenic proxies are not sufficient to cause complete carbonate undersaturation, modeled scenarios for CAMP-related T-J pCO2 increases (within error of pedogenic pCO2 proxies) suggest that aragonite undersaturation is plausible and in extreme cases calcite undersaturation is achievable. Thus, a short but extreme acidification event could occur and would satisfactorily explain the significant extinction of calcareous organisms, the Early Hettangian coral gap, and the T-J carbonate crisis.^1";

6947 s[6944] = "MAY A. (2011).- Buchbesprechung: 709. Ernst, A. & Königshof, P. (2010): Bryozoan fauna and microfacies from a Middle Devonian reef complex (Western Sahara, Morocco).- Zentralblatt für Geologie und Paläontologie Teil II 2011, 3/4: 641-645.- FC&P 37, 170, ID=7516^Topic(s): book review, bryozoans, reefs; Systematics: ; Stratigraphy: Devonian; Geography: Western Sahara, Morocco^A review of the book of Ernst & Königshof (2010) is given: The part of the book on the bryozoans (chapters "Taxonomic descriptions"; "Systematic palaeontology"; "Appendix" and plates) is very good. However, the part on stratigraphy and facies (chapters "Geological setting" and "Microfacies analysis") is unsatisfying. Among others, the given proof of a Late Givetian age is shown to be unsubstantiated. Fortunately, the [present] reviewer can demonstrate by the few informations on corals given by Ernst & Königshof (2010), that these fossils are probably Late Givetian in age. [abridged]^1";

6948 s[6945] = "MCGHEE G.R. jr, CLAPHAM M.E., SHEEHAN P.M., BOTTJER D.J. & DROSER M.L. (2013).- A new ecological-severity ranking of major Phanerozoic biodiversity crises.- Palaeogeography, Palaeoclimatology, Palaeoecology 370: 260-270.- FC&P 37, 170, ID=7517^Topic(s): mass extinctions, ranking of crises; Systematics: ; Stratigraphy: ; Geography: ^A new ecological-severity ranking of the major Phanerozoic biodiversity crises is proposed in which the Capitanian crisis is ranked lesser than the Frasnian (Late Devonian) but greater than the Serpukhovian (end-Mississippian), and the Famennian (end-Devonian) crisis is ranked

as equal in ecological impact to the Hirnantian (end-Ordovician). Two new decouplings between taxonomic severity and ecological severity are revealed in these analyses, the Capitanian and Famennian crises, in which the ecological impact of the biodiversity loss was markedly different from the magnitude of the biodiversity loss. These analyses also reveal that the "Great Devonian Interchange" (GDI) invasive-species event in the Givetian biodiversity crisis may provide an important palaeoecological analog for the study of present-day extinction and homogenization in ecosystems produced by modern invasive species.¹¹;

6949 s[6946] = "MCMONAGLE L.B., LUNT P., WILSON M.E.J., JOHNSON K.J., MANNING C. & YOUNG J. (2011).- A re-assessment of age dating of fossiliferous limestones in eastern Sabah, Borneo: Implications for understanding the origins of the Indo-Pacific marine biodiversity hotspot.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 305, 1-4: 28-42.- **FC** 37, 171, ID=7518**Topic(s):** diversity hotspot, stratigraphy; **Systematics:** ; **Stratigraphy:** Oligocene; **Geography:** Borneo, Sabah E¹¹On the basis of a combined larger benthic foraminifera, nannofossil and strontium isotope dating programme we confidently re-assign muddy carbonate deposits from the Lower Kinabatangan River Area of Borneo to the Oligocene rather than the Early Miocene. High-diversity, coral-rich (>50 species) deposits are here tightly constrained to predominately at, or just after, the Early to Late Oligocene boundary (Larger benthic foraminifera zone - Te1, Nannofossil zone - NP24, Sr isotope ages - 28.8-27.6 Ma). This new dating potentially pushes back the start of the Indo-west Pacific Centre of Marine Diversity, at least for corals, about 5 million years earlier than previous data indicated. Our new data supports maintaining separation of the muddy carbonates (previously defined as the Lower Kinabatangan Limestones: Haile & Wong, 1965) from nearby crystalline limestones of the Gomantong Limestone Formation dated here as Early Miocene (Larger benthic foraminifera zone - Te5/earliest Tf1, Sr isotope age - 21.0 Ma). This apparently punctuated development of shallow marine carbonates is seen at several locations in northern Borneo; an area underlain by oceanic crust and long dominated by very deep marine sedimentation (Hutchison, 2005). The opportunistic formation of clastic-influenced coastal and isolated biohermal carbonates is both an important palaeontological data point and a geological marker of changing basin settings. The new data on the first shallow marine deposits in a long established deep marine location, and evidence for unconformities, has important implications for the regional tectonic model, in an area of hydrocarbon exploration.¹¹;

6950 s[6947] = "MISTIAEN B., BRICE D., ZAPALSKI M.K. & LOONES C. (2012).- Brachiopods and Their Auloporid Epibionts in the Devonian of Boulonnais (France): Comparison with Other Associations Globally.- In: *Earth and Life - International Year of Planet Earth 2012*: 159-188.- **FC** 37, 172, ID=7519**Topic(s):** brachiopods, auloporids, epibionts; **Systematics:** Brachiopoda, Cnidaria, Auloporida; **Stratigraphy:** Devonian U, Frasnian; **Geography:** France, Boulonnais¹¹From research undertaken on brachiopods encrusted by auloporids at two intervals in the Frasnian (Beaulieu and Ferques Formations) of Boulonnais (France), we conclude that the most important factors influencing encrustation were usually (in decreasing order): size of the host, morphology, feeding currents, shell orientation in vivo and shell ornament. Shell structure (punctate or impunctate) seems not to have influenced the rate of encrustation. In the cases discussed, most but not all auloporids encrusted their hosts in vivo. The most favourable environments for development of both brachiopods and epibionts seem to have been hard bottoms and thin limestone beds alternating with argillaceous beds. The influence of environmental (sedimentologic) conditions is difficult to precisely specify in terms of the development of encrustation, but seems to have

- played an important role.¹";
- 6951 s[6948] = "NAKAZAWA T., UENO K., KAWAHATA H. & FUJIKAWA M. (2011).- Gzhelian-Asselian Palaeoaplysina-microencruster reef community in the Taishaku and Akiyoshi limestones, SW Japan: Implications for Late Paleozoic reef evolution on mid-Panthalassan atolls.- Palaeogeography, Palaeoclimatology, Palaeoecology 310, 3-4: 378-392.- FC 37, 172, ID=7520Topic(s): reef communities; Systematics: ; Stratigraphy: Carboniferous - Permian, Gzhelian - Asselian, Akiyoshi Limestone; Geography: Japan SW^A Palaeoaplysina-microencruster reef community is recognized in the Gzhelian-Asselian interval of the Taishaku and Akiyoshi limestones in SW Japan, which represent accreted Panthalassan atoll carbonates. In a reef-core area of the atoll, the alga Palaeoaplysina acted as a framebuilder and was associated with various binders (e.g., Tubiphytes, Archaeolithoporella, cystoporate bryozoans, and microbialites) and sediment-bafflers such as fenestrate and cryptostomate bryozoans and phylloid algae. In a subtidal environment of the back-reef area, Palaeoaplysina and phylloid algae flourished as sediment-bafflers. A microbial community, including Tubiphytes and sessile foraminifers, was predominant in a very shallow, peritidal environment of the back-reef area. * Palaeoaplysina was distributed mainly along the northern margin of Pangea and is regarded as a boreal element. During Gzhelian-Asselian time, its distribution extended to the tropical or subtropical Panthalassa Ocean due to global cooling. On the Akiyoshi atolls, the Palaeoaplysina-microencruster community was succeeded by a sponge-microencruster community in the late Early Permian. The timing of this biotic turnover is similar to that of a change in climate from icehouse to greenhouse conditions, and coincides with superplume activity beneath the mid-Panthalassa Ocean.¹";
- 6952 s[6949] = "OSBORNE M.C., DUNBAR R.B., MUCCIARONE D.A., SANCHEZ-CABEZA J.-A. & DRUFFEL E. (2013).- Regional calibration of coral-based climate reconstructions from Palau, West Pacific Warm Pool (WPWP).- Palaeogeography, Palaeoclimatology, Palaeoecology 386: 308-320.- FC 37, 173, ID=7521Topic(s): coral skeletons, stable elements, trace elements, climate reconstruction; Systematics: ; Stratigraphy: Recent; Geography: Pacific, west Pacific warm pool, Palau^Stable isotopic and trace element records from corals collected within the west Pacific Warm Pool (WPWP) are well suited to examine interannual to decadal climate variability associated with the El Nino-Southern Oscillation (ENSO) phenomenon. The most commonly used climate recorder in corals is $\delta^{18}\text{O}$ ($\delta^{18}\text{O}_{\text{CRL}}$), a parameter subject to multiple regional and local environmental influences. Location-specific calibration of $\delta^{18}\text{O}_{\text{CRL}}$ is a necessary first step for developing long-term paleoceanographic reconstructions. Here we present four new coral $\delta^{18}\text{O}$ stratigraphies from the Republic of Palau (7.5°N 134.5°E), and compare our records with instrumental measurements for the period 1950-2008. We also compare our results with a previously published coral record from Palau. We employ a new sea surface salinity (SSS) product and validate its utility for coral-based paleoclimate calibrations. We not only examine differences among the records but also identify strong and regionally coherent environmental signals. We find that SSS variability is the dominant influence on $\delta^{18}\text{O}_{\text{CRL}}$ in Palau, while sea surface temperature (SST) is of secondary importance. Our results show that time-averaging multiple $\delta^{18}\text{O}_{\text{CRL}}$ records into a single composite series produce greater correlations with instrumental data and indices than individual stratigraphies alone. Our results are consistent with observations of a strengthening of the hydrological cycle in the WPWP region over the past 50 years, though the magnitudes of long term linear trends differ among the different Palau $\delta^{18}\text{O}_{\text{CRL}}$ records. Interannual and interdecadal variabilities between the Palau $\delta^{18}\text{O}_{\text{CRL}}$ records are more consistent than the long term linear trends. Monthly Palauan $\delta^{18}\text{O}_{\text{CRL}}$ anomalies capture

strong El Nino events with high fidelity over the calibration period. This study provides constraints for future paleoenvironmental investigations in Palau using longer coral records.¹;

6953 s[6950] = "PAS D., DA SILVA A.-C., CORNET P., BULTYNCK P., KÖNIGSHOF P. & BOULVAIN F. (2012).- Sedimentary development of a continuous Middle Devonian to Mississippian section from the fore-reef fringe of the Brilon Reef Complex (Rheinisches Schiefergebirge, Germany).- Facies 59, 4: 969-990.- FC&P 37, 174, ID=7522Topic(s): fore-reef sediments, Brilon reef complex; Systematics: ; Stratigraphy: Devonian M, Givetian - Carboniferous, Visean; Geography: Rhenish Slate Mts, Brilon Reef ComplexThe Brilon-reef complex is one of the biggest Devonian carbonate buildups (~80 km²) of the Rheinisches Schiefergebirge. The Burgberg section is located in the southeastern fore-reef area of the Brilon Reef Complex and exposes a succession of strata (117 m thick), which extends from the Middle Givetian (middle varcus conodont Zone) to the Visean (bilineatus conodont Zone). Field and microfacies observations led to the definition of nine microfacies that are integrated into a sedimentary model divided into off-reef, intermediate fore-reef, and proximal fore-reef sedimentary domains (SD). The off-reef domain (SD1) is the most distal setting observed and is characterized by fine-grained sediments, dominated by pelagic biota and the local occurrence of gravity-flow deposits. The intermediate fore-reef (SD2) is characterized by a mixture of biota and sediments coming from both deeper-water and shallow-water sources and is influenced by storm and gravity-flow currents. In this domain, Renalcis moundlike structures developed locally. Finally, the proximal fore-reef (SD3) corresponds to the most proximal setting that is strongly influenced by gravity-flow currents derived from the Brilon Reef Complex. The temporal evolution of microfacies in the fore-reef setting of the Burgberg section show five main paleoenvironmental trends influenced by the onset, general development, and demise/drowning of the Brilon Reef Complex. Fore-reef to off-reef lithologies and their temporal changes are from the base to the top of the section: (U1) - finegrained sediments with large reef debris, corresponding to the initial development of the reef building upon submarine volcanoclastic deposits during the Middle Givetian (middle varcus Zone) and first export of reef debris in the fore-reef setting, (U2) - high increase of reef-derived material in the fore-reef area, corresponding to a significant progradation of the reef from the Middle Givetian to the Early Frasnian (maximum extension of the Brilon Reef Complex to the south, disparilis to the falsiovalis conodont biozones), (U3) - progressive decrease of shallow-water derived material and increase of fine-grained sediments and deep-water biota into the fore-reef setting, corresponding to the stepwise withdrawal of the reef influence, from the Middle to the Late Frasnian (jamieae conodont Zone), (U4) - development of a submarine rise characterized by nodular and cephalopod-bearing limestones extending from the Late Frasnian to the Late Famennian corresponding to the demise and drowning of the Brilon Reef Complex as a result of the Late Frasnian Kellwasser events (upper rhenana and triangularis conodont biozones), (U5) - significant deepening of the Burgberg area starting in the Late Famennian, directly followed by an aggrading trend marked by pelagic shales overlying the nodular limestone deposits.¹;

6954 s[6951] = "RACHEBOEUF P.R., CASIER J.-G., PLUSQUELLEC Y., TORO M., MENDOZA D., PIRES DE CARVALHO M., LE HERISSE A., PARIS F., FERNANDEZ-MARTINEZ E., TOURNEUR F., BROUTIN J., CRASQUIN S. & JANVIER P. (2012).- New data on the Silurian-Devonian palaeontology and biostratigraphy of Bolivia.- Bulletin of Geosciences 87, 2: 269-314.- FC&P 37, 175, ID=7523Topic(s): fossils, biostratigraphy, biogeography; Systematics: ; Stratigraphy: Silurian, Devonian; Geography: BoliviaIn order to precisely establish the bio- and chronostratigraphic position of several levels

of the Silurian-Devonian succession of Bolivia, with respect to the International Time Scale, additional Silurian and Devonian localities belonging to the Eastern Cordillera and the Interandean Zone areas have been recently revised and sampled, both for macrofossils and palynomorphs. Specifically, the localities are Nunumayani, and Muruhuta from the late Silurian-early Devonian time interval. Correlations with other fossiliferous localities are discussed, namely Huacallani and Rumicorral. A new outcrop yielding Middle Devonian tabulate corals at Pisacavina is described, its faunal content is described, and compared with the historical coral collection. As a result, it appears clearly that the Silurian-Devonian Bolivian fauna needs a thorough revision, as well as the selection of stratigraphically significant macrofossils. Besides macrofossils, the analysis of palynomorph assemblages is significant in establishment of both intra-Bolivian and international correlations before any reliable biogeographic reconstruction is done. This paper records the first discovery of a plant of the genus *Protolapidodendron* from the Devonian of Bolivia. An ostracod assemblage from Pisacavina is described, illustrated, and discussed for the first time, it suggests an Early Devonian or an Eifelian age. Newly described taxa include the coral *Parastriatopora boliviana* sp. nov., and the chonetoidean brachiopods *Sanjuanetes glemareci* sp. nov., and *Kentronetes giae* sp. nov.¹¹;

6955 s[6952] = "SANFILIPPO R., ROSSO A., BASSO D., VIOLANTI D., DI GERONIMO I., DI GERONIMO R., BENZONI F. & ROBBA E. (2011).- Cobble colonization pattern from a tsunami-affected coastal area (SW Thailand, Andaman Sea).- *Facies* 57, 1: 1-13.- FC&P 37, 176, ID=7524Topic(s): cobble communities, settlement patterns; Systematics: ; Stratigraphy: Recent, post 2004 tsunami; Geography: Indian Ocean, Andaman Islands^We studied the sclerobiont community associated with organogenic and lithic cobbles from soft bottoms in the Khao Lak coastal area (Andaman Sea) that was damaged by the 2004 tsunami. The 15 cobbles examined originate from grab and hand sampling carried out in the years 2006 and 2007 in the depth range of 4.6-15.2 m. A rich endo- and epibenthos was identified, mainly consisting of algae, foraminifers, sponges, cnidarians, polychaetes, bryozoans and bivalves. Associations on each examined cobble show similarities in composition and structure being characterized by a few dominant groups. Differences were noted in the degree and pattern of colonization, distinguishing for each cobble an upward and a downward side at the time of sampling. The mean total coverage is 15.09% being higher on the upper sides (17.4%) compared to the lower sides (12.8%). Calcareous algae, bivalves and sponges prevail on upper sides, while bryozoans prevail on lower sides. The sclerobionts distribution allowed to infer the orientation of cobbles on the seafloor during colonization. Major colonization values, exceeding 30% coverage, were observed on organogenic cobbles located in the proximity of reefs or collected from below 12 m of water depth. Conversely, cobbles from the shallowest stations result poorly colonized, independently of their composition. The water turbidity and wave motion as a possible cause of the observed distributions were discussed. The Khao Lak cobble community seems to be largely unaffected by the tsunami event, as suggested by the estimated biodiversity, abundance and coverage of sclerobionts.¹¹;

6956 s[6953] = "SANTOS A., MAYORAL E., BAARLI B.G., DA SILVA C., CACHAO M. & JOHNSON M.E. (2012).- Symbiotic association of a pyrgomatid barnacle with a coral from a volcanic middle Miocene shoreline (Porto Santo, Madeira Archipelago, Portugal).- *Palaeontology* 55, 1: 173-182.- FC&P 37, 177, ID=7525Topic(s): bioclaustration, coral, barnacle; Systematics: ; Stratigraphy: Miocene M; Geography: Atlantic, Madeira Archipelago^The bioclaustration of the pyrgomatid barnacle *Ceratoconcha* aff. *costata* within the carbonate skeleton of a colonial hermatypical coral (*Tarbellastrea reussiana*) is described from a middle Miocene basaltic rocky palaeoshore on a small

north-eastern Atlantic islet of Porto Santo (Madeira Archipelago, Portugal). The resulting structure is named as a new trace fossil *Imbutichnus* *igen. nov.*, characterized by a small, funnel-like cavity, a circular to oval cross-section, with a nearly cylindrical shape in the upper part and a conical shape towards the base. *Imbutichnus costatum* *isp. nov.* is defined as a bioclastration structure produced by the overgrowth of a pyrgomatid barnacle by a coral. From an ethologic point of view, *Imbutichnus* is attributed to the *Impedichnia* category. In terms of palaeoecology, it is interpreted as the result of a parasitic relationship. This is also the oldest record of pyrgomatid barnacles in the eastern Atlantic and clearly demonstrates that the Miocene palaeogeographic range of *Ceratoconcha* was much wider than previously assumed.¹¹;

6957 s[6954] = "SCHNEIDER S., BERNING B., BITNER M.A., CARRIOL R.-P., JÄGER M., KRIWET J., KROH A. & WERNER W. (2009).- A parautochthonous shallow marine fauna from the Late Burdigalian (early Otnngian) of Gurlarn (Lower Bavaria, SE Germany): Macrofaunal inventory and paleoecology.- *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 254, 1/2: 63-103.- FC&P 37, 177, ID=7526Topic(s): macrofossils, parautochthonous, taxonomy, ecology; Systematics: ; Stratigraphy: Miocene, Burdigalian, U; Geography: Germany, Lower Bavaria¹¹This paper describes and illustrates a diverse parautochthonous macrofauna from a single Upper Burdigalian (lower Otnngian) horizon at Gurlarn in Lower Bavaria (SE Germany). In total, 80 different taxa are recorded in specific or open nomenclature; some 50% of these taxa are bryozoans, followed by bivalves (16 taxa), cirripedes (7 taxa), echinoderms, corals (5 taxa each), brachiopods, fish (4 taxa each), serpulids, and gastropods (3 taxa each). The presence of additional organisms was documented by actualistic comparison based on indirect evidence such as drillholes, bite marks, and specialized growth forms of bryozoan colonies. Analysis of aut- and synecological indicators suggests that the fauna thrived in a near-shore shallow marine setting at a water depth of 5-20 m. Based on particular faunal elements and overall faunal composition we hypothesize that the environment is characterized by three distinct but interfingering habitats, i.e. (1) rocky slopes and boulders, (2) seagrass meadows, and (3) bryozoan meadows. Because similar, albeit less well-preserved, faunas occur at several localities along the northern coast of the early Otnngian Molasse Sea, the parautochthonous assemblage from Gurlarn provides an excellent example for the structure of these typical biota.¹¹;

6958 s[6955] = "SENOWBARI-DARYAN B., STANLEY G.D. jr & ONOUE T. (2012).- Upper Triassic (Carnian) reef biota from the Sambosan Accretionary Complex, Kyushu, Japan.- *Facies* 58, 4: 671-684.- FC&P 37, 178, ID=7527Topic(s): reef biota, calcified sponges, algae, problematica; Systematics: ; Stratigraphy: Triassic U, Carnian, Sambosan Accretionary Complex; Geography: Japan, Kyushu¹¹Calcified sponges, algae, and reef problematica are abundant yet poorly known from the Triassic of Japan. They are abundant in shallow-water carbonate, redeposited blocks of the Sambosan Accretionary Complex, Konose Group, and southern Kyushu. Based on study of thin-sections from reef limestone exposed along the Kuma River, some important organisms and reef microfacies are described, which seem typical of Upper Triassic reef complexes. The most abundant reef organisms are hypercalcified sponges, including sphinctozoans, inozoans and chaetetids, followed by cyanophycean algae (including "Tubiphytes"-like organisms), and solenoporecean red algae. Loose sponge spicules in one thin-section also indicate the occurrence of rare hexactinellid sponges. Chambered demosponges described from the Konose carbonate rocks include *Solenolmia manon manon* (Münster), *Colospongia* sp., *Jablonskyia andrusovi* (Jablonsky), several unidentified chambered sponges as well as the inozoid *Permocorynella* sp. 1 and *Permocorynella* sp. 2. Also present are

chaetetid sponges and solenoporacean red algae belonging to *Parachaetetes cassianus* (Flügel) and *Parachaetetes?* sp. or *Solenopora?* sp. Especially abundant in thin-sections are cyanophytes and Tubiphytes-like organisms. Among the organisms is *Cladogirvanella Ott* and *Hedstroemia* sp. The composition of the biota and presence of typical problematic organisms increases our knowledge of shallow-water Upper Triassic carbonate rocks in a remote setting in western Panthalassa. The composition of the biota indicates a mostly Carnian age. Most comparable organisms are known from both the northeastern and southern Tethys.¹";

6959 s[6956] = "SOMERVILLE I.D., COZAR P., SAID I., VACHARD D., MEDINA-VAREA P. & RODRIGUEZ S. (2013).- Palaeobiogeographical constraints on the distribution of foraminifers and rugose corals in the Carboniferous Tindouf Basin, South Morocco.- *Journal of Paleogeography* 2, 1: 1-18.- FC&P 37, 180, ID=7528^Topic(s): corals, forams, biogeography; Systematics: ; Stratigraphy: Carboniferous; Geography: Morocco S, Tindouf Basin^The northern flank of the Tindouf Syncline in southern Morocco exhibits a continuous, well exposed Carboniferous succession with limestones of late Asbian to early Bashkirian age containing rich and diverse foraminiferal and rugose coral assemblages. Analysis of these assemblages provides new data on the relatively poorly known Saharan basins. * The palaeobiogeographical relationship of the Tindouf Basin with other Palaeotethyan basins is complex. Although there is a predominance of cosmopolitan taxa for the Palaeotethys, it is recognized that there was an influence of basins from NW Europe, such as the UK and Ireland. Some taxa are recorded in both NW Europe and Tindouf without any characteristic contributions from intermediate basins in northern Morocco. The neighbouring Bechar Basin in Algeria presents distinct assemblages. The bulk of the data analyzed suggest that this sector of the western Palaeotethys can be subdivided into four palaeobiogeographical subprovinces: the Atlantic subprovince (UK, Ireland, N. France and Belgium), the Mediterranean subprovince (Pyrenees, Montagne Noire, Betic Cordillera, Rif - N. Morocco, and Balearic Islands), and the Saharan subprovince (Bechar, Reganne, Ahnet-Mouydir and Tindouf). In between, mobile belts of mixed faunal assemblage characteristics are observed (e.g., SW Spain and Central Meseta) forming the west peri-Gondwanan subprovince. ** Analysis of the Tindouf Basin faunas shows that, as in other Saharan basins, there is a high diversity and abundance of foraminiferal taxa, with a higher proportion of survivors and longer stratigraphic ranges, features also mirrored by rugose corals. This emphasizes the longevity of the carbonate platform in a tropical setting, where periodic transgressions introduced new assemblages, and oceanic currents are interpreted as one of the main controlling factors for the distribution of the taxa in these subprovinces. Moreover, not only were water temperatures on the platform higher, but also tectonic stability greater. It is considered that the effects of the first phases of the Gondwanan glaciation were minimal on the Tindouf faunas.¹";

6960 s[6957] = "SORAUF J.E., EZAKI Y., FEDOROWSKI J., JELL J.S., KATO M., MORYCOWA E. & RONIEWICZ E. (2012).- Mentors: the generation 1935-1985.- *Geologica Belgica* 15, 4: 204-208.- FC&P 37, 180, ID=7529^Topic(s): paleontologists, coral students, scientific biographies; Systematics: ; Stratigraphy: ; Geography: ^The lives and scientific contributions of five eminent academic geologists and paleontologists, James Alloiteau (Museum National d'Histoire Naturelle, Paris, France), Dorothy Hill (University of Queensland, Australia), Marius Lecompte (University of Louvain, Belgium), Masao Minato (Hokkaido University, Sapporo, Japan), and Maria Różkowska (Adam Mickiewicz University, Poland) are briefly summarized here. Each of these paleontologists made major contributions to the study of fossil corals and/or sponges, and each overcame considerable difficulties and disruptions in their lives

to excel as mentors to us. All showed remarkable determination and love for paleontological research, and inspired their students and colleagues to understand details of structure and systematic positions of fossil corals and sponges. Each of these individual mentors was the subject of a presentation by a former student at the 11th International Symposium on Fossil Corals and Sponges in Liege, Belgium, thus, somewhat broader coverage of each is provided in the abstracts volume of the meeting.^1";

- 6961 s[6958] = "SPENGLER A.E. & READ J.F. (2010).- sequence development on a sediment-starved, low accommodation epeiric carbonate ramp: Silurian Wabash Platform, USA mid-continent during icehouse to greenhouse transition.- Sedimentary Geology 224: 84-115.- FC&P 37, 181, ID=7530^Topic(s): carbonata platform, sequence development, icehouse-greenhouse transition; Systematics: ; Stratigraphy: Ordovician / Silurian; Geography: USA, Wabash Platform^Twelve cored wells through the Silurian section of the Wabash Platform, Indiana, U.S.A., and 2 non-cored basal wells with cuttings, were studied to define the sequence stratigraphy of a sediment-starved ramp within a low-latitude epeiric sea during the latest Ordovician icehouse to Silurian greenhouse transition. The Wabash Platform (approximately 200,000 km² area) was bounded to the north by the Michigan Basin, to the east by the Appalachian foreland basin, and passed to the southwest into the Vincennes Basin, which was open to the ocean. Facies developed include: platform-fringing buildups (stromatolite wackestone core, stromatopora skeletal wackestone caps and crinoidal rudstone/packstone flank facies), and non-buildup crinoid grainstone-packstone sheets (shoals), skeletal wackestone (variably cherty, between fair weather and storm wave base, deep lagoon and deep ramp) and carbonate mudstone (clean to argillaceous, sub-storm wave base, deep lagoon and deep ramp/basin). The eleven sequences, 2 m to 30 m thick and 1 to 4 m.y. durations (average ~ 2.5 m.y.), generally can be correlated to global sea-level cycles. The lower three sequences are disconformity-bounded (reflecting moderate ice sheets) but the others are relatively conformable. The most easily mapped regional surfaces are the transgressive surfaces, because the correlative conformities are cryptic. The wide well spacing prevented mapping of lowstand system tracts. The transgressive system tracts are upward-deepening, upward-fining carbonate units, that become more argillaceous and silty upward. The highstand system tracts are upward-coarsening carbonate mudstone to wackestone-packstone and rare grainstone. Barrier bank complexes and isolated buildups aggraded during deposition of the upper 4 sequences to form a discontinuous raised rim (~ 40 m relief) to the ramp while the interior of the platform remained sediment starved. Subsidence rates in the basin were very low (0.6 to 1.2 cm/k.y.), but the low platform accumulation rates (0.2 cm/k.y. to 0.8 cm/k.y.) prevented the seafloor from building to sea level in all but the lower three sequences and later over barrier banks (accumulation rates 2 cm/k.y.). Parasequence development in high-accommodation settings elsewhere in the Silurian in North America records transition from moderate ice-sheets to an ice-free world. This is weakly expressed on the Wabash Platform due to the dominantly deeper subtidal setting. The remarkably low sedimentation rates resulted from the epeiric sea being isolated from the open ocean, and they likely are typical of the large epeiric seas of the Paleozoic.^1";
- 6962 s[6959] = "SQUIRES R.L. (1999).- Upper Paleocene to lower Eocene ("Meganos Stage") marine megafossils in the uppermost Santa Susana Formation, Simi Valley, southern California.- Contributions in Science 479: 1-38.- FC&P 37, 183, ID=7531^Topic(s): marine megafossils; Systematics: ; Stratigraphy: Eocene L, Santa Susana Fm; Geography: USA, California s^^1";
- 6963 s[6960] = "STEELE-PETROVICH H.M. (2011).- Replacement name for Tetradium Dana, 1846. - Journal of Paleontology 85, 4: 802-803.-

FC&P 37, 184, ID=7532^Topic(s): calcareous algae, case of homonymy; Systematics: ; Stratigraphy: Ordovician M U; Geography: ^Tetradium Dana, 1846 (type species: Tetradium fibratum Safford, 1856), a common Middle and Upper Ordovician fossil, is a calcareous filamentous florideophyte alga (Phylum Rhodophyta) (Steele-Petrovich, 2009a, 2009b), and not a tabulate coral or a chaetetid sponge, as traditionally classified. This makes it a later homonym of Tetradium Loureiro, 1790 (see Farr et al., 1979), a Recent tree. It will be substituted by Prismostylus Okulitch 1935. A new specific classification of the genus Prismostylus Okulitch (and possibly other closely related genera) would have to be based probably on tube morphology. Family and Order names that are based on the illegitimate genus Tetradium (i.e., Tetradiidae Nicholson, 1879 and Tetradiida Okulitch, 1936, respectively), which would normally become Tetradiaceae and Tetradiales in botanical tradition, must be replaced also (ICBN, Rec. 16B, Art. 18.3). Therefore, the replacement names selected here are Family Prismostylaceae and Order Prismostylales. The type species is Prismostylus columnaris (Hall), 1847, as designated by Okulitch (1935) when the genus was defined.^1";

6964 s[6961] = "STEVENS C.H. (2010).- Distribution of three key Early Permian fossil groups in western USA and northern Mexico and their relevance to interpretation of paleotectonic features along the southwestern margin of Laurentia.- Palaeogeography, Palaeoclimatology, Palaeoecology 288, 1-4: 103-107.- FC&P 37, 184, ID=7533^Topic(s): fossil groups, biogeography; Systematics: corals, fusulinids; Stratigraphy: Permian L; Geography: USA SW, Mexico N^Three species groups, including two groups of corals and one of fusulinids, delineate the zone of favorable marine environments for these animals along the shelves bordering southwestern Laurentia during the Cisuralian (Early Permian). The three species groups are: the coral Protowentzelella group of late Asselian to early Sakmarian age, the fusulinid Eoparafusulina linearis group of late Sakmarian age, and the coral Pararachnastraea illipahensis group of late Artinskian to Kungurian age. Occurrences of these three species groups clearly outline most of the major paleotectonic features that were present along the southwestern margin of the Laurentian shelf at that time. The paucity of data in Mexico, however, leaves open the question of large-scale displacement on the Mojave-Sonora megashear, a feature proposed to cut across northern Mexico and southwestern USA, although the data presented here could be construed to suggest lack of significant displacement in post-Pennsylvanian time.^1";

6965 s[6962] = "SUCHY V., SYKOROVA I., DOBES P., MACHOVIC V., FILIP J., ZEMAN A. & STEJSKAL M. (2012).- Blackened bioclasts and bituminous impregnations in the Koneprusy Limestone (Lower Devonian), the Barrandian area, Czech Republic: implications for basin analysis.- Facies 58: 759-777.- FC&P 37, 185, ID=7534^Topic(s): blackened bioclasts, bitumen; Systematics: ; Stratigraphy: Devonian carbonates, Variscan Orogeny; Geography: Czech Republic, Barrandian^Carbonate reef talus facies of the Koneprusy Limestone (Pragian, Lower Devonian, Barrandian) locally exhibit widespread impregnation by organic matter resulting in a partial to complete blackening of the limestones. Two contrasting types of impregnation are recognized: blackening of individual carbonate fossils and bioclastic layers within the limestone originated very early during diagenesis. The blackening is due to finely dispersed organic matter and possibly some iron sulphides and clay minerals that selectively adhered to the outer layers of corals, bryozoans, and crinoid fragments, leaving other fossils unaltered. These darkened fossils are similar to black pebbles - i.e., reworked, dark to black limestone clasts and bioclasts that are known to occur exclusively in shallow-water zones of both ancient and modern carbonates. The alteration of fossil fragments may have taken place in very shallow-water environments, possibly those of saline and reducing

back-reef lagoons or supratidal/intertidal zones, with organic matter being derived from decayed algae and microbes, or early vascular terrestrial plant material. Following the coloration, the blackened fossils were removed from their original position by waves or storms and transported into relatively deeper-water reef slope settings to form graded, salt-and-pepper-colored bioclastic beds. The presence of blackened fossils in the carbonate succession may point to episodic emergence and indicates a vanished vegetated siliciclastic hinterland that may once have existed to the west or south from the present-day erosive edge of the Barrandian Devonian strata. Subvertical veins cutting the Koneprusy Limestone and filled with black solid bitumen and blackened calcite resulted from a subsequent but substantially later diagenetic event, which is a testament of aqueous and petroleum fluid migration through the succession during deeper burial. Microthermometric characteristics of the aqueous inclusions embedded in vein calcite indicate that the veins were precipitated by brines of low to moderate salinity (0.5–9.5 wt% NaCl equiv.) with temperatures in the range of 87–116 °C. The bitumen in the veins is epi-impsonite (Rr = 0.70–1.90%), which is interpreted as degraded petroleum residuum that experienced thermal alteration at around 120 °C. The AFT modeling combined with fluid inclusion microthermometry and wider geological considerations indicate that the veins originated during the Variscan orogeny, most probably upon deep burial of the Lower Paleozoic strata in Carboniferous time.¹;

6966 s[6963] = "SURLYK F. & RENSEN A.M. (2010).- An early Campanian rocky shore at Iv&Klack, southern Sweden.- Cretaceous Research 31, 6: 567-576.- FC 37, 186, ID=7535^Topic(s): rocky shore, morphology, fossils ; Systematics: ; Stratigraphy: Cretaceous U, Campanian; Geography: Sweden S, Kristianstad Basin^Well-exposed, ancient rocky shores are rare and the associated shelly faunas are normally strongly worn and fragmented due to erosion during both sea-level rise and fall. An early Campanian rocky shore with a rich fauna is preserved at Iv&Klack in the Kristianstad Basin, southern Sweden. Iv&Klack is situated on the small, hilly island of Iv& situated in lake Iv&sj&n with a lake level about 6 m above present-day sea level. The rocky shore was formed during a major late early Campanian transgression caused by a sea-level rise up to about 100m above present sea level. An archipelago was formed along the northern basin margin during the transgression with numerous small islands and peninsulas. The steep palaeo-coast at Iv&Klack consists of gneiss overlain in the lower part by more than 30m of kaolin in places containing large boulders of gneiss with a kaolinized outer crust. The kaolin wedges out upslope and is absent above 30-35 m above lake level. The kaolin is overlain by up to 5m of muddy quartz sand with highly angular grains, representing a residue of the kaolin formed during transgressive wave and current reworking. The steep gneiss coast was rapidly transgressed by the sea in the latest early Campanian and at least 25m of onlapping coarse-grained skeletal sand, gravel and whole fossils were deposited on the clean gneiss surface during the Belemnellocamax mammilatus belemnite biozone. Large boulders of gneiss are common in the carbonates and formed distinct boulder beds at some levels but these are now quarried away. The top 6m of the preserved carbonate succession are free of boulders. The rocky surface is fairly even on a large scale, but highly irregular in detail with numerous metre-sized hummocks and boulders formed during terrestrial weathering and kaolinization. The lowest part of the shore is developed as a bench, topped by a sub-horizontal irregular platform, 20-30 m wide, with large hummocks and rounded boulders. The platform passes upwards into a steep boulder-strewn slope. A well-developed glauconitized hardground with Thalassinoides burrows and several incipient hardgrounds occur in the carbonates draping the bench and lower part of the platform. They dip gently outwards and probably represent a kind of

beach rock. A highly diverse benthic fauna with more than 200 shell-bearing species lived between, below and on the hummocks and boulders. It comprises bivalves, brachiopods, polychaetes, gastropods, echinoids, asteroids, bryozoans and is dominated by large oysters and includes the northernmost Late Cretaceous rudists and hermatypic corals. The remaining benthic invertebrate groups are represented by only a few species each. The non-benthic invertebrate fauna comprises four belemnite species and one rare ammonite species. The lower Campanian carbonates of the small basin have yielded an unusually diverse vertebrate fauna totalling more than 60 species, including mosasaurs, plesiosaurs, crocodiles, turtles, birds, and as many as 44 species of sharks and rays. Ivö Klack thus provides information on virtually all trophic levels in the rocky shore ecosystem and represents the most diverse rocky shore fauna known from the geological record. This paper aims at providing the framework for a series of papers on the palaeoecology of the main benthic faunal groups.^1";

6967 s[6964] = "SZENTE I., BARON-SZABO R.C., HRADECKA L., KVACEK J., SVOBODOVA M., SVABENICKA L., SCHLAGINTWEIT F. & LOBITZER H. (2010).- The Lower Gosau Subgroup of the Kohlbachgraben and "Station Billroth" North of St. Gilgen (Turonian-?Coniacian, Salzburg, Austria).- Abhandlungen der Geologischen Bundesanstalt 65: 135-154.- FC&P 37, 187, ID=7536^Topic(s): geology, fossils, biostratigraphy; Systematics: ; Stratigraphy: Cretaceous U, Turonian, Turonian / Coniacian, Lower Gosau Subgroup ; Geography: Austria, Salzburg^Grey marls of the Lower Gosau-Subgroup exposed in a left tributary of the Kohlbachgraben north of St. Gilgen have yielded foraminifers, calcareous nannofossils and palynomorphs as well as poorly preserved plant remains. The microfossils indicate a Turonian or Turonian/Coniacian boundary age. On top of the grey marls a several meters thick succession of marly limestone and marl follows, whose fossil fauna is dominated by radiolitid rudists. Grey marls sampled in two exposures situated near the long-known fossil locality "Billroth" yielded poorly preserved microfossils as well as a moderately diverse colonial coral and rudist assemblage, indicating a Turonian age. The most important findings of palynomorphs and macrofossils are briefly described and figured.^1";

6968 s[6965] = "VILELLA J. & CALZADA S. (2007).- Segundo suplemento al catálogo de holotipos del Museo Geológico del Seminario de Barcelona.- Scripta Musei Geologici Seminarii Barcinonensis (Ser. Pal.) 3: 1-36.- FC&P 37, 189, ID=7537^Topic(s): museal collection, fossils, catalogue of types; Systematics: ; Stratigraphy: ; Geography: ^^1";

6969 s[6966] = "VINN O. & MOTUS M.-A. (2012).- New endobiotic cornulitid and Cornulites sp. aff. Cornulites celatus (Cornulitida, Tentaculita) from the Katian of Vormsi Island, Estonia.- Geologiska Foreningens Forhandlingar(GFF) 134, 1: 3-6.- FC&P 37, 189, ID=7538^Topic(s): edobionts in corals, cornulitids; Systematics: Cornulitida, Heliolitida; Stratigraphy: Ordovician L, Katian; Geography: Estonia^Two species of endobiotic cornulitids are described from heliolitid corals of the Katian (Late Ordovician) of Estonia. They are thus far the earliest known showing this symbiotic relationship. Conchicolites hosholmenis n. sp. represents the only known symbiotic coral endobiont species in the genus. Cornulites sp. aff. Cornulites celatus closely resembles the North American endobiotic species C. celatus from tabulates of the Hirnantian (Late Ordovician).^1";

6970 s[6967] = "VINN O. & MOTUS M.-A. (2012).- Diverse early endobiotic coral symbiont assemblage from the Katian (Late Ordovician) of Baltica.- Palaeogeography, Palaeoclimatology, Palaeoecology 321-322: 137-141.- FC&P 37, 190, ID=7539^Topic(s): edobionts in corals, cornulitids, symbiosis; Systematics: Cornulitida, Heliolitida; Stratigraphy: Ordovician L, Katian; Geography:

Estonia NW^A diverse early endobiotic coral symbiont assemblage has been detected within heliolitid tabulate corals of Katian age from northwestern Estonia. This assemblage indicates that the earliest endobiotic coral symbiont communities were not restricted to North America. The symbiotic endobiont assemblage comprises abundant *Cornulites* aff. *celatus* and rare *Conchicolites hosholmensis* and *Chaetosalpinx* sp. The cornulitids are the earliest known symbiotic endobionts of this group. The symbiotic endobionts presumably occurred in certain hosts only and preferred *Protoheliolites dubius* over *Propora speciosa*. This record indicates that early endobiotic cornulitids were more diverse than previously thought and appeared in large numbers in the Katian. It is possible that the appearance of abundant skeletal symbiotic coral endobionts may coincide with the Global Ordovician Biodiversification Event, supporting the hypothesis of escape from increased predation.^1";

6971 s[6968] = "VINN O. & WILSON M.A. (2010).- Endosymbiotic *Cornulites* in the Sheinwoodian (Early Silurian) stromatoporoids of Saaremaa, Estonia.- *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen* 257, 1: 13-22.- FC&P 37, 190, ID=7540^Topic(s): endosymbiosis, stromatoporoids, cornulitids; Systematics: Porifera, Stromatoporoidea, Cornulitida; Stratigraphy: Silurian, Sheinwoodian; Geography: Estonia, Saaremaa^The new endosymbiotic cornulitid *Cornulites stromatoporoides* n. sp. is described here from the Sheinwoodian stromatoporoids of Saaremaa, Estonia. This new species represents the earliest record of cornulitid endosymbiosis, probably reflecting increased pressure by boring and durophagous predators on worms with mineral tubes in the Silurian. In lower Sheinwoodian open shelf marls, 30% of stromatoporoids are infested by *C. stromatoporoides* n. sp., 77 % of stromatoporoids in upper Sheinwoodian shoal limestones also had this endosymbiotic relationship. *C. stromatoporoides* n. sp. has thus far only been found as an endosymbiont in stromatoporoids. There is a range of one to six, averaging 2.4, endosymbiotic *C. stromatoporoides* n. sp. specimens (syn vivo) per infested stromatoporoid in the lower Sheinwoodian. Large stromatoporoids contain more *Cornulites* endosymbionts than smaller stromatoporoids.^1";

6972 s[6969] = "VODRAZKA R., SKLENAR J., CECH S., LAURIN J. & HRADECKA L. (2009).- Phosphatic intraclasts in shallow-water hemipelagic strata: a source of palaeoecological, taphonomic and biostratigraphic data (Upper Turonian, Bohemian Cretaceous Basin).- *Cretaceous Research* 30: 204-222.- FC&P 37, 191, ID=7541^Topic(s): phosphatic lag, fossils, burial, diagenesis, exhumation; Systematics: ; Stratigraphy: Cretaceous U, Turonian; Geography: Czech Republic, Bohemian Cretaceous Basin, Byckovice^A prominent phosphatic lag exposed in the Upper Turonian hemipelagic strata near Byckovice, Bohemian Cretaceous Basin, yields an enormous accumulation of diversified, phosphatized and unphosphatized fauna. Taphonomic, palaeoecological and sedimentological data suggest that the phosphatic lag records a complex history of burial, mineralization and exhumation of sediment and fossils. Three main stages can be distinguished in the formation of the lag: (1) deposition of a hemipelagic marlstone or limestone inhabited by a diversified, softground fauna, then (2) intense phosphatization, winnowing of unconsolidated sediment and exhumation of the phosphates due to a combined effect of elevated bottom shear stress and bioturbation, and (3) resumption of hemipelagic deposition and establishment of a new assemblage dominated by sponges attaching to the exhumed phosphatic intraclasts. The occurrence of sponges inhabiting phosphatic intraclasts is unique in both fossil and recent ecosystems. One of these sponges, a poorly known hexactinellid *Laocoetis cretacea* (Rauff) is therefore described in detail. Biostratigraphic data suggest that the lag represents the uppermost *Subprionocyclus neptuni* Zone and lowermost *Mytiloides scupini* Zone. Well-log correlation with coeval, orbitally tuned strata further

- suggests that the absolute duration approximated 350 kyr.^{^1}";
- 6973 s[6970] = "WILSON M.A., FELDMAN H.R. & BELDING KRIVICICH E. (2010).- Bioerosion in an equatorial Middle Jurassic coral-sponge reef community (Calloviaan, Matmor Formation, southern Israel).- Palaeogeography, Palaeoclimatology, Palaeoecology 289, 1-4: 93-101.- FC&P 37, 192, ID=7542^Topic(s): bioerosion, coral-sponge reef; Systematics: ; Stratigraphy: Jurassic M, Callovian, Matmor Fm; Geography: Israel S^The Matmor Formation (Middle Jurassic, Callovian, 165-161 mya) in southern Israel contains abundant coral-sponge patch reefs and large crinoids which have been extensively bioeroded by bivalves, worms, barnacles, phoronids, and others producing eight ichnospecies. It is significant for the evolutionary history of bioerosion because this is the first equatorial Middle Jurassic boring ichnofauna to be documented. When compared to contemporaneous ichnofaunas, this assemblage is of average diversity and abundance but has only rare sponge borings and contains abundant specimens of Oichnus paraboloides as shallow pits on crinoid stems. The Matmor Formation surprisingly lacks carbonate hardgrounds, which are otherwise abundant in subtropical and temperate equivalents.^{^1}";
- 6974 s[6971] = "YU Kefu, ZHAO Jianxin, ROFF G., LYBOLT M., FENG Yuexing, CLARK T. & LI Shu (2012).- High-precision U-series ages of transported coral blocks on Heron Reef (southern Great Barrier Reef) and storm activity during the past century.- Palaeogeography, Palaeoclimatology, Palaeoecology 337-338: 23-36.- FC&P 37, 192, ID=7543^Topic(s): coral blocks, radiometric dating, storm frequency; Systematics: ; Stratigraphy: Recent; Geography: Great Barrier Reef, Heron Island^Transported coral blocks scattered on reef flats have previously been identified as useful proxies for past storm occurrences. High-precision TIMS U-series dating and detailed field observations of 110 coral samples collected from 102 individual transported coral colonies (coral blocks) and 4 transported sections of reef matrix (reef blocks) from the northern side of Heron Reef (southern Great Barrier Reef) indicate that: (1) the youngest age of corals attached to reef blocks may represent the age of possible past storm occurrence, providing a proxy for historical storm reconstruction; (2) most ages of dated storm-transported coral and reef blocks match well relatively with known cyclone and storm events, further supporting that they are good indicators of past storm events; and (3) age distribution and relative probability frequency analysis of the dated coral and reef blocks suggest that there have been eight broad periods of storm occurrence since 1900 AD (1904-1909, 1914-1916, 1935-1941, 1945-1960, 1965-1967, 1976-1977, 1983-1988 and 2001-2007), roughly showing decadal variations. The coral-based storm reconstruction therefore extended the database of past storm occurrences around Heron Reef area. These findings suggest that coral reefs in the southern Great Barrier Reef are frequently influenced by periods of high storm activity, and show strong resilience to natural disturbances over the past century. Additionally, our results show for the first time that the blue skeletal coral *Heliopora coerulea* (order: Helioporaceae) has U concentrations of only 0.12 to 0.30 ppm, ~5-10% that of common reef building corals with white skeletons (Order: Scleractinia), which may be a unique chemical signature of the only living species of the Helioporidae family.^{^1}";
- 6975 s[6972] = "ZALECKA K. & WRZOLEK T. (2011).- The database of Fossil Cnidaria & Porifera newsletter, 1972-2010.- In: Aretz, M., Delculee, S., Denayer, J. & Poty, E. (Eds.): 11th Symposium on Fossil Cnidaria and Porifera, Liege, August 19-29, 2011, Abstracts. Kölner Forum für Geologie und Paläontologie 19: 196.- FC&P 37, 193, ID=7544^Topic(s): bibliographic database, fossil corals & sponges, temporal trends; Systematics: ; Stratigraphy: ; Geography: ^The database of almost 7000 entries has been compiled of publications,

which were listed in current bibliographies of Fossil Cnidaria & Porifera, newsletters of the International Association for the Study of Fossil Cnidaria and Porifera (IASFCP) in the years 1972-2010. The data records contain informations on authors, publication year and title, systematic group, stratigraphy, geography, abstract (full or abbreviated), journal, book, also DOI number or equivalent for some records. [Wrzolek; extracted from an abstract; the database - 6710 records - is available on-line at <http://kse.wnoz.us.edu.pl/sql/index.php>^1";

6976 s[6973] = "ZAMAGNI J., MUTTI M. & KOSIR A. (2012).- The evolution of mid Paleocene-early Eocene coral communities: How to survive during rapid global warming.- *Palaeogeography, Palaeoclimatology, Palaeoecology* 317-318: 48-65.- FC&P 37, 193, ID=7545^Topic(s): coral communities, diversity trends, global warming; Systematics: Cnidaria, Scleractinia; Stratigraphy: Paleocene - Eocene; Geography: ^Today, diverse communities of zooxanthellate corals thrive, but do not build reef, under a wide range of environmental conditions. In these settings they inhabit natural bottom communities, sometimes forming patch-reefs, coral carpets and knobs. Episodes in the fossil record, characterized by limited coral-reef development but widespread occurrence of coral-bearing carbonates, may represent the fossil analogs of these non-reef building, zooxanthellate coral communities. If so, the study of these corals could have valuable implications for paleoenvironmental reconstructions. Here we focus on the evolution of early Paleogene corals as a fossil example of coral communities mainly composed by zooxanthellate corals (or likely zooxanthellate), commonly occurring within carbonate biofacies and with relatively high diversity but with a limited bioconstructional potential as testified by the reduced record of coral reefs. We correlate changes of bioconstructional potential and community compositions of these fossil corals with the main ecological / environmental conditions at that time. The early Paleogene greenhouse climate was characterized by relatively short pulses of warming with the most prominent occurring at the Paleocene - Eocene boundary (PETM event), associated with high weathering rates, nutrient fluxes, and pCO2 levels. A synthesis of coral occurrences integrated with our data from the Adriatic Carbonate Platform (SW Slovenia) and the Minervois region (SW France), provides evidence for temporal changes in the reef-building capacity of corals associated with a shift in community composition toward forms adapted to tolerate deteriorating sea-water conditions. During the middle Paleocene coral-algal patch reefs and barrier reefs occurred from shallow-water settings, locally with reef-crest structures. A first shift can be traced from middle Paleocene to late Paleocene, with small coral-algal patch reefs and coral-bearing mounds development in shallow to intermediate water depths. In these mounds corals were highly subordinated as bioconstructors to other groups tolerant to higher levels of trophic resources (calcareous red algae, encrusting foraminifera, microbes, and sponges). A second shift occurred at the onset of the early Eocene with a further reduction of coral framework-building capacity. These coral communities mainly formed knobs in shallow-water, turbid settings associated with abundant foraminiferal deposits. We suggest that environmental conditions other than high temperature determined a combination of interrelated stressors that limited the coral-reef construction. A continuous enhancement of sediment load / nutrients combined with geochemical changes of ocean waters likely displaced corals as the main bioconstructors during the late Paleocene-early Eocene times. Nonetheless, these conditions did not affect the capacity of some corals to colonize the substrate, maintain biodiversity, and act as locally important carbonate-sediment producers, suggesting broad environmental tolerance limits of various species of corals. The implications of this study include clues as to how both ancient and

- modern zooxanthellate corals could respond to changing climate.¹¹";
- 6977 s[6974] = "ZAPALSKI M.K. (2011).- Is absence of proof a proof of absence? Comments on commensalism.- Palaeogeography, Palaeoclimatology, Palaeoecology 302: 484-488.- FC&P 37, 195, ID=7546Topic(s): biotic interactions, commensalism; Systematics: ; Stratigraphy: ; Geography: ^Commensalism in the narrow sense can be understood as an interaction strictly neutral for one organism and positive for the other. Neutral interaction is the absence of interaction and as such it cannot be proven (the proof of absence cannot be made) and consequently it can be regarded as a concept unfit for empirical science. In the broad sense it is often understood as a weak (positive or negative) interaction on one hand and positive on the other. This approach also seems imperfect, as weak interactions should be regarded rather as mutualism or parasitism, respectively. The borders between interactions (commensalism/parasitism and commensalism / mutualism) are difficult to define, hence commensalism should rather be considered as a theoretical interval within the continuum of interactions. Detection of commensalism in recent associations is rather difficult, while in the fossil record it seems impossible. Commensalism as a null hypothesis in paleoecology cannot be retained, as the possibility of making a type II error is very high. The terms "paroecia" and "endoecia" seem to be more useful to use in cases when a particular ecological relationship is difficult to prove.¹¹";
- 6978 s[6975] = "ZAPALSKI M.K. (2014).- Evidence of photosymbiosis in Palaeozoic tabulate corals.- Proceedings Royal Society B 22 281: 1775 20132663. doi: 10.1098/rspb.2013.2633 (online since December 2013)- FC&P 37, 195, ID=7547Topic(s): coral skeletons, photosymbiosis, stable isotopes C & O; Systematics: Cnidaria, Scleractinia, Tabulata; Stratigraphy: Phanerozoic, post-Silurian; Geography: ^Coral reefs form the most diverse of all marine ecosystems on the Earth. Corals are among their main components and owe their bioconstructing abilities to a symbiosis with algae (Symbiodinium). The coral-algae symbiosis had been traced back to the Triassic (ca 240 Ma). Modern reef-building corals (Scleractinia) appeared after the Permian-Triassic crisis; in the Palaeozoic, some of the main reef constructors were extinct tabulate corals. The calcium carbonate secreted by extant photosymbiotic corals bears characteristic isotope (C and O) signatures. The analysis of tabulate corals belonging to four orders (Favositida, Heliolitida, Syringoporida and Auloporida) from Silurian to Permian strata of Europe and Africa shows these characteristic carbon and oxygen stable isotope signatures. The δ180 to δ13C ratios in recent photosymbiotic scleractinians are very similar to those of Palaeozoic tabulates, thus providing strong evidence of such symbioses as early as the Middle Silurian (ca 430 Ma). Corals in Palaeozoic reefs used the same cellular mechanisms for carbonate secretion as recent reefs, and thus contributed to reef formation. [electronic supplementary material at <http://dx.doi.org/10.1098/rspb.2013.2663>]¹¹";